



SMLE 13

Corrected copy

بسم الله الرحمن الرحيم
هذا العمل قائم بشكل أساسي على ملزمة 13 لعام 2016،
تمت مراجعة جميع الأسئلة من قبل عدد من أطباء الإمتياز، دفعة 2017 باذلين قصارى جهدنا للوصول إلى
أفضل الإجابات الممكنة والإستعانة بمصادر مختلفة لتوثيق الإجابات.
الفارق في عدد صفحات هذه النسخة عن النسخة السابقة نتج بسبب زيادة الشرح والمصادر في هذه النسخة.
كل الشكر لجميع من شارك في هذا العمل والشكر موصول لزملائنا القائمين على النسخة الأساسية من ملزمة
13 من الدفعات السابقة، جعلها الله في موازين حسناتهم جميعاً.

في نهاية الأمر هذا العمل هو عمل بشري ولا يخلو من الخطأ، وفي حال وجود أي خطأ نرجو التواصل معنا
على الإيميل:

Smle432@gmail.com

كما نتمنى من الجميع المشاركة في تجميع اسئلة 2017/2018 على الفورم التالي

<https://goo.gl/vF5Wqx>

ولا تنسوننا من دعائكم
بالتوفيق جميعاً

***تنويه: المحتوى مطابق للمذكرة القديمة لكن مع الاختلاف في ترقيم بعض الأسئلة.**

TABLE OF CONTENT

- SECTION 1: Medicine
 - Infection, Allergy & immunology Page 4
 - Cardiology Page 95
 - Endocrinology Page 174
 - Pulmonology Page 216
 - Rheumatology Page 238
 - Gastroenterology Page 271
 - Neurology Page 305
 - Nephrology Page 348
 - Hematology Page 378
- SECTION 2: Dermatology..... Page 451
- SECTION 3: pediatrics Page 490
- SECTION 8: Emergency medicine Page 654
- SECTION 9: F.med , community , Ethics Page 722
- SECTION 10: Psychiatry Page 801

Medicine

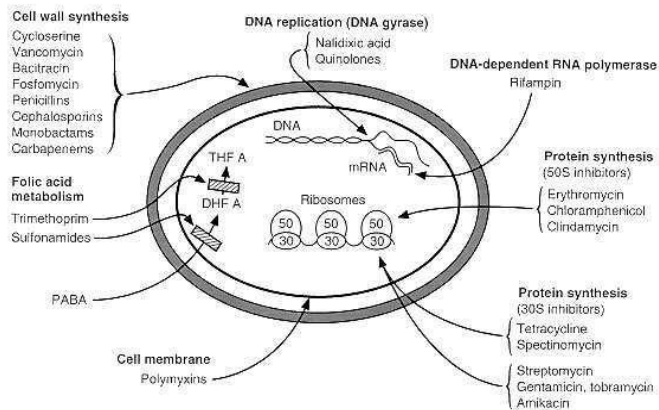


Infection, allergy and immunology

1. Diabetic patient developed fever, productive cough and SOB. Labs show high WBC. CXR (picture was given which showed lower lobe infiltrates + air-fluid level). The drug that will be given to the patient acts on which of the following?

- A. DNA gyrase
- B. 30 S ribosome
- C. 50 S ribosome
- D. Transpeptidase

Answer: C



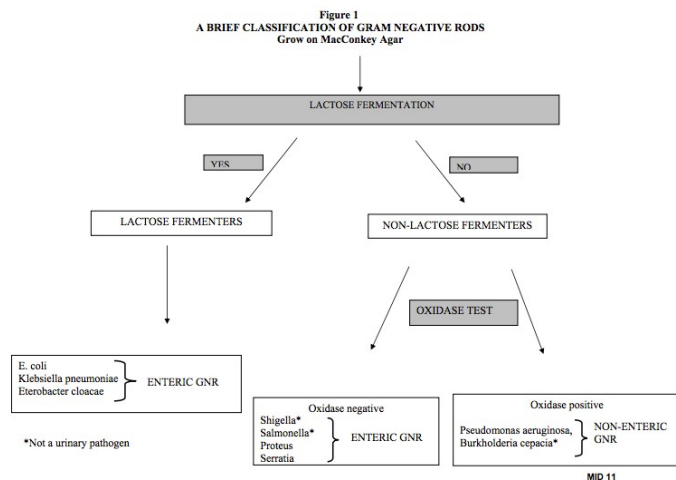
Because effective broad-spectrum antibiotics are available, primary or nonspecific abscesses can frequently be arrested in the early stage of suppurative pneumonitis. Whereas penicillin was long the antibiotic of choice, trials have shown clindamycin to be superior

Reference: <http://emedicine.medscape.com/article/428135-overview#showall>

2. Patient with ventilator associated pneumonia. Culture showed lactose non-fermenting, gram negative motile bacilli producing greenish colony + Oxidase positive. What is the organism?

- A. Haemophilus influenzae
- B. Streptococcus pneumoniae
- C. Klebsiella or other gram negative bacteria
- D. Pseudomonas aeruginosa

Answer: D



Reference: <http://www.columbia.edu/itc/hs/medical/pathophys/id/2008/utiGNR.pdf>

3. Which of the following is the Most specific test for TB?

- A. PCR
- B. Chest X ray

smle ,2017

- C. Sputum culture
- D. PPD

Answer: C

The most sensitive and specific test. Should always be performed as it is required for precise identification and for drug susceptibility testing.

Reference: <http://bestpractice.bmj.com/best-practice/monograph/165/diagnosis/tests.html>

4. A patient with tuberculosis on medication for 3 months. He developed pins and needles sensation of his lower limbs. Deficiency of which of the following caused his symptoms?

- A. Niacin
- B. Folic acid
- C. Iron
- D. Pyridoxine(B6)

Answer: D

Vitamin B6 (pyridoxine) supplementation during isoniazid (INH) therapy is necessary in some patients to prevent the development of peripheral neuropathy.

Reference: Pubmed & first aid step1(2015 edition, page 90)

5. Best prophylactic against traveler's diarrhea :

- A. fresh fruit and vegetables
- B. peeled fruit
- C. daily antibiotic
- D. drinks with rice

Answer: B

Preventive measures include not drinking tap water, not using ice in beverages (even alcoholic drinks), not eating salads and other forms of raw vegetables, not eating fruits that can't be peeled on the spot and not eating mayonnaise, pastry icing, unpasteurized dairy products and undercooked shellfish.

Note: Drug prophylaxis against traveler's diarrhea may be taken for up to three weeks. Antibiotic prophylaxis is not recommended except in special circumstances, such as in patients who are severely immunocompromised or seriously ill.

Antibiotic prophylaxis with trimethoprim-sulfamethoxazole , or doxycycline. Increasingly, however, resistance to these antibiotics has become such a problem that **their routine use is not recommended.**

Reference: <http://www.aafp.org/afp/1999/0701/p119.html>

6. Long scenario about TB and what's the antibiotic to start :

- A. Rifampicin, INH, Ethambutol and Pyrazinamide
- B. Rifampicin, INH and Ethambutol
- C. Rifampicin and INH
- D. INH

Answer: A (RIPE)

For initial empiric treatment of TB, start patients on a 4-drug regimen: isoniazid, rifampin, pyrazinamide, and either ethambutol or streptomycin for 2 months, then continue for four months by using isoniazid, rifampin (total duration 6 months)

smle ,2017

Reference: <http://emedicine.medscape.com/article/230802-treatment>

7. A middle-aged man presents with a cough and fever lasting several weeks. Posteroanterior chest radiograph shows a prominent paratracheal area on the right, lymphadenopathy, a cavitary opacity in the right upper lobe, and a focal consolidation in the middle lung zone on the right. CXR shown below. What is the dx?

- A. COPD
- B. BA
- C. Pneumonia
- D. TB

Answer: D

primary infection can be anywhere in the lung in children whereas there is a predilection for the upper or lower zone in adults.

In primary pulmonary tuberculosis, the initial focus of infection can be located anywhere within the lung and has non-specific appearances ranging from too small to be detectable, to patchy areas of consolidation or even lobar consolidation. Radiographic evidence of parenchymal infection is seen in 70% of children and 90% of adults 1. Cavitation is uncommon in primary TB, seen only in 10-30% of cases 2. In most cases, the infection becomes localised and a caseating granuloma forms (tuberculoma) which usually eventually calcifies and is then known as a Ghon lesion 1-2.

The more striking finding, especially in children, is that of ipsilateral hilar and contiguous mediastinal (paratracheal) lymphadenopathy, usually right sided

Reference: <https://radiopaedia.org/articles/tuberculosis-pulmonary-manifestations-1>

8. What is the optimal duration of antibiotic treatment in strep throat?

- A. 3 days
- B. 5 days
- C. 7 days
- D. 10 days

Answer: D

Oral penicillin VK is the treatment of choice, given for 10 days' duration. For patients who are unable to complete a 10-day oral course, a single intramuscular dose of penicillin G benzathine can be given.

Reference: <http://www.emedexpert.com/conditions/strep-throat.shtml>

9. College student have meningitis. What to do as a prophylaxis to dorm friends next?

- A. Isolate all contacts for 4 weeks
- B. Immunize all contacts
- C. Give antibiotic (Penicillin and other similar antibiotics) - exact sentence was written
- D. Do nothing

Answer: The question is not clear but most likely it's B (Read explanation)

B: If Haemophilus influenzae type b, pneumococcal meningitis or Neisseria meningitidis Groups C, A, Y and W135, vaccination of contacts and index may be indicated.

C: Correct antibiotics are not mentioned here but chemoprophylaxis with either oral rifampin or ciprofloxacin is recommended for all household and day care contacts of patients with suspected or known Hib infection.

Reference: <http://www.emed.ie/Infections/Prophylaxis/Meningitis.php>
smle ,2017

10. Young adult came complaining of painless penile ulcer, what is the appropriate investigation to do?

- A. Blood culture
- B. Excisional biopsy.
- C. Swab culture and urinalysis
- D. Dark field microscope.
- E. CBC & ESR.

Answer: D

Primary syphilis: sensitivity of dark-field microscopy is 74% to 86%, specificity is 85% to 100% (*Treponema pallidum*). Primary syphilis usually begins with a single, painless, well-demarcated ulcer (chancre) with a clean base and indurated border.

Reference: <http://www.aafp.org/afp/2012/0201/p254.html>

11. HIV patient ... (symptoms of intestinal obstruction) did intestinal resection. They found tumor white in color nearly encircling the wall. What is the tumor?

- A. hodgkin
- B. non Hodgkin
- C. Adenocarcinoma
- D. plasmacytoma

Answer: B

Patients who are seropositive for human immunodeficiency virus (HIV) have a substantially increased risk of cancer. Twenty-five to 40 percent of HIV-positive patients will develop a malignancy, with approximately 10 percent developing a non-Hodgkin lymphoma (NHL).

Reference: <https://www.uptodate.com/contents/aids-related-lymphomas-epidemiology-risk-factors-and-pathobiology>

12. Enteric fever resistance to chloramphenicol, what's next?

- A. Double chloramphenicol
- B. Ciprofloxacin alone
- C. Add ciprofloxacin
- D. IM ceftriaxone

Answer: B

Fluoroquinolones are highly effective against susceptible organisms, yielding a better cure rate than cephalosporin.

Reference: <http://emedicine.medscape.com/article/231135-medication>

13. Post streptococcal infection generalized petechial and plt =15 Management?

- A-splenectomy
- B-cyclo
- C-VIII
- D-IVIG

Answer: D

smle ,2017

This is a case of ITP. IV immunoglobulin (IVIG) has been the drug of second choice (after corticosteroids) for many years.

Reference: <http://emedicine.medscape.com/article/202158-treatment>

14. patient has UTI organism grows on both antiseptic & detergent

- A. E.Coli
- B. Proteus
- C. Pseudomonas
- D. Staph aureus or strep

Answer: C

Table 2: Variation in growth of different species of bacteria under different concentration of detergent

Microorganism\Media	Control	100mg/ml	200mg/ml	300mg/ml	400mg/ml
<i>Escherchia coli</i>	Maximum	High	Moderate	Low	Very little
<i>Pseudomonas aeruginosa</i>	Maximum	High	Moderate	No growth	No growth
<i>Bacillus subtilis</i>	Maximum	Little	No growth	No growth	No growth
<i>Staphylococcus aureus</i>	Maximum	No growth	No growth	No growth	No growth
<i>Micrococcus sp.</i>	Maximum	High	Moderate	Low	Very little

Table 3: Variation in growth of different species of bacteria under different concentration of soap

Microorganism\Media	Control	100mg/ml	200mg/ml	300mg/ml	400mg/ml
<i>Escherchia coli</i>	Maximum	High	Moderate	Low	Very little
<i>Pseudomonas aeruginosa</i>	Maximum	High	Moderate	Low	Very little
<i>Bacillus subtilis</i>	Maximum	No growth	No growth	No growth	No growth
<i>Staphylococcus aureus</i>	Maximum	High	Moderate	Low	Very little
<i>Micrococcus sp.</i>	Maximum	Low	No growth	No growth	No growth

Reference: <http://www.soeagra.com/abr/december%202011/9.pdf>

15. Man eating rice only, he has gingival and tongue lesions. Which of the following deficiency you will find ?

- A. Vitamin A.
- B. Vitamin C.
- C. Thiamin(B1).
- D. Niacin (B3).

Answer: C

The germ cells of whole-grains and seeds are rich in thiamine, but polished rice is deficient in thiamine (read about dry beriberi)

Reference: https://bestpractice.bmj.com/best-practice/monograph/633/diagnosis/history-and-examination.html?locale=zh_TW

16. What is the common cause to make the pt. Retire in KSA?

- A. HBV
- B. HBC
- C. HIV
- D. hep a

Answer: C (NOT SURE)

Reference: SMLE12 Corrected edition
smle ,2017

17. what is the cause to use every year influenza vaccine?

- A. resistance of antimicrobial
- B. new antigen
- C. different type of transmission
- D. drift .. So could be new antigen.

Answer: D

Genetic changes that result in a virus with different antigenic properties is the main reason why people can get the flu more than one time.

Reference: <https://www.cdc.gov/flu/about/viruses/change.htm>

18. 2 years old presented with fever for one month with the pic, lab shows Pancytopenia, what is the cause:

- A. leishmania
- B. leukemia
- C. malaria
- D. brucellosis

Answer: A ,b

Depend on the presentation and what pic showed, both could cause pancytopenia.

Anemia is the most common hematological manifestation of visceral Leishmaniasis VL. VL may also be associated with leucopenia, thrombocytopenia, pancytopenia.

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3002089/>

19. No question.

20. Immune deficient pt : what vaccine could be given :

- A. Measles
- B. Rubella
- C. Pneumococci
- D. Varicella

answer: C

Reference: [http://www.jacionline.org/article/S0091-6749\(14\)00112-2/fulltext](http://www.jacionline.org/article/S0091-6749(14)00112-2/fulltext)

21. UTI case patient resistant to B LACTAMS, sensitive to fluoroquinolones, chloramphenicol, aminoglycosides which drug is contraindicated:

- A. gentamicin (aminoglycoside)
- B. azithromycin
- C. flucloxacillin
- D. chloramphenicol

answer: B (NOT SURE)

Reference: SMLE12 Corrected edition

smle ,2017

22. (long scenario) report {single strand RNA)?

- A. hepatitis a
- B. hepatitis b
- C. hepatitis c
- D. hepatitis d

answer: Question is not complete

the structure of hepatitis viruses are as follow: Hepatitis A virus (non-enveloped single-stranded RNA) Hepatitis B virus (enveloped double-stranded DNA) Hepatitis C virus (enveloped single-stranded RNA)

Hepatitis D virus (envelop from HBV, single-stranded RNA) Hepatitis E virus (non-enveloped single-stranded RNA)

You have to know which one is +ve sense or -ve sense

Reference: <http://www.baronerocks.com/index.php/mnemonics/mnemonics-microbiology/73-rna-sense-virus-mnemonic>

23. 75 years old male, asymptomatic, BM report: increased lymphocytes Immunohistochemistry: Positive CD19, CD56

Treatment?

- A. No treatment
- B. Rituximab + CVB
- C. Rituximab + Prednisolone
- D. Cyclophosphamide

Answer: C?

I asked a consultant and he responded: This question dose not make sense. It should be cd20 positive and then the answer should include rituximab.

24. Diarrhea \Shigella species treatment

- A. Metronidazole
- B. Azithromycin
- C. Amoxicillin
- D. Ceftriaxone

Answer: d

Patients with diarrhea for more than 3 days and fever, abdominal pain, vomiting, headache or myalgias a third-generation cephalosporin is appropriate empiric therapy in the setting of acute illness.

Reference: <http://emedicine.medscape.com/article/182767-medication>

25. DM, hypothyroid, irregular menses female, present with recurrent itching & white ad- herent oral plaque , +ve mantoux test , she was exposed to TB 4 years ago, immunoglobu- lin, WBC, RBCs all are normal ; Dx ;

- A. Chronic granulomatous disease
- B. Chronic candidiasis
- C. DiGeorge syndrome
- D. Hypogamaglobulinemia

Answer: B

answer by exclusion is B

Reference: <http://emedicine.medscape.com/article/1091928-overview>

26. Giardia. Diagnostic test

- A. 3 stool parasite
- B. 3 stool cultures
- C. concentration test
- D. stool immunoassay

Answer: A

Stool O&P testing aids in the diagnosis of giardiasis in 80-85% of patients. It remains the diagnostic method with which other tests are compared. Aspiration of duodenal contents and demonstration of trophozoites also have been used for diagnosis but this is more invasive than stool examination and, in direct comparison studies to stool microscopy, may have a lower diagnostic yield.

Stool antigen enzyme-linked immunosorbent assays also are available. [53] These tests are similar to the stool O&P test in terms of cost and have a sensitivity of 88-98% and a specificity of 87-100%. These tests are best used as a screening test in high-incidence settings such as day-care centers or for identification of subjects during an epidemic, but they should not take the place of stool microscopy. Three specimens from different days should be examined

Reference: <http://emedicine.medscape.com/article/176718-workup>

27. Giardiasis treatment

- A. Metronidazole
- B. Paromomycin
- C. Ciprofloxacin

Answer: A

metronidazole: 250 mg orally three times daily for 5-7 days.

Reference: <http://www.mayoclinic.org/diseases-conditions/giardia-infection/basics/treatment/con-20024686>

28. Gram negative bacteria oxidase+, non lactose fermenter which of the following the best is antimicrobial?

- A. Ceftriaxone
- B. Cefepime
- C. Ciprofloxacin
- D. SMZ -TMP (bactrim)

Answer : B

Susceptible organisms to cefipime

•Bacteroides spp, Enterobacter spp, Escherichia coli, Haemophilus influenzae, Klebsiella spp, Proteus mirabilis, Pseudomonas spp, Staphylococcus aureus, Streptococcus pyogenes

Reference: <http://reference.medscape.com/drug/maxipime-cefepime-342511>

29. To prevent recurrence of UTI , What you prefer of the following circumstances ?

- A. Decreased PH ,increased urea or urea, decreased urine osmolarity
- B. Decreased PH ,increased urea ,increased urine osmolarity
- C. Increased PH ,increased urea or ureadecreased urine osmolarity
- D. Increased PH ,decreased urea or urea, dec. urine osmolarity

Answer : B

Biochemical properties are normally important in making bacterial survival difficult in urine: acid pH, high urea content, and high osmolality. In addition, mucosal mucopolysaccharide within the lining of the urinary tract as well as systemic and local antibody production may be protective for UTIs

Reference: https://www.urology.wisc.edu/system/assets/932/module2_adult_uti.pdf?1347982497

30. Patient came from Africa with fever, myalgia and arthralgia?

- A. Ebola fever
- B. Lassa fever
- C. Yellow fever
- D. Malaria

Answer: we need more details. But most likely C due to arthralgia.

Yellow fever has 3 stages:

- Stage 1 (infection): Headache, muscle and joint aches, fever, flushing, loss of appetite, vomiting, and jaundice are common. Symptoms often go away briefly after about 3 to 4 days.
- Stage 2 (remission): Fever and other symptoms go away. Most people will recover at this stage, but others may get worse within 24 hours.
- Stage 3 (intoxication): Problems with many organs may occur, including the heart, liver, and kidney. Bleeding disorders, seizures, coma, and delirium may also occur.

Reference: <https://www.mtatva.com/en/disease/yellow-fever-symptom-and-causes/>

31. 16 yr from Africa (Ginia) with painless neck mass for 5 weeks developed cough, fever , URS:

- A. Burkitt lymphoma
- B. infectious mononucleosis
- C. Hodgkin's lymphoma
- D. Lyme disease

Answer : C (not A because African type is in the jaw!)

Reference: Step up to medicine 3rd edition page 352-353

32. pt have parotitis, pain with eating that radiate to the ear, with nerve transmit pain with eating?

- A. 8
- B. 9
- C. 10
- D. 7

Answer: D

The facial nerve (cranial nerve VII), gives rise to five terminal branches within the parotid gland. These branches innervate the muscles of facial expression.

<http://teachmeanatomy.info/head/organs/salivary-glands/parotid/>

33. Patient with end stage liver disease, on central venous line, septic, blood showed ood c/s budding yeast, what anti-fungal is appropriate at this stage?

- A. Caspofungin
- B. Flucytosine
- C. fluconazole
- D. Itraconazole

Answer: A

smle ,2017

For patients in severe or moderately severe clinical conditions (e.g., hemodynamically unstable or with suspected concomitant organ involvement), echinocandins are the first choice because of their activity against *Candida* and excellent toxicity profile
fluconazole, broad spectrum antifungals are usually recommended for the first line treatment, while species identification is pending

Reference: http://www.medscape.com/viewarticle/775172_4

34. HIV PT come with diffuse papule in skin and mouth Tt by ?

- A. Topical steroid
- B. Oral AB
- C. Topical AB
- D. Chemo & radiotherapy

Answer: D

Reference: <http://emedicine.medscape.com/article/2006845-overview>

35. malaria fast diagnostic test what u will see?

- A. malaria antigen
- B. malaria antibodies
- C. malaria pigments
- D. parasite sexual

Answer: A

"Rapid Diagnostic Tests" (RDTs) provide results in 2-15 minutes.

Reference: https://www.cdc.gov/malaria/diagnosis_treatment/diagnosis.html

36. Patient with TB, how to prevent her dorm friends from having it:

- A. no need they want get it
- B. isolate all contact for 4 weeks
- C. immunization
- D. penicillin and other antibiotics like it.

Answer: A

By consultant

37. patient has symptoms of infectious mononucleosis monospot , after 8 day he sudden complaining of acute abdominal pain , decrease BP ? What will you do?

- A. Antibiotic
- B. Fluid resuscitation
- C. urgent CT abdomen i think 3- Urgent gastro..
- D. Barium enema

Answer: B

The trend in management of splenic injury continues to favor nonoperative or conservative management.

Reference: <http://emedicine.medscape.com/article/432823-treatment>

38. A patient who was treated from TB, came to you complaining of eye pain. What is the cause?
- A. Isoniazid
 - B. Rifampicin
 - C. Ethambutol
 - D. Pyrazinamide

Answer: C

Reference: <http://www.drugs.com/sfx/ethambutol-side-effects.html>

39. A patient with signs of TB. What vaccination you would give to his family?
- A. MMR
 - B. DTaP
 - C. BCG
 - D. Polio

Answer: C

NO NEED FOR EXPLANINATION

40. A patient was diagnosed with enteric fever. What is the presentation that he will have?
- A. Confusion (or other CNS problems)
 - B. Maculopapular rash
 - C. Nausea, vomiting and loose stools
 - D. Abdominal pain, headache, fever

Answer: D

The clinical syndromes associated with *S typhi* and *paratyphi* are indistinguishable. Typhoid fever begins 7-14 days after ingestion of the organism . The fever pattern is stepwise, characterized by a rising temperature over the course of each day that drops by the subsequent morning. The peaks and troughs rise progressively over time.

Over the course of the first week of illness, the notorious gastrointestinal manifestations of the disease develop. These include diffuse abdominal pain and tenderness and, in some cases, fierce colicky right upper quadrant pain. Monocytic infiltration inflames Peyer patches and narrows the bowel lumen, causing constipation that lasts the duration of the illness. The individual then develops a dry cough, dull frontal headache, delirium, and an increasingly stuporous malaise

Reference: <http://emedicine.medscape.com/article/231135-clinical>

- 41. No question
- 42. No question
- 43. No question

44. Which vaccine you will give to immunocompromised?
- A. Recomb. HBV
 - B. Sabin (OPV)
 - C. Salk (IPV)

D. BCG

Answer: A AND C

Reference: <https://primaryimmune.org/wp-content/uploads/2011/04/Immunization-Of-The-Immunocompromised-Host.pdf>

45. old patient came to ER 4 w of fever cough night sweat... (clear T.B symptom) immediately do!??

- A. put pt in negative pressure
- B. give anti T.B drug
- C. sputum culture
- D. chest x ray

Answer: A

(I'm not sure which one is 100% correct but logically is to start isolation to prevent the spread of TB)

Isolate patients with possible tuberculosis (TB) infection in a private room with negative pressure (air exhausted to outside or through a high-efficiency particulate air filter).

Reference: <http://emedicine.medscape.com/article/230802-treatment>

46. What is the percentage of complete recovery from HCV?

- A. 20
- B. 40
- C. 60
- D. 80%

answer: A

It is probable that on average the recovery rate in acute HCV infection is closer to 20% than to the commonly cited 15%. The key issue then becomes the clinical outcome in the 80% who develop persistent HCV infection.

Reference: http://www.medscape.com/viewarticle/410845_12

47. Same as 37

48. Patient is presented with hand cellulitis and red streaks in the hand and tender axillary lymphadenopathy. This condition is more likely to be associated with:

- A. Malignancy
- B. Pyoderma
- C. Neuropathy
- D. Lymphangitis

Answer : D

Lymphangitis is defined as an inflammation of the lymphatic channels that occurs as a result of infection at a site distal to the channel O/E erythematous and irregular linear streaks extend from the primary infection site toward draining regional nodes. These streaks may be tender and warm.

Reference: <http://emedicine.medscape.com/article/966003-clinical#showall>

49. Man came to the hospital with cellulitis after he got bitten by a wild cat. What is the most likely organism ?

- A. *Pasteurella caballi*.
- B. *Pasteurella Multocida*.
- C. *Pasteurella canis*.
- D. *Pasteurella avium*.

Answer: B

P. multocida is the most frequent causative agent in human *Pasteurella* infection. Common symptoms of pasteurellosis in humans include swelling, cellulitis, and bloody drainage at the site of the wound. Infection may progress to nearby joints where it can cause further swelling, arthritis and abscesses

Reference: <http://emedicine.medscape.com/article/224920-treatment>

50. Picture of skin with chickenpox, with history of child with malaise and fatigue followed by single macule then spread all over the body including the face, what is the treatment:

- A. Antibiotics
- B. Antiseptic
- C. Acyclovir

Answer: C

Antiviral medications are recommended for people with chickenpox who are more likely to develop serious disease including

1. otherwise healthy people older than 12 years of age
2. people with chronic skin or lung disease
3. people receiving steroid therapy
4. some groups of pregnant women

Acyclovir, an antiviral medication, is licensed for treatment of chickenpox

Reference: <http://www.cdc.gov/chickenpox/about/prevention-treatment.html>

51. history of septic arteritis on cephalexin culture gram+ cocci resistant to cephalexin (2 gener cephalo) what next:

- A. Vancomycin
- B. stop drug
- C. continuous

Answer: A

Because community-acquired MRSA is resistant to traditional *S. aureus* treatments such as antistaphylococcal penicillins (e.g., dicloxacillin) and cephalosporins (e.g., cephalexin [Keflex], cefadroxil [formerly Duricef]), U.S. physicians have prescribed a variety of other antibiotics to treat these infections (see accompanying table).

Reference: <http://www.aafp.org/afp/2009/0501/p802.html#afp20090501p802-ut1>

51. Immunocompromised patient which vaccine will give for her brother?

- A. Varicella
- B. Pneumococcus

smle ,2017

C. Influenza

Answer: C

If the immunocompromised patient is six months or older, household members may receive the inactivated influenza vaccine, or the live attenuated influenza vaccine if they are healthy, not pregnant, and two to 49 years of age.

Reference: <http://www.aafp.org/afp/2014/1101/p664.html>

52. same as 45

53. Old lady with sharp chest pain and fever diagnosed with pericarditis what will you do to dx the case, most accurate test is:

- A. Acid fast stain
- B. Pericardial biopsy
- C. Pleural aspiration

Answer: B

When evaluating for tuberculous pericarditis, the diagnostic yield for acid-fast bacilli (AFB) in pericardial fluid is fairly low (30-76%). Pericardial biopsy has a much better yield (approximately 100%). Elevated adenosine deaminase in pericardial fluid is useful for diagnosing tuberculosis; studies note greater than 90% sensitivity and specificity with levels higher than 50-70 U/L.

Reference: <http://www.uptodate.com/contents/tuberculous-pericarditis>

54. Patient after 24 h from eating from restaurant and found gram positive bacilli in food ,what is the organism ?

- A. Salmonella (G-ve)
- B. Shigella (G-ve)
- C. B.cerus

Answer: C

At least three gram-positive sporeforming rods are known to cause bacterial food poisoning: Clostridium perfringens (welchii), C. botulinum, and Bacillus cereus

Reference: https://link.springer.com/chapter/10.1007/978-1-4615-7476-7_21

55. 12 y/o with bilateral lower lung infiltration treatment?

- A. Ciprofloxacin
- B. Azithromycin
- C. penicillin

Answer: B

In the treatment of mycoplasmal pneumonia, antimicrobials against M pneumoniae are bacteriostatic, not bactericidal. Tetracycline and erythromycin compounds are very effective. The second-generation tetracyclines (doxycycline) and macrolides are the drugs of choice.

Reference: <http://emedicine.medscape.com/article/1941994-medication>

56. Patient has central line what is the most common cause of infection
- A. Skin opening
 - B. drug administration
 - C. contamination from staff hand

Answer: A

skin colonization is the most common source of cvc infection by microorganism from the patient's skin and occasionally the hands of the healthcare worker.

bacterial migration

- migration of microbes from catheter-skin interface extraluminal to the catheter-vessel interface (most common situation)

- Staphylococci (S. aureus, coagulase negatives)

Reference : <http://lifeinthefastlane.com/ccr/central-line-infections>

57. Repeated UTI , US revealed stones, organism with swarming motility ,the organism is?
- A. *Proteus mirabilis*
 - B. *Pseudomonas*
 - C. *E coli*

Answer: A

P. mirabilis infections frequently develop into cystitis and pyelonephritis and can be further complicated by catheter encrustation and formation of urinary stones

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3591990/>

58. Associated with animal bites?
- A. *Pasteurella multocida*
 - B. *Pseudomonas*
 - C. *Eikenella*

Answer: A

A detailed pet history, including exposure to pets owned by friends or strangers, should reveal the possibility of *Pasteurella* infection

Reference: <http://emedicine.medscape.com/article/224920-clinical>

59. HSV-2 most appropriate treatments?
- A. Acyclovir
 - B. Lamivudine
 - C. Ribavirin

Answer: A

Reference: <http://emedicine.medscape.com/article/218580-treatment>

60. Patient with vesicles in forehead and supraorbital region for one day, what will udo?
- A. Antiviral
 - B. Antiviral and refer to ophthalmic
 - C. Reassure

Answer: B

smle ,2017

Patients with diagnosed or suspected HZO should receive antiviral therapy and should be promptly referred to an ophthalmologist.

Reference: <http://emedicine.medscape.com/article/1132465-treatment#d9>

61. IV drug abuser has HIV +ve. oral thrush and symptoms of pneumonia. x ray and Bron- cho alveolar lavage was done. after staining with silver stain. Pneumocystisjiroveci was found. what is the most likely predictor of her HIV infection?

- A. pneumocystis jiroveci infection
- B. IV drug use
- C. candida

Answer: A

Pneumocystis jiroveci pneumonia (PJP), formerly known as Pneumocystis carinii pneumonia (PCP), is the most common opportunistic infection in persons with HIV infection.

Reference: <http://emedicine.medscape.com/article/225976-overview#showall>

62. Patient on anti TB medication complaining of numbness and paresthesia what is the treatment:

- A. Pyridoxine
- B. Iron
- C. Thiamine

Answer: A

Vitamin B6 (pyridoxine) supplementation during isoniazid (INH) therapy is necessary in some patients to prevent the development of peripheral neuropathy.

Reference: Pubmed & first aid step1(2015 edition, page 90)

63. Patient presented with meningitis symptom and he swim in the river what is the organ- ism

- A. s. Pneumonia
- B. h. Influenza
- C. n. meningitis

Answer: not complete

Naegleria fowleri (parasite) lives in fresh water such as lakes, ponds and poorly maintained swimming pools, and can cause meningitis

Reference:First aid step1(2015 edition, page 150)

64.Q about susceptibility to fungal and viral infections or repeated fungal & viral infec- tions:

- A. T cell deficiency
- B. B cell deficiency
- C. phagocytes deficiency

Answer:Q not complete but most likely it's A
smle ,2017

Maybe its DiGeorge syndrome.

65. Pt on cloxacillin for staph micro reported it is resistant to one of the cephalosporins what to do:
- A. Continue cloxacillin
 - B. Start vancomycin
 - C. Stop antibiotics

Answer: B

Because community-acquired MRSA is resistant to traditional *S. aureus* treatments such as antistaphylococcal penicillins (e.g., dicloxacillin) and cephalosporins (e.g., cephalexin [Keflex], cefadroxil [formerly Duricef]), U.S. physicians have prescribed a variety of other antibiotics to treat these infections (see accompanying table).

Reference: <http://www.aafp.org/afp/2009/0501/p802.html#afp20090501p802-ut1>

66. No question

67. Abdominal pain and fever, then constipation then diarrhea. Culture showed gram -ve rod, non-lactose fermenting, oxidase -ve organism that produces hydrous sulphate. Most appropriate treatment? (*Salmonella Typhi*)

- A. 50s subunit
- B. DNA gyrase inhibitor
- C. Transpeptidase

Answer: B

Fluoroquinolones and ceftriaxone are the drug of choice for treating typhoid fever.

Reference: Reference: First aid step1(2015 edition, page 139)

68. What two drugs are contraindicated together?

- A. Digoxin and Levodopa
- B. Sulphate
- C. Tetracycline and aluminum

Answer: C

Reference: <http://reference.medscape.com/drug/tetracycline-342550#3>

69. Repeated pediatric question

70. Bee sting since 18 hrs. With swelling and redness, what will you do?

- A. Antihistamines
- B. Steroids
- C. Observe

Answer: A

Local reactions can be life threatening if swelling occludes the airway. initiate invasive measures to secure the airway if this occurs. Otherwise, the following local care measures suffice:

- Provide supplemental oxygen
- Diphenhydramine limits the size of the local reaction.
- Clean the wound and remove the stinger if present.
- Apply ice or cool packs.
- Elevate the extremity to limit edema.

*Treatment should include an initial intravenous (IV) bolus of 10-20 mL/kg isotonic crystalloids in addition to diphenhydramine and epinephrine.

*If the patient has not removed the stinger, it should be removed as soon as possible by the first caregiver on the scene. Delay increases venom load, so the fastest removal technique is the best. Pinching and traction is an acceptable technique.

Reference: <http://emedicine.medscape.com/article/768764-treatment>

71. which cause insomnia irritability and restless?

- A. TCA
- B. tetracycline antidepressant
- C. SSRI

TCA Causes sedation

Answer: C

Reference: First aid step1(2015 edition, page 523)

72. patient came from Sudan before two weeks and developed fever headache and vomiting what is the best diagnostic test?

- A. blood culture
- B. Stools culture
- C. Peripheral blood picture.

Answer C

Malarial infection is suspected. Individuals are generally asymptomatic for 12 to 35 days but can commence symptoms as early as 7 days (depending on parasite species) In most cases, the incubation period for P. falciparum infection is about 12 to 14 days (range 7 to 30 days); most infections due to P. falciparum become clinically apparent within one month after exposure. Detection of parasites on Giemsa-stained blood smears by light microscopy is the standard tool for diagnosis of malaria and remains the most common onsite diagnostic method

Reference: <http://www.uptodate.com/contents/clinical-manifestations-of-malaria>

73. Long scenario of patients labs show low hg low platelet with normal reticulocyte which Antibiotic cause this ?

- A. Tetracycline
- B. Chloramphenicol
- C. Cefepime

Answer: B

Aplastic anemia comes with low RBC,WBC,platelet and normal reticuloctye count

Reference: Step up to medicine 3rd edition page 330 and 326, look at the chart

74. A patient with an infection that is resistant to Beta-lactam antibiotics, what antibiotic should be given?

smle ,2017

- A. Azithromycin
- B. Vancomycin
- C. Gentamicin

Answer: B

Because community-acquired MRSA is resistant to traditional *S. aureus* treatments such as antistaphylococcal penicillins (e.g., dicloxacillin) and cephalosporins (e.g., cephalexin [Keflex], cefadroxil [formerly Duricef]), U.S. physicians have prescribed a variety of other antibiotics to treat these infections (see accompanying table).

Reference: <http://www.aafp.org/afp/2009/0501/p802.html#afp20090501p802-ut1>

75. long Scenario about old male bedridden on foley's catheter he develop Gram -ve bac- teria what is the organism

- A. E.coli
- B. pseudomonas aeruginosa
- C. strep. Pneumonia

Answer : A

E. coli Short-term catheters are placed for a mean duration of 2-4 days. The usual indications are for acute illnesses, output measurement, perioperative routine, and acute retention. Approximately 15% of patients develop bacteriuria, usually with a single organism (E coli).

Reference: <http://emedicine.medscape.com/article/231574-overview#showall>

76. A man came from Africa with some symptoms. Vital signs were provided. What is the diagnosis?

- A. Yellow fever
- B. Ebola
- C. Lassa fever

Answer: not complete

Not complete

Viral Hemorrhagic Fevers						
Disease	Reservoir	Transmission	Incubation period	Geography	Mortality rate	Clinical features of severe disease ¹
Lassa fever	Multimammate rats (<i>Mastomys natalensis</i>)	Urine from rat Body fluids from patients	6-21 days	West Africa	15%	Hemorrhage, shock, encephalopathy, ARDS (responds to ribavirin) Deafness in survivors
Ebola fever	Undefined (?bats)	Body fluids from patients Handling infected primates	2-21 days	Central Africa Outbreaks as far north as Sudan	25-90%	Hemorrhage, hepatic and renal failure
Marburg fever	Undefined	Body fluids from patients Handling infected primates	3-9 days	Central Africa Outbreak in Angola	25-90%	Hemorrhage, diarrhea, encephalopathy, orchitis
Yellow fever	Monkeys	Mosquitos	3-6 days	Tropical Africa, South and Central America	~ 15%	Hepatic failure, renal failure, hemorrhage
Dengue	Humans	<i>Aedes aegypti</i>	2-7 days	Tropical and subtropical coasts; Asia, Africa, Americas	< 10% ²	Hemorrhage, shock

77. Patient with oral ulcers. Culture showed herpesvirus
- A. HSV 2
 - B. VSV
 - C. HSV 1

Answer: C

HSV-1 is traditionally associated with orofacial disease, while HSV-2 is traditionally associated with genital disease.

Reference: <http://emedicine.medscape.com/article/218580-overview>

78. Dog bite infection caused by?
- A. Viral
 - B. Bacterial
 - C. Polymicrobial

Answer: C

Infections can be caused by nearly any group of pathogens (bacteria, viruses, rickettsia, spirochetes, fungi). At least 64 species of bacteria are found in the canine mouth, causing nearly all infections to be mixed. Common bacteria involved in dog bite wound infections include the following:

Staphylococcus species Streptococcus species Eikenella species Pasteurella species Proteus species

Klebsiella species Haemophilus species Enterobacter species

DF-2 or Capnocytophaga canimorsus Bacteroides species

Moraxella species Corynebacterium species Neisseria species Fusobacterium species Prevotella species Porphyromonas species

Reference: <http://emedicine.medscape.com/article/768875-overview>

79. patient can't take BCG vaccine Because he has deficiency in
- A. IL
 - B. TNF gamma
 - C. IFN

Answer: C

BCG, like most vaccines, stimulates antibodies and creates a resistance without damaging the organism. The BCG vaccine recruits CD4 and CD8 T cells as a response to protective mycobacterial antigens (Figure 2) (5). After recruiting these cells, the new cells are exposed to the macrophage product interleukin 12 which calls for T cells to secrete interferon γ (6).

When Mycobacterium tuberculosis enters the cell, interferon γ reduces the pH in the phagosomal

membrane and produces superoxide and nitric oxide, which can destroy Mycobacterium tuberculosis (6).

Reference: https://microbewiki.kenyon.edu/index.php/BCG_Vaccine

80. HIV patient test to confirm:
- A. PCR
 - B. Western blot
 - C. Elisa

answer: B

western blot is confirmatory. Elisa is for screening. If s negative, other tests are not usually needed.

Reference: <http://emedicine.medscape.com/article/211316-overview>

81. HIV patient, presented with SOB and productive cough. Lung biopsy showed soap bubble like intra-alveolar lesions with exudates, small cyst, stained by silver stain.
- A. Pneumocystis jiroveci
 - B. Aspergillus fumigatus
 - C. Cryptococcus neoformans

Answer: A (silver stain) AND C (Soap bubble) !!

Reference: <http://emedicine.medscape.com/article/225976-overview>

82. HIV presents commonly with?
- A. opportunistic infection
 - B. chronic diarrhea
 - C. generalized lymphadenopathy

Answer: C

The patient may present with signs and symptoms of any of the stages of HIV infection. Acute seroconversion manifests as a flu like illness, consisting of fever, malaise, and a generalized rash. The asymptomatic phase is generally benign.

Generalized lymphadenopathy is common and may be a presenting symptom.

Note: A AND B are indicative of AIDS not HIV

Reference: <http://emedicine.medscape.com/article/211316-clinical>

83. Patient had 1.5 cm calcified lesion in the routine chest x ray . He's symptomless. Next action will be.

Answer:

- A. observation
- B. percutaneous biopsy
- C. transbronchial biopsy

Answer: C

Patients with solitary pulmonary nodules are usually asymptomatic. However, solitary pulmonary nodules can pose a challenge to clinicians and patients. Whether detected serendipitously or during a routine investigation, Patients with early lung cancer, when the primary tumor is less than 3 cm in diameter without evidence of lymph node involvement or distant metastasis (stage

1A), have a 5-year survival rate of 70-80%. Therefore, prompt diagnosis and management of early lung cancer manifesting as a solitary pulmonary nodule is the the best chance for cure. Because the yield from bronchoscopy is only 10-20% when the nodule is less than 2 cm in diameter, bronchoscopy and transbronchial needle aspiration (TBNA) may be helpful when the lesion is either endobronchial in location or near a large airway.

Reference: <http://emedicine.medscape.com/article/2139920-overview>

84. Dental caries caused by which organism?

- A. Candida
- B. HSV
- C. Streptococcus mutans

Answer: C

Caries develop through a complex interaction in which transmissible cariogenic oral microflora, primarily Streptococcus mutans and lactobacilli, metabolize fermentable dietary carbohydrates, resulting in lactic acid production.[3] The resultant drop in pH at the tooth surface results in dissolution of the mineral component of the enamel.

Reference: http://www.medscape.com/viewarticle/722767_2

85. Patient with hemosiderin laden macrophages- what is the diagnosis? (Answers we're all pulmonary causes)

- A. CMV
- B. Pneumocystis jiroveci
- C. Chronic lung infection

Answer: B

Reference: <http://emedicine.medscape.com/article/225976-overview#showall>

86. Drug that cause white patches in mouth. What is the inhaler?

- A. Ipratropium
- B. Short acting beta2 agonist
- C. Steroid

Answer: C

Children on inhaled steroids also have increased incidence of oral candidiasis.

Reference: <http://emedicine.medscape.com/article/969147-overview>

87. Patient is allergic to sulfa drugs and penicillin and shellfish. She has UTI what antibiotic you will give?

- A. Nitrofurantoin
- B. Trimethoprim Sulfamethoxazole
- C. Amoxicillin

Answer: A

Beta-lactam antibiotics (eg, amoxicillin-clavulanate, cefdinir, cefaclor, cefpodoxime-proxetil) may be used when other recommended agents cannot be used. B is a sulfa contacting antibiotic.

Reference: <http://emedicine.medscape.com/article/233101-overview>

smle ,2017

88. A married woman was diagnosed with UTI. Urine culture revealed Staphylococcus Saprophyticus. What you should ask this patient about?

- A. Use of condom and spermicides.
- B. Alcohol consumption.
- C. Fecal incontinence.

Answer: A

Sexual intercourse contributes to increased risk, as does use of a diaphragm and/or spermicide.

Reference: <http://emedicine.medscape.com/article/233101-overview>

89. Pt with 1st metatarsal joint pain, redness and erythema High temperatures? What is the cause?

- A. staph aureus
- B. NA monourate crystal
- C. Ca pyrophosphate crystal

Answer:B

Na monourate crystals, Gout and pseudogout are the 2 most common crystal-induced arthropathies. Gout is caused by monosodium urate monohydrate crystals

Reference: <http://emedicine.medscape.com/article/329958-overview>

90. Patient has whitish elevated patchy lesion over the dorsal surface of the tongue, it does not remove after scrubbing the lesion, what is the most likely diagnosis?

- A. Dysplasia
- B. Neurofibroma
- C. Foreign body

Answer: A

Dx Leukoplakia itself is a benign reactive process. However, between 1 and 20 percent of lesions will progress to carcinoma within 10 years. The clinical significance and natural history of oral leukoplakia depends upon the presence and degree of dysplasia

Reference: [SMLE Made Easy](#)

91. medical student diagnosed as meningitis, what you do for him ?

- A. Start antibiotics
- B. isolate him for 4 weeks
- C. give him influenza vaccine for his colleagues

Answer: A

bacterial meningitis must be the first and foremost consideration in the differential diagnosis of patients with headache, neck stiffness, fever, and altered mental status. Acute bacterial meningitis is a medical emergency, and delays in instituting effective antimicrobial therapy result in increased morbidity and mortality.

Reference: <http://emedicine.medscape.com/article/232915-overview>

92. Known case of HIV, Have several problems on iris ,Including the word"necrotizing" Wt the cause?

- A. HIV
- B. Cytomegalovirus?

smle ,2017

C. toxoplasma

Answer: Not complete but most likely B

CMV chorioretinitis is the most common manifestation of CMV disease in HIV-infected patients
<http://emedicine.medscape.com/article/215702-overview>

93. (long scenario) how does hyperglycemia cause infection to occur?

- A. allow bacteria to grow.
- B. decrease immune response.
- C. impairs phagocytosis

Answer: C

Studies have demonstrated impairment of host defenses, including decreased polymorphonuclear leukocyte mobilization, chemotaxis, and phagocytic activity related to hyperglycemia.

Reference: <http://www.ncbi.nlm.nih.gov/pubmed/16006275>

94. patient have a chronic liver disease and you found a fungal infection which drug you will use

- A. fluconazole
- B. itraconazole
- C. amphotericin

ANSWER: C

The only one metabolized by the kidney.

Reference: BY cons

95. patient has DM & HTN (I think on captopril which induce dry cough) present with mild ankle edema and +ve protein in urine what will give instead of ACEI! ,, I'm not sure about this Q

- A. ARB
- B. Thiazide
- C. CCB

Answer: A

ARBs would be predicted to be acceptable substitutes for ACE inhibitors in patients who have adverse events such as kinin-mediated cough.

Reference: http://www.medscape.com/viewarticle/484537_2

96. patient with secondary syphilis was treated with penicillin 2 hours from the firstdose he developed fever myalgia and malaise. what is your management?

- A. Epinephrine
- B. Antihistamine
- C. symptomatic management with paracetamol

Answer: C

- Dx is Jarisch-Herxheimer reaction is an acute febrile reaction that usually occurs within the first 24 hours after any therapy for syphilis. The fever may be accompanied by headache, myalgias, rigors, sweating, hypotension, and the worsening of rash if initially

smle ,2017

present. . These symptoms normally only last 24 hours and are not serious. The symptoms can be treated with paracetamol.

Reference: Smle made Easy

97. old patient on antiviral treatment for the influenza, intranasal, the mechanism of action of this antiviral is to:

- A. Inhibit viral neuraminidase
- B. DNA gyrase
- C. Polymerase

Answer: A

Zanamivir, an antiviral agent, is a neuraminidase inhibitor

Reference: <https://www.drugbank.ca/drugs/DB00558>

98. Patient c/o fever ,productive cough , x-ray show right lung opacification and obliteration of right costophrenic angle what you'll find on examination?

- A. crepitations on both lungs
- B. absence of vesicular breathing sounds of rt side
- C. presence of bronchial breathing

Answer: C

Referece: <http://emedicine.medscape.com/article/300157-clinical#b3>

99. KSA have implemented strong regulations regarding worker health cares, which of the following diseases if the worker had, he can't work?

- A. HeB
- B. HeC
- C. HIV

Answer: c (NOT SURE)

100. bacteria grow in antiseptic and detergent

- A. E. coli
- B. klebsiella answer

Pseudomonas

Same as question no.14

101. No question

102. Patient with hyperpigmented non pruritic papules in the dorsum of the hands not resolved with antifungal?

- A. tinea corporis
- B. lichen planus

Answer: Not complete, repeated in derma section.

65. Vesicles on the eye and forehead?

- A. Herpes zoster ophthalmicus.
- B. Herpes virusophthalmic.

smle ,2017

Answer: A

Explanation: Herpes zoster ophthalmicus, can result from involvement of the dermatomal distribution of the ophthalmic branch of the trigeminal cranial nerve

Reference: [Uptodate](#)

66. The type of Hepatitis B vaccine is

- A. Recombinant
- B. Inactivated

Answer: A (recombinant DNA techniques)

Explanation: Plasma-derived and recombinant HBV vaccines use HB-Surface Ag to stimulate the production of anti-HBV in non-infected individuals. The vaccines are highly effective, with a greater than 95% rate of sero-conversion. Vaccine administration is recommended for all infants as part of the usual immunization schedule, as well as for adults at high risk of infection (eg, those receiving dialysis and healthcare workers).

Reference: <http://emedicine.medscape.com/article/775507-treatment#d15>

67. Best method to prevent food poisoning?

- A. high cooked food and rewarm
- B. other wrong

Answer: A

Explanation: You can kill harmful organisms in most foods by cooking them to the right temperature.

Reference: <http://www.mayoclinic.org/diseases-conditions/food-poisoning/manage/ptc-20337636>

68. 19-year-old boy after unprotected sex he developed generalized rash involving hand and feet

- A. Chlamydia
- B. Syphilis

Answer: B

Explanation: Rash is the most characteristic finding of secondary syphilis and can take any form, except vesicular lesions. The rash is classically a diffuse, symmetric macular or papular eruption involving the entire trunk and extremities including the palms and soles

Reference: [Uptodate](#)

69. Patient with +ve PPD for the first time and -ve CHEST X-RAY. No signs or symptoms of TB, what to do:

- A. Reassure
- B. INZ for 6 months
- C. Others

Answer: B

Explanation: US guidelines endorse either six or (preferably) nine months of treatment with isoniazid or four months of treatment with rifampin, we prefer the four month regimen with rifampin because completion rates are higher and side effects are fewer than with other regimens

Reference: [Uptodate](#)

70. Treatment of chlamydia:

- A. azithromycin
- B. doxycycline
- C. metronidazole

Answer: B

Explanation: First-line agents — In general, *C. trachomatis* is highly susceptible to tetracyclines and macrolides. Within these two classes, first-line agents include doxycycline and azithromycin, respectively.

Reference: [Uptodate](#)

71. Generalized cervical lymphadenopathy + mild tenderness + low grade fever. What's the most likely diagnosis?

- A. small lymphocytic lymphoma
- B. hodgkin's lymphoma EBV
- C. EBV

Answer: C

Explanation: EBV (LYMPHOMA IS NOT TENDER)

Infectious mononucleosis is the best known acute clinical manifestation of EBV. It often begins with malaise, headache, and low-grade fever before development of the more specific signs of tonsillitis and/or pharyngitis, cervical lymph node enlargement and tenderness, and moderate to high fever

Reference: [Uptodate](#)

72. Cervical infection can enter to superior-mediastinum through:

- A. Retro-pharyngeal space
- B. Para-pharyngeal space
- C. Carotid sheath

Answer: A

Explanation: The predisposing factors of mediastinal extension in DNI (Deep Neck infections) were older age, involvement of two or more spaces, especially including the retropharyngeal space, and more comorbidities.

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3373973/>

73. Bacteroids in gunshot wound abdomen, what antibiotics:

- A. clindamycin
- B. metronidazole or cefoxitin
- C. Others

smle ,2017

Answer: B

Explanation: Bacteroides species are anaerobic bacteria that are predominant components of the bacterial flora of mucous membranes and are therefore a common cause of endogenous infections. Bacteroides infections can develop in all body sites, including the CNS, the head, the neck, the chest, the abdomen, the pelvis, the skin, and the soft tissues. Single agents that can serve this role are the carbapenems or a combination of a beta-lactam-beta-lactamase inhibitor and metronidazole for anaerobes. Although clindamycin, cefoxitin, cefotetan, and moxifloxacin were previously considered acceptable options for intraabdominal sepsis involving anaerobes, these drugs are no longer advocated due to escalating rates of resistance by B. fragilis group.

Reference: 1- <http://emedicine.medscape.com/article/233339-overview2->
<http://cursoenarm.net/UPTODATE/contents/mobipreview.htm?4/25/4497>

74. diagnosis of pertussis:

- A. Nasopharyngeal swab
- B. Throat swab

Answer: A

Explanation: The culture specimen should be obtained during the first 2 weeks of cough by using deep nasopharyngeal aspiration, Sensitivity is 30% to 60% if culture taken under 2 weeks after symp-toms start. Sensitivity decreases if culture taken 3 weeks after onset of cough.(BMJ)

Reference: <http://emedicine.medscape.com/article/967268-overview>

75. Hemosiderin laden in alveolar lavage?

- A. Due to PCP
- B. CMV

Answer: B

Reference: [NCBI](#)

76. Patient with meningitis and facial nerve palsy, what is the organism*?

- A. H. Influenza
- B. Streptococcus pneumoni

Answer:

Explanation: expected, the most common etiology for aseptic meningitis with peripheral facial nerve palsy was Borrelia burgdorferi infection whereas enterovirus infection was the predominant cause for aseptic meningitis alone.

Reference: [NCBI](#)

77. Scenario of patient with mastoiditis what is the proper antibiotic*:

- A. amoxicillin
- B. azithromycin

Answer: B

Explanation: IV antibiotic treatment is initiated immediately with a drug that provides CNS penetration, such as ceftriaxone 1 to 2 g (children, 50 to 75 mg/kg) once/day continued for ≥ smle ,2017

2 wk. Oral treatment with a quinolone may be acceptable. Subsequent antibiotic choice is guided by culture and sensitivity test results.

Reference:(merck manuals)?

78. after removal of phlegmon they found *Enterococcus faecalis* ? what antibiotic* ?

- A. ceftriaxone
- B. ciprofloxacin

Answer:

Explanation: Ampicillin is the drug of choice for monotherapy of susceptible *E. faecalis* infection. For most isolates, the MIC of ampicillin is 2- to 4-fold lower than that of penicillin. For rare strains that are resistant to ampicillin because of beta-lactamase production, ampicillin plus sulbactam may be used. Vancomycin should be used in patients with a penicillin allergy or infections with strains that have high-level penicillin resistance

Reference: <http://emedicine.medscape.com/article/216993-treatment>

79. girl prick her nail when she cut the rose. the lesion becomes ulcerated then transmitted lesion on same lymphatic drainage, what the organism?

- A. *Aspergillus*
- B. sporotrichosis

Answer :B

Explanation: The characteristic infection involves suppurating subcutaneous nodules that progress proximally along lymphatic channels (lymphocutaneous sporotrichosis).

Reference: Medscape

80. Patient will be in a risk of *Neisseria* infection defect in which of the following:

- A. classical complement pathway
- B. final lytic complement pathway

Answer:A

Explanation: deficiency of C3 is associated with increased susceptibility to meningococcal disease. Inherited C3 deficiency is however uncommon, but is associated with an increased incidence of pyogenic infections, including those caused by *N. meningitidis*, *Streptococcus pneumoniae*, and *Haemophilus influenzae*.

Reference: NCBI

81. Smoker c/o whitish lesion on mouth, not removed by wash, what is Your diagnosis?
- A. Thrush
 - B. Leukoplakia

Answer :B

Explanation: Leukoplakia is a condition in which thick, white patches form on your tongue and the lining of your mouth. Smoking is the most common cause.

Reference:

<http://www.healthline.com/health/leukoplakia#overview1>

82. Transmitted of parasite by ingestion of undercooked beef?
- A. Schistosoma
 - B. Taenia saginata
 - C. Tenia solium*
 - D. Entamoeba

Answer: B

Explanation: Humans can become infected with these tapeworms by eating raw or undercooked beef (*T. saginata*) or pork (*T. solium* and *T. asiatica*)

Reference: https://www.cdc.gov/parasites/taeniasis/gen_info/faqs.html

122. TB test:
- A. IFN γ
 - B. TGN or IGRAs (or like that)

Answer: B

Explanation: TB blood tests: TB blood tests (also called interferon-gamma release assays or IGRAs) measure

how the immune system reacts to the bacteria that cause TB. An IGRA measures how strong a person's immune system reacts to TB bacteria by testing the person's blood in a laboratory. Two IGRAs are approved by the U.S. Food and Drug Administration (FDA) and are available in the United States:

1. QuantiFERON[®]–TB Gold In-Tube test (QFT-GIT)
2. T-SPOT[®].TB test (T-Spot)

- Positive IGRA: This means that the person has been infected with TB bacteria. Additional tests are needed to determine if the person has latent TB infection or TB disease. A health care worker will then provide treatment as needed.

- Negative IGRA: This means that the person's blood did not react to the test and that latent TB infection or TB disease is not likely.

IGRAs are the preferred method of TB infection testing for the following:

- People who have received bacille Calmette–Guérin (BCG). BCG is a vaccine for TB disease.
- People who have a difficult time returning for a second appointment to look for a reaction to the TST. There is no problem with repeated IGRAs.

Reference <http://www.cdc.gov/tb/topic/testing/>

123. patient with renal stones and hematuria, most likely organism?

- A. Schistosoma haematobium
- B. E coli

Answer: B

Reference

Borghi, Loris, Antonio Nouvenne, and Tiziana Meschi. "Nephrolithiasis and urinary tract infections: 'the chicken or the egg' dilemma?." *Nephrology Dialysis Transplantation* 27.11 (2012): 3982-3984.

124. Patient transverse blood from Kenya and had anal infection

- A. HBV
- B. Syphilis

Answer: HIV ?

Explanation: Prevalence of HIV in Kenya is very high

Reference: Musyoki, Helgar, et al. "Prevalence of HIV, sexually transmitted infections, and risk behaviours among female sex workers in Nairobi, Kenya: Results of a respondent driven sampling study." *AIDS and Behavior* 19.1 (2015): 46-58.

125. Pt comes from Africa:

- A. EBola
- B. HIV

Answer: incomplete

EXTRA INFO. **EBOLA:** The incubation period, that is, the time interval from infection with the virus to onset of symptoms is 2 to 21 days. Humans are not infectious until they develop symptoms. First symptoms are the sudden onset of fever fatigue, muscle pain, headache and sore throat. This is followed by vomiting, diarrhea, rash, symptoms of impaired kidney and liver function, and in some cases, both internal and external bleeding (e.g. oozing from the gums, blood in the stools). Laboratory findings include low white blood cell and platelet counts and elevated liver enzymes.

Reference: Pubmed

126. Patient had throat infection 2 weeks ago was developed hematuria how to treat:

- A. Corticosteroids
- B. Thiazide

Answer: best is loop diuretics such as Furosemide (Lasix)

Explanation: the diagnosis is post strep glomerulonephritis

During the acute phase of the disease, restrict salt and water. If significant edema or hypertension develops, administer diuretics. Loop diuretics increase urinary output and consequently improve cardiovascular congestion and hypertension.

For hypertension not controlled by diuretics, usually calcium channel blockers or angiotensin-converting enzyme inhibitors are useful. For malignant hypertension, intravenous nitropruside or other parenteral agents are used.

Other features of therapy are as follows:

-Indications for dialysis include life-threatening hyperkalemia and clinical manifestations of smle ,2017

uremia

Restricting physical activity is appropriate in the first few days of the illness but is unnecessary once the patient feels well

-Steroids, immunosuppressive agents, and plasmapheresis are not generally indicated

Reference:

<http://emedicine.medscape.com/article/240337-treatment#d8>

127. organism gram positive cluster? what will be positive?

A. Coagulase

B. Oxidase

Answer: A

Explanation: One of the most important phenotypical features used in the classification of staphylococci is their ability to produce coagulase, an enzyme that causes blood clot formation.

Reference: Uptodate

128. Pt with ulcer on penis?

A. chancer

B. syphilis

Answer: incomplete question

Explanation: Lesions in primary syphilis are called (chancres) located in genital area and usually begin as solitary, painless, raised, firm and red papules while Chancroid is a bacterial sexually transmitted disease (STD) caused by infection with *Haemophilus ducreyi*. It is characterized by painful necrotizing genital ulcers that may be accompanied by inguinal lymphadenopathy. It is a highly contagious but curable disease.

Reference: <http://emedicine.medscape.com/article/229461-clinical>

129. Patient with Sore throat, skin rash , spleen enlarge, What is the cause ?

- A. Epstein-bar virus EBV
- B. CMV

Answer:A

Reference:<http://emedicine.medscape.com/article/222040-clinical>

130. How to diagnose Giardia lamblia?

- A. three consecutive stool analysis
- B. three separate stool analysis*

Answer: B

Explanation: Stool examination may be performed on fresh specimens or after preservation with polyvinyl alcohol or 10% formalin (with appropriate staining). Ideally, 3 specimens from different days should be examined because of potential variations in fecal excretion of cysts. *G intestinalis* is identified in 50-70% of patients after a single stool examination and in more than 90% after 3 stool examinations.

Reference:

[Medscape](#)

131. Old man with DM, has redness in calf area, raised and painful, tender*:

- A. Cellulitis
- B. Diabetic neuropathy

Answer: A

Explanation: cellulitis or Erysipelas if demarcated

Erysipelas and cellulitis are infections of the skin commonly found in Diabetics . Erysipelas is a superficial infection, affecting the upper layers of the skin, while cellulitis affects the deeper tissues. They can overlap, so it is not always possible to make a definite diagnosis between the two.

Reference:

- 1- <http://www.bad.org.uk/shared/get-file.ashx?id=156&itemtype=document>

132. Patient with damaged valve after a tooth extraction he got infective endocarditis, what is the organism:

- A. strep viridans
- B. staph aureus

Answer: A

Explanation: These account for 50%-80% of IE cases. Streptococcus viridans (eg, *S. anguis*, *S. milleri*, *S. mutans*, *S. mitior*) make up the normal bacterial flora of the pharynx and upper respiratory tract. Tonsillectomy, dental extraction, and dental cleaning can result in bacteremia and lead to infection.

Reference:

NCBI

133. fever with spot in molar tooth?

- A. Measles
- smle ,2017

B. Rubella

Answer: A

Explanation: Koplik's spots in measles; these are 1 to 3 mm whitish, grayish, or bluish elevations with an erythematous base, typically seen on the buccal mucosa opposite the molar teeth (opposite the upper 1st & 2nd molars) and are pathognomonic for measles

Reference: [Uptodate](#)

134. History of infection, Hb low, WBC high, what is the investigation:

- A. Bone marrow biopsy
- B. Hb electrophoresis

Answer: need more details

Explanation: *if the hx go with SCD > B .

*various clues including the leukocyte alkaline phosphatase score and the presence of basophil-ia were used to distinguish CML from a leukemoid reaction. However, at present the test of choice in adults to distinguish CML is an assay for the presence of the Philadelphia chromo- some, either via cytogenetics and FISH, or via PCR for the BCR/ABL fusion gene. The LAP (Leukocyte Alkaline Phosphatase) score is high in reactive states but is low in CML

Reference: [UpToDate](#)

135. patient with meningitis, which combination of antibiotic should be given?

- A. vancomycin + ampicillin
- B. amoxicillin + gentamycin

Answer: depends on the age

TABLE 10-3 Empiric Treatment for Acute Bacterial Meningitis		
Age or Risk Factor	Likely Etiology	Empiric Treatment
Infants (<3 mo)	Group B streptococci, <i>E. coli</i> , <i>Klebsiella</i> spp., <i>L. monocytogenes</i>	Cefotaxime + ampicillin + vancomycin (aminoglycoside if <4 weeks)
3 mo to 50 yrs	<i>N. meningitidis</i> , <i>S. pneumoniae</i> , <i>H. influenzae</i>	Ceftriaxone or cefotaxime + vancomycin
>50 yrs	<i>S. pneumoniae</i> , <i>N. meningitidis</i> , <i>L. monocytogenes</i>	Ceftriaxone or cefotaxime + vancomycin + ampicillin
Impaired cellular immunity (e.g., HIV)	<i>S. pneumoniae</i> , <i>N. meningitidis</i> , <i>L. monocytogenes</i> , aerobic gram-negative bacilli (including <i>P. aeruginosa</i>)	Ceftazidime + ampicillin + vancomycin

136. Which of the following organisms is seen in patients with chronic granulomatous disease?

- A. C.Difficile
- B. Staph aureus

Answer B

Explanation: The diagnosis of chronic granulomatous disease should be considered in any patient with recurrent infections with catalase-positive organisms; infections with unusual organisms such as *Serratia marcescens*, *A nidulans*, or *B cepacia*; or infections in sites normally considered to be rare in children, such as *Staphylococcus aureus* infection in a liver abscess.

Reference: [Illustrated Textbook of Pediatrics](#)

137. patient in ICU on ventilator develop yeast infection what is the treatment?

- C. Fluconazole
- D. itraconazole

Answer: A

Explanation: the most common antifungal agents used currently for the treatment of can- didemia are fluconazole and the echinocandins (caspofungin, micafungin, anidulafungin). Formulations of amphotericin b are given less often due to the risk of toxicity. Both the echinocandins and the azoles are better tolerated than amphotericin b formulations.”

& oxford journals: “overall, fluconazole-susceptible candida albicans remains the most common species causing candidaemia in icu patients.

Reference: [UpToDate](#)

138. Increase of which of the following prevalence cause reactivation of TB in developed countries?

- A. DM
- B. HIV

Answer: B

Reference: http://www.medscape.com/viewarticle/443137_2

139. parasite in soil contamination:

- A. tenia saginata
- B. ascaris-bancrofti
- C. Bancrofti

Answer: B

Explanation: Ascariasis is soil-transmitted helminth infections

Extra info: The main species that infect people are the roundworm (*Ascaris lumbricoides*), the

whipworm (*Trichuris trichiura*) and hookworms (*Necator americanus* and *Ancylostoma duodenale*)

Reference: https://wwwnc.cdc.gov/eid/article/21/2/14-0048_article

140. A farmer presented with 2 weeks history of fever, headache and one more symptom. What is the most likely diagnosis?

- A. Brucellosis
- B. Meningitis

smle ,2017

Answer: A,

Explanation: The trick in the duration, bacterial meningitis usually presents over several hours and also being a farmer is a definitive risk for Brucellosis. Brucellosis also can manifest as Neurobrucellosis, usually presenting as meningitis.

Cryptococcal meningitis may be present for several weeks- but it's not one of the options. In the other hand, brucellosis may show up any time from a few days to a few months after the person get infected. Brucellosis is an infectious disease. People can get the disease when they are in contact with infected animals or animal products contaminated with the bacteria. Ani- mals that are most commonly infected include sheep, cattle, goats, pigs, and dogs, among others.

Signs and symptoms include fever, headache, sweats, malaise, anorexia pain in muscles, joint, and/or back, fatigue

Reference: [UpToDate](#)

141. long scenario about pt coming from Africa 3 weeks ago with fever no other +ve points What is the Dx?

- A. Ebola
- B. yellow fever

Answer: A

Explanation: yellow fever incubation period 3-6 days and in this scenario 3 weeks so we exclude it ebola from 2 to 21 days so it could be if malaria present most likely 6–30 days (98% onset within 3 months of travel)

DISEASE	USUAL INCUBATION PERIOD (RANGE)	DISTRIBUTION
Incubation <14 days		
Chikungunya	2-4 days (1-14 days)	Tropics, subtropics
Dengue	4-8 days (3-14 days)	Topics, subtropics
Encephalitis, arboviral (Japanese encephalitis, tickborne encephalitis, West Nile virus, other)	3-14 days (1-20 days)	Specific agents vary by region
Enteric fever	7-18 days (3-60 days)	Especially in Indian subcontinent
Acute HIV	10-28 days (10 days to 6 weeks)	Worldwide

Influenza	1-3 days	Worldwide, can also be acquired while traveling
Legionellosis	5-6 days (2-10 days)	Widespread
Leptospirosis	7-12 days (2-26 days)	Widespread, most common in tropical areas
Malaria, <i>Plasmodium falciparum</i>	6-30 days (98% onset within 3 months of travel)	Tropics, subtropics

Malaria, <i>P. vivax</i>	8 days to 12 months (almost half have onset >30 days after completion of travel)	Widespread in tropics and subtropics
Spotted-fever rickettsiae	Few days to 2-3 weeks	Causative species vary by region
Incubation 14 Days to 6 Weeks		
Encephalitis, arboviral; enteric fever; acute HIV; leptospirosis; malaria	See above incubation periods for relevant diseases	See above distribution for relevant diseases
Amebic liver abscess	Weeks to months	Most common in developing countries
Hepatitis A	28-30 days (15-50 days)	Most common in developing countries
Hepatitis E	26-42 days (2-9 weeks)	Widespread
Acute schistosomiasis (Katayama syndrome)	4-8 weeks	Most common in sub-Saharan Africa

142. A case of a patient diagnosed to have cutaneous leishmania or baghdad boil which type of leishmania* ?

- A. Kala Azar /
- B. Donovan

Answers is B

Explanation: Cutaneous leishmaniasis (also known as oriental sore, baghdad boil) is the most common form of leishmaniasis affecting humans caused by (e.g., *L. major* and *L. tropica* *Leishmania tropica*, *L. major*, and *L. aethiopia*, as well as *L. infantum* and *L. donovani*.)

While Visceral leishmaniasis (VL), also known as kala-azar caused by (e.g., *L. infantum* and *L. donovani*).

Reference:

https://www.cdc.gov/parasites/leishmaniasis/health_professionals/index.html

Types

- Infection with *Leishmania* species can result in 3 main types of disease depending on the species, geographic region and host immune response.
- ***Leishmania donovani*** produces visceral leishmaniasis (kala-azar). Symptoms include fever (often 2 fever spikes per day), enlargement of the spleen and liver, weakness, and progressive emaciation. The disease is often fatal without treatment, but survivors often develop immunity.
- ***Leishmania tropica*** and *L. mexicana* produce cutaneous leishmaniasis which is characterized by skin lesions (oriental sore). Infected macrophages containing amastigotes are found primarily at the site of infection around the sores. The sores are characterized by an elevated rim encircling the lesion.
- ***Leishmania braziliensis*** produces mucocutaneous leishmaniasis, characterized by lesions near mucosal membranes. The initial site of infection is a small red papule that ulcerates in a few weeks. The lesions are flat (no raised rim) and often oozing. Infections of the ear, nose and mouth area lead to degeneration of the cartilage and soft tissues, resulting in disfigurement.

143. A child who ate honey develops progressive paralysis symptoms?

- A. Botulism
- B. *C. Perfringens*

Answer: A

Explanation: Honey can contain the bacteria that causes infant botulism so, children less than 12 months old should not be fed honey. Honey is safe for persons 1 year of age and older.

Reference: <http://www.cdc.gov/nczved/divisions/dfbmd/diseases/botulism/>

144. Fever and cough then facial nerve then loss of reflexes?

- A. Tetanus
- B. Botulism

Answer: B

Explanation: If Guillain-Barre syndrome was one of the choices it would be the answer. Signs and symptoms of botulism:

- Occur 6-48 h after ingestion of *Clostridium botulinum* from soil
- Difficulty with convergence, ptosis, paralysis of extraocular muscles.
- Dilated, poorly reactive pupils
- Jaw weakness, dysarthria, dysphagia.
- Spreads to trunk and limbs
- Abdominal cramps with n/v.
- Symmetric weakness with paralysis and absent/decreased deep tendon reflexes
- Anticholinergic symptoms: dry mouth, constipation, urinary retention

- Rarely respiratory distress.
Pattern of paresis often starts with gi symptoms (constipation, early satiety), then paresis of extraocular muscles, then dysphagia, then limbs/respiratory involvement; all associated with dry mouth

Reference: Toronto note.

145. patient with honeymoon cystitis. Which of following could be the organism?

- C. Staph.saprophyticus
- D. E,coli

Answer: A

Explanation: Honeymoon cystitis is a bladder infection that results from sexual activity. It occurs when the bacteria travels in the upward direction from the urethra to the bladder.

Reference:

<http://www.m.webmd.com/a-to-z-guides/tc/understanding-bladder-infections-basic-information?page=2>

<http://www.urineinfection.net/honeymoon-cystitis-symptoms-and-relief/>

124. Positive PPD test but normal X-ray, what will you do?

- A. Isoniazid for 6 months
- B. Rifampin for 6 months

Answer: A (MTB)

Explanation: US guidelines endorse either six or (preferably) nine months of treatment with isoniazid or four months of treatment with rifampin.

Reference: UpToDate

125. TB case, what is the next appropriate step to get a definitive dx?

- A. Sputum smear under microscope
- B. Sputum culture

Answer: B

Explanation: Culture of sputum is the gold standard but can take weeks to obtain, acid fast stain can yield rapid preliminary results but lacks sensitivity. But AFB is the most specific test for TB and allows direct identification and determination of susceptibility of the causative organism.

References: 1- First Aid USMLE STEP 2 CK

2- <http://emedicine.medscape.com/article/230802-workup#c1>

126. Long scenario, bloody diarrhea and RBC in urine after 7 days hx of food poisoning, Treatment?

- A. STEROID
- B. ANTIBIOTIC

Answer: conservative, This is caused by E coli

Explanation: HUS (Hemolytic Uremic Syndrome) As the infection progresses, diarrhea becomes watery and then may become grossly bloody; that is, bloody to the naked eye.

E. coli symptoms also may include vomiting and fever, although fever is an uncommon symptom.

On rare occasions, E. coli infection can cause bowel necrosis (tissue death) and perforation without progressing to hemolytic uremic syndrome (HUS)—a complication of E. coli infection that is now recognized as the most common cause of acute kidney failure in infants and young children.

References:

<http://emedicine.medscape.com/article/175569-treatment>

154 Pt with barking cough and 38 temp which of the following symptoms is associated with this disease?

- A. Cyanosis
- B. Wheezing

Answer: A

Explanation: Barky cough=croup, and Croup maybe associated with complete airway obstruction which leads to hypoxia and cyanosis

*signs of hypoxia usually a (pallor or cyanosis) (uncommon) Impending respiratory failure.(BMJ)

References:

1-<http://emedicine.medscape.com/article/303533-overview>

2- [Kaplan pediatrics](#)

155. Patient with acute rheumatic fever show acute cardiac symptoms, what is the treatment?

- A. IV penicillin
- B. IM steroid

Answer: B

Explanation: Most patients with mild or moderate carditis without cardiac failure do not require any therapy. A subset of patients with carditis who develop cardiac failure do require treatment:

- Bed rest with ambulation as tolerated
- Medical management of heart failure; first-line therapy is diuretics, and ACE inhibitors may be added in severe heart failure or where aortic regurgitation is present.

Despite the absence of high-quality evidence to support the use of glucocorticoid therapy for patients with carditis and severe heart failure, there is consensus among clinicians treating rheumatic fever that the use of glucocorticoids can speed recovery.(BMJ).

References:

<http://emedicine.medscape.com/article/236582-treatment>

156. Patient with fever, pre-auricular swelling, (description of the swelling was provided), what is the diagnosis?

- A. Mumps
- B. Pre-auricular lymphadenopathy

Answer: need more details ?

Explanation:

Mumps parotitis is usually bilateral but may be unilateral. Pain while chewing or swallowing, especially while swallowing acidic liquids such as vinegar or citrus juice. Its swelling beyond the parotid in front of and below the ear. The skin over the glands may become tense and shiny.

Reference: merck manual.

157. Bacterial meningitis in LP

- A. decrease glucose and increase protein
- B. increase glucose and decrease protein

Answer: A

Reference:

<http://emedicine.medscape.com/article/2172226-overview>

Parameter	Normal	Bacterial Meningitis	Viral Meningitis	Fungal Meningitis	Tuberculous Meningitis
Opening pressure (mm H ₂ O)	<180	200-500	NA	>250 (<i>Cryptococcus</i> sp)	NA
WBC count (mm ³)	0-5	100-20,000 (mean 800)	5-500 (mean 80)	20-2,000 (mean 100)	5-2,000 (mean 200)
WBC differential	No predominance	>80% PMN	>50% L, <20% PMN	>50% L	>80% L
Protein (mg/dL)	15-50	100-500	30-150	40-150	>50
Glucose (mg/dL)	45-100 (2/3 of serum)	≤40 (<40% of serum)	30-70	30-70	<40
Gram stain (% +)	NA	60-90	–	–	37-87 (AFB smear)

+: positive; *-*: negative; AFB: acid-fast bacilli; CSF: cerebrospinal fluid; L: lymphocytes; NA: not applicable; PMN: polymorphonuclear cells; WBC: white blood cells. Source: References 9, 10.

158. Staph saprophyticus vaginal infection, what's a risk factor for it:

- A. Septicidal in condoms
- B. douching habit

Answer: A

Explanation:

Spermicide-coated condoms were associated with an increase risk of UTI caused by *S saprophyticus*. Because sexual activity and spermicide exposure are important risk factors for UTI caused by both *S saprophyticus*

Reference:

<https://www.ncbi.nlm.nih.gov/pubmed/9472209>

159. vesicles highly suspected roundworms:

- A. Ascaris
- B. Taeniasaginat

Answer: A

Reference:

<http://emedicine.medscape.com/article/212510-overview#showall>

160. Mycobacterium tuberculosis , that is the best culture media ?

- A. Blood agar
- B. Löwenstein-Jensen

medium Answer: B

Explanation:

Löwenstein–Jensen medium is a growth medium especially used for culture of *Mycobacterium*, notably *Mycobacterium tuberculosis* Among 2,648 specimens positive on culture for *Mycobacterium tuberculosis* over a 6-year period, 82% grew on Lowenstein-Jensen medium (LJ)

Reference:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC379926/>

161. Painless genital ulcer + lymph nodes enlargement

- A. Syphili

s Answer: A

Explanation:

smle ,2017

Single, painless, well-demarcated ulcer (chancre) with a clean base and indurated border
Mild or minimally tender inguinal lymphadenopathy

Reference:

<http://www.aafp.org/afp/2012/0201/p254.html>
<http://www.aafp.org/afp/2012/0201/p254.html>

162. enterococcus faecalis antibiotic and the patient is allergic to ampicillin, what to give?
A- Vancomycin

Answer: A

Explanation:

Ampicillin is the drug of choice for monotherapy of susceptible E faecalis infection. For most isolates, the MIC of ampicillin is 2- to 4-fold lower than that of penicillin. For rare strains that are resistant to ampicillin because of beta-lactamase production, ampicillin plus sulbactam may be used. **Vancomycin should be used in patients with a penicillin allergy or infections with strains that have high-level penicillin resistance due to altered PBPs**

Reference:

<http://emedicine.medscape.com/article/216993-treatment>

163. What is the best treatment for traveler's diarrhea ?
A- Ciprofloxacin

Answer: A

Explanation: Because traveler's diarrhea tends to resolve itself, you may get better without any intervention. It's important to try to stay hydrated with safe liquids, such as bottled water or canned juice. If you don't seem to be improving quickly, you can turn to several medications to help relieve symptoms such as Anti-motility agents, however you can use Abx to decrease the duration and severity of the disease.

Antibiotics Used for the Treatment of Traveler's Diarrhea. In areas where invasive organisms such as Campylobacter and Shigella are common, fluoroquinolones remain the drug of choice. Azithromycin is recommended in areas with quinolone-resistant Campylobacter and for the treatment of children and pregnant women.

Reference:

<http://www.aafp.org/afp/2005/0601/p2095.html>

164. Brucellosis prevention?
A-Pasteurization

Answer: A

Explanation: The best way to prevent brucellosis infection is to be sure you do not consume: undercooked meat
unpasteurized dairy products

Reference:

<http://www.cdc.gov/brucellosis/prevention/index.html>

smle ,2017

165. Female pt diagnosed with PID on ceftriaxone with no benefit wt is the organism

A. herpes

Answer: chlamydia?

Need more details

Explanation: Chlamydia & gonorrhea are the most common causative organisms causing PID.

Ceftriaxone is used for gonorrhea Tx.

Reference:

<http://emedicine.medscape.com/article/256448-overview>

166. woman with recurrent UTI, WHY?

A. Because it cleans itself of the from anus to vulva (my answer)

Answer: A

Explanation: Biologic or genetic factors — Women with recurrent UTI have been shown to have an in- creased susceptibility to vaginal colonization with uro-pathogens

Behavioral risk factors:

Spermicide use during the past year

Having a new sex partner during the past year

Having a first UTI at or before 15 years of age

Having a mother with a history of UTIs

Pelvic anatomy: Pelvic anatomy may predispose to recurrent UTI in some women,

Postmenopausal women

Urinary incontinence

Presence of a cystocele

Post Voiding residual urine

No associations were found between a history of recurrent UTI and pre- and postcoital voiding patterns, frequency of urination, delayed voiding habits, **wiping patterns**, douching, use of hot tubs, frequent use of pantyhose or tights, or body mass index.

Reference:

<http://www.uptodate.com/contents/recurrent-urinary-tract-infection-in-women#H5> <http://www.uptodate.com/contents/recurrent-urinary-tract-infection-in-women - H5>

<http://www.uptodate.com/contents/recurrent-urinary-tract-infection-in-women - H5>

<http://www.uptodate.com/contents/recurrent-urinary-tract-infection-in-women - H5>

167. Patient on central cath developed infection. Blood gram stain shows budding yeast?

A. Fluconazole

Answer: A

Explanation: Fluconazole (antifungal) was as effective as, but was less toxic than, amphotericin B

Reference: Toronto notes

168. Syphilis case, what do you give?

A. Penicillin Benzathine (aka penicillin G)

Answer: A

Explanation: Penicillin is the only recommended therapy for neurosyphilis, congenital syphilis, or smle ,2017

syphilis during pregnancy. Rarely, *T pallidum* has been found to persist following adequate penicillin therapy; however, there is no indication that the organism has acquired resistance to penicillin

The following regimens are recommended for penicillin treatment:

Primary or secondary syphilis

- Benzathine penicillin G 2.4 million units intramuscularly (IM) in a single dose

Early latent syphilis

- Benzathine penicillin G 2.4 million units IM in a single dose

Late latent syphilis or latent syphilis of unknown duration

- Benzathine penicillin G 7.2 million units total, administered as 3 doses of 2.4 million units IM each at 1-week intervals

- Treatment appropriate to the stage of syphilis is recommended.

Reference: <http://emedicine.medscape.com/article/229461-treatment#d7>

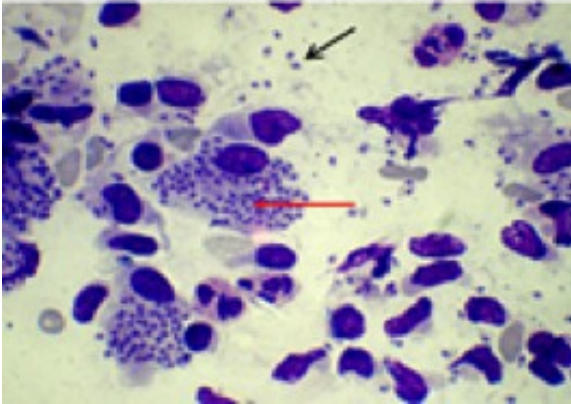
169.40 years old man presents with persistent lesion on the forearm that started 3 months ago. He came from a deserted area that has sand fly infestation. Giemsa stain showed Donovan bodies inside and outside monocytes. What will you use to treat him?

A. Miltefosine

Answer: A?

Explanation: This patient has leishmaniasis.

Leishman-Donovan bodies within histiocytes (Red Arrows) and extracellularly (black arrows) along with epithelial cells and inflammatory cells (Giemsa, X 400).



- Uncomplicated cutaneous leishmaniasis: Topical application of paromomycin or Intralesional antimony (Sodium stibogluconate, Meglumineantimoniate).
- Complicated cutaneous leishmaniasis: Oral systemic therapy; include azoles and miltefosine
- Agents with activity against visceral leishmaniasis (VL) include amphotericin B, pentavalent antimonial drugs, Paromomycin (a parenteral aminoglycoside), **Miltefosine** (the first oral drug for treatment of VL)

Reference:

<http://www.uptodate.com/contents/treatment-of-cutaneous-leishmaniasis> Additional information ; Topical paromomycin has been shown to be effective against cutaneous leishmaniasis caused by L major (in Iraq) and L mexicana.

While Oral miltefosine is used for Treatment of New World cutaneous leishmaniasis.

Reference:

<http://emedicine.medscape.com/article/220298-treatment#d9>

170. Oral leukoplakia that can't be swiped off. Most likely to be?

A. Dysplasia

Answer: A

Explanation: it's Hyperplasia of squamous cells >> dysplasia >> Carcinoma in situ?

Reference:

<http://emedicine.medscape.com/article/853864-overview#showall>

171. cholera vibrio antibiotic:

A. Doxycycline

Answer:A

Explanation ■ Recommendations for the Use of Antibiotics for the Treatment of Cholera

1. Oral or intravenous hydration is the mainstay of cholera treatment.
2. In conjunction with hydration, treatment with antibiotics is recommended for severely ill patients. It is particularly recommended for patients who are severely or moderately dehydrated and continue to pass a large volume of stool during rehydration treatment. Antibiotic treatment is also recommended for all patients who are hospitalized.
3. Antibiotic choices should be informed by local antibiotic susceptibility patterns. In most countries, **Doxycycline is recommended as first-line treatment for adults**, while azithromycin is recommended as first-line treatment for children and pregnant women. During an epidemic or outbreak, antibiotic susceptibility should be monitored through regular testing of sample isolates from various geographic areas.
4. None of the guidelines recommend antibiotics as prophylaxis for cholera prevention, and all emphasize that antibiotics should be used in conjunction with aggressive hydration.
5. Education of health care workers, assurance of adequate supplies, and monitoring of practices are all important for appropriate dispensation of antibiotics.

Reference: <https://www.cdc.gov/cholera/treatment/antibiotic-treatment.html>

172. How is giardia diagnosed?

A. 3 different stool sample

Answer: A

Explanation: Because Giardia cysts can be excreted intermittently, multiple stool collections (i.e., three stool specimens collected on separate days) increase test sensitivity.

Reference: Centers for Disease Control and Prevention.

Extra info.: Stool examination may be performed on fresh specimens or after preservation with polyvinyl alcohol or 10% formalin (with appropriate staining).

tools for diagnosis of giardiasis include antigen detection assays and stool examination. In areas where available, antigen detection tests are preferred over stool examination.

Antigen detection assays — a number of immunoassays using antibodies against cyst or trophozoite antigens have been developed for stool analysis. Available kits include direct immunofluorescent assays (dfa) that use fluorescein-tagged monoclonal antibodies, immunochromatographic assays, and enzyme-linked immunosorbent assays (elisas). In general, these methods have greater sensitivity and faster turn-around time than conventional stool microscopy methods.

Reference: <http://emedicine.medscape.com/article/176718-workup>

173. Lung disease causes clubbing

A. Bronchiectasis

Answer: A

smle ,2017

Explanation: It usually begins in the thumb and index fingers and is most often associated with pulmonary or cardiovascular diseases, including lung cancer, interstitial pulmonary fibrosis, lung abscess, pulmonary tuberculosis, pulmonary lymphoma, congestive heart failure, infective endocarditis, and cyanotic congenital heart disease . Less frequently, digital clubbing may occur in patients with extra-thoracic disease, including inflammatory bowel disease, liver cirrhosis, and gastrointestinal neoplasms

Reference: Uptodate

Extra info. :Bronchiectasis Findings on physical examination are nonspecific and may include the following:

- Crackles, rhonchi, scattered wheezing, and inspiratory squeaks on auscultation
- **Digital clubbing (2-3% of patients; more frequent in moderate-to-severe cases)**
- Cyanosis and plethora with polycythemia from chronic hypoxia (rare)
- Wasting and weight loss
- Nasal polyps and signs of chronic sinusitis
- Physical stigmata of cor-pulmonale, in advanced disease

Reference<http://emedicine.medscape.com/article/29691>

[-overview](#)

174. The most specific/ best diagnostic test for syphilis?

A- Fluorescent treponemal antibody absorption (FTA-ABS)

Answer: A

Explanation:

- Nontreponemal testing is commonly used for serologic screening for syphilis, which include VDRL, RPR, and TRUST. (These tests must be confirmed with specific treponemal testing since false positive nontreponemal tests can occur. Nontreponemal testing is performed initially due to its low cost.)
- Specific treponemal tests include FTA-ABS MHA-TP, TP-PA, and TPEIA.

Reference: UpToDate

175. Patient with needle sensation after TB drug.

A. Isoniazid

d Answer: A

Explanation:

*Isoniazid Adverse Effects

>10%

Mild elevation in LFTs (10-20%)

Peripheral neuropathy (dose-related incidence, 10-20% incidence with 10 mg/kg/d), Loss of appetite

smle ,2017

Nausea, Vomiting, Stomach pain, Weakness.

1-10%

Dizziness, Slurred speech, Lethargy, Progressive liver damage (increases with age; 2.3% in pts > 50 yo)

Hyperreflexia

<1%

Agranulocytosis, Anemia, Megaloblastic anemia, Thrombocytopenia, Systemic lupus erythematosus, Seizure

Reference:

<http://reference.medscape.com/drug/isoniazid-342564#4>

176. Schistosoma Antibiotics:

Praziquantel

Answer: A

Explanation:

Praziquantel is the

treatment and

Add glucocorticoid if acute schistosomiasis or neurologic complications develop.

Reference: Toronto notes

177. patient with lymphadenopathy, splenomegaly and fever:

A. infectious mononucleosis

Answer: A

Explanation:

infectious mononucleosis by EBV, early sign is a fever, lymphadenopathy. Later findings include hepatomegaly and splenomegaly.

Reference: medscape

178. A woman with jaundice and high liver enzymes. Her husband has +ve Hep B surface antigen but she does not have +ve markers for Hep A, B, C. What will you do now?

A-Check for anti Hep B core antibody (IgM)

Answer: A

Explanation: Because it will become +ve early.

interpretation of Hepatitis B Serologic Markers [\[5, 9\]](#)

	HB-sAg	Anti-HBs	Anti-HBc IgM	Anti-HBc IgG	HBeAg	Anti-HBe	HBV DNA
Susceptible to infection	-	-	-	-	-	-	-

smle, 2017

Immune due to natural infection	-	+	-	+	-	-/+	-*
Immune due to vaccination	-	+	-	-	-	-	-
Incubation	+	-	-	-	+	-	+
Acutely infected	-/+	-	+	-	+	-	+
Chronically infected	+	-	-/+**	+	-/+	-/+	+

(-) is undetectable; (+) is detectable; (-/+) means may be detectable

*Nondetectable with non-PCR method

**May be positive in 10%-15% patients with reactivation of infection

Reference: <http://emedicine.medscape.com/article/2109144-overview#a2>

179. Post-herpetic neuralgia treatment

A. Antiviral

Answer: antiviral reduces the incidence of postherpetic but its not a treatment.

Explanation: look at the image below

Reference: Master the board

Postherpetic Neuralgia

Herpes zoster reactivation, or shingles, is associated with a pain syndrome after resolution of the vesicular lesions in about 15% of cases. **Treatment with antiherpetic medications** such as acyclovir, famciclovir, or valganciclovir seems to **reduce the incidence of postherpetic neuralgia**, but steroids do not.

The pain is treated with tricyclic antidepressants, gabapentin, pregabalin, carbamazepine, or phenytoin until an effective therapy is found. Topical capsaicin is helpful. Most antiepileptic medications have some beneficial effect in neuropathic pain such as postherpetic neuralgia or peripheral neuropathy. However, none work in more than 50% to 70% of patients at best.

Prevention of Herpes Zoster (Shingles)

Zoster vaccine is indicated in all persons above the age of 60 to prevent herpes zoster (shingles). This vaccine is similar to the varicella vaccine routinely administered to children to prevent chicken pox or varicella, except that the dose is much higher.

180. bacteria associated with ventilator- pneumonia ?

A. Pseudomonas

Answer :A

Explanation: Bacteria cause most cases of HAP and ventilator-associated pneumonia (VAP), especially aerobic gram-negative bacilli such as Pseudomonas aeruginosa, Escherichia coli, Klebsiella pneumoniae, and Acinetobacter species. In addition to methicillin-sensitive Staphylococcus aureus (MSSA), both hospital-acquired and community-acquired strains of MRSA are causing an increasing number of HAP cases

Reference: (BMJ)

181. wet cutaneous leishmania transmitted by?

A. Sandfly

Answer: A

Explanation: There are 3 main forms of leishmaniasis – visceral (also known as kala-azar and the most serious form of the disease), cutaneous (the most common), and mucocutaneous. Leishmaniasis is caused by the protozoan Leishmania parasites which are transmitted by the bite of infected female phlebotomine sandflies

Reference: <http://www.who.int/mediacentre/factsheets/fs375/en/>

Also you can look Davidson's Practice & principles of Medicine ed. 22nd ; p362, Leishmaniasis under epidemiology and transmission subtitle.

smle ,2017

182. monospot test +ve what is the diagnosis ?

A. infectious mononucleosis

Answer: A

Explanation:

the Monospot test may indicate that a person has a typical case of infectious mononucleosis.

Reference: <https://www.cdc.gov/epstein-barr/laboratory-testing.html>

170. Which type of hepatitis have available vaccines?

A. Hep B and A

Answer: A

170. Pt traveled, came back with large watery diarrhea, dx: A
Giardiasis???

Explanation:

Travelers diarrhea but there a lot of causes that cause watery diarrhea
(E.coli,salmonla,giardiasis)

Reference: first aid

171. I don't remember the scenario but in culture : Methicillin sensitive , gram+

Answer: MRSA, need more details.

172. cocci in cluster , what's the Abx?

A.Cloxacillin

Explanation: the organism is staph arus so best tx is penicillin but resistance common to penicillin so better start penicillinase resistant beta lactam abs (dicloxacillin , oxacillin) ??

Reference: master the board

173. Male with Painless genital ulcer, What you will order ?

A.darkfield microscopy

Answer: A

Explanation:

Primary syphilis: sensitivity of dark-field microscopy is 74% to 86%, specificity is 85% to 100%.
Dark ground microscopy and treponemal serological tests in the diagnosis of early syphilis.

Reference: UpToDate

174. Patient not know to be HIV came with lab result that confirm that he has HIV CD count less than 200 and WBC count. He developed fever and cough what is the organism which is gram positive:

- A. [actinomycosis israelii \(that's what I chose I don't remember the other but no pneumocytes in the choices\)](#)

Answer: A??

Explanation:

HIV related opportunistic infection list: page 194 First aid .

Actinomycosis is an infectious disease caused by anaerobic, gram-positive actinomycetes. Iatrogenic immunosuppression and immunodeficient states, particularly in chronic granulomatous disease, may favor invasion by actinomycetes.

Reference: [First aid](#)

175. Trip overseas & got bloody diarrhea

- A. [amoebic dysentery](#)

Answer: [need more details](#)

Explanation:

Any type of infectious colitis may cause hematochezia (bright red rectal bleeding) The most common types are enterohemorrhagic Escherichia coli, Salmonella, Histoplasma, and Cytomegalovirus colitis.

Stool studies, including stool cultures, are useful in making the diagnosis. The pathogens reported to cause bloody diarrhea are as follows:

Bacterial

- Campylobacter
- Clostridium difficile
- Enterohemorrhagic Escherichia coli
- Salmonella
- Shigella
- Vibrio parahaemolyticus
- Yersinia

. Parasitic

- Cryptosporidium
- Entamoeba

histolytica. Viral

- Cytomegalovirus
- Herpesvirus.

Reference: [UpToDate](#)

176. Foul smelling diarrhea, bloating, swelling of abdomen

A. Colistrudium

Answer:?????not complete Q

177. A scenario about a patient who deals with flowers and got pricked by rose thorn, presented with redness at the prick site. which of the following is the cause:

A. fungus *Sporothrix schenckii* .

Answer: A

Explanation:

Sporotrichosis (also known as “rose gardener’s disease”) is a rare infection caused by a fungus called *Sporothrix*. This fungus lives throughout the world in soil and on plant matter such as sphagnum moss, rose bushes, and hay

*Diagnosis is sporotrichosis ttt by itraconazole.

Reference: <https://www.cdc.gov/fungal/diseases/sporotrichosis/index.html>

178. A man came from india with diarrhea and then developed rash:

A. post kala azar dermal leishmaniasis

Answer: A ??? need more details.

Explanation:

Post-kala-azar dermal leishmaniasis (PKDL) is a complication of visceral leishmaniasis (VL); it is characterised by a macular, maculopapular, and nodular rash in a patient who has recovered from VL and who is otherwise well. The rash usually starts around the mouth from where it spreads to other parts of the body depending on severity. It is mainly seen in Sudan and India where it follows treated VL. Diagnosis is mainly clinical Treatment is always needed in Indian PKDL; in Sudan most cases will self cure but severe and chronic cases are treated. Sodium stibogluconate is given at 20 mg/kg for 2 months in Sudan and for 4 months in India.

Reference: <https://www.ncbi.nlm.nih.gov/pubmed/12560194>

179. OM by strep pyogenes, on antibiotics amoxicillin, add what/?

A. Clavulanic acid

Answer: ???

Explanation:

Amoxicillin is the antibiotic of choice unless the child received it within 30 days, has concurrent purulent conjunctivitis, or is allergic to penicillin; in these cases, clinicians should prescribe an antibiotic with additional beta-lactamase coverage The recommendations support the use of amoxicillin as the first-line antimicrobial agent of choice in patients with AOM.

The group recommended increasing the dose used for empiric treatment from 40-45 mg/kg/ day to 80-90 mg/kg/day because of concerns about increasingly resistant strains of *S pneumoniae*, which are theoretically susceptible to this higher dose ..The recommendations for second-line therapy were more controversial, despite their reasonableness from a scientific viewpoint. Stressing the importance of documenting true clinical failure of therapy after at least 3 days of treatment with high-dose amoxicillin, the working group suggests tympanocentesis for identification and susceptibility testing of the etiologic bacteria to guide alternate antibiotic therapy. So depends on the scenario, and the duration to keep patient on amoxicillin

for longer time or to give augmentin

Reference: Medscape

180. A patient had repeated attacks of reddish rash and plaques in mouth. What is the diagnosis?

A. Candidiasis

Answer: A

Explanation:

Pseudomembranous candidiasis. The typical adherent white plaques may be removed by wiping firmly with a tongue blade or gauze.

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4681845/>

181. Fever, bloody diarrhea and stool microscopic showed (pic) Based on the organism above which drug supposed to be given ?

A. Metronidazole

Answer :A

Explanation: All Entamoeba histolytica infections should be treated. Treatment is given as soon as the diagnosis is considered and following taking of samples for testing, as amebiasis is a potentially fatal illness. Symptomatic patients should initially be given a nitroimidazole (metronidazole or tinidazole).

Reference: BMJ

182. HIV patient has velvety skin rash:

A. Kaposi sarcoma

Answer : A

Explanation: Kaposi sarcoma Lesions are multifocal, asymmetrically distributed, and nonpruritic, varying in size (ranging from several millimeters to centimeters in diameter) and color (pink, red, purple, brown, or blue). Cutaneous lesions may be difficult to distinguish in dark-skinned people. They can be papular, nodular, plaque-like, bullous-like or fungating with skin ulceration and secondary infection. Longstanding lesions may become indurated (woody) and hyperkeratotic.

Reference: BMJ

183. Red back of the hand with previous prick sensation and fever, what is the dx?

A. Cellulitis

Answer: need

more details

184. Antiviral inhaled how it work

A. Neuraminidase inhibitor

Answer : A

Explanation: Two classes of antiviral drugs are available for the prevention and treatment of influenza:

- The neuraminidase inhibitors, zanamivir, oseltamivir, and peramivir, which are active against both influenza A and influenza B.
- The adamantanes, amantadine and rimantadine, which are only active against influenza A. Due to a marked increase in resistant isolates, these agents should **not** be used in the United States for influenza prophylaxis or treatment except in selected circumstances, which are discussed separately.

Reference: UpToDate

185. Patient has traveled then got inflammation and took amoxicillin, he developed lymphadenopathy and skin rash, what is the proper investigation for this patient

- A. EBV monospot test
- B. Brucellosis

Answer : A

Explanation:

Onset of rash after taking ampicillin or amoxicillin for URI- related symptoms, think of IM and do monospot test first

Reference: Kaplan step2 CK-pediatrics.

186. Case of giardiasis,

- A. in biopsy sickle shape parasite

Answer : A

Explanation:

Biopsy specimens from duodenum are often teeming with sickle-shaped Giardia trophozoites, which are tightly bound by the concave attachment disc to the villus surface of the intestinal epithelial cells.

Reference: (medscape)

187. patient taking carbamazepine developed generalized rash and peeling of epidermis:

- A. Steven Johnson syndrome

Answer: A

Explanation:

The most frequent drugs implicated in SJS and TEN are:

- Anticonvulsants (e.g., carbamazepine, phenobarbital, phenytoin, valproic acid, lamotrigine)
- Antibiotics (e.g., sulfonamides, aminopenicillins, quinolones, cephalosporins)
- Antifungals
- Antiretrovirals (e.g., nevirapine) and antivirals (e.g., telaprevir, acyclovir)
- Anthelmintics
- Analgesics (e.g., acetaminophen)

- Nonsteroidal anti-inflammatory drugs (NSAIDs) and selective COX-2 inhibitors
- Antimalarials
- Azathioprine
- Sulfasalazine
- Allopurinol
- Tranexamic acid
- Corticosteroids
- Psychotropic agents
- Chlormezanone
- Anticancer drugs (e.g., bendamustine, busulfan, chlorambucil).

Reference:

1- Bmj

2-[http://emedicine.medscape.com/article/1197450-overview#a5http://emedicine.medscape.com/article/1197450-overview - a5](http://emedicine.medscape.com/article/1197450-overview#a5http://emedicine.medscape.com/article/1197450-overview-a5)

188. Elderly with back bone pain, bone biopsy positive acid fast bacilli ,the organism?

A. *Mycobacterium tuberculosis*

Answer: A

Explanation:

a surveillance report published by the Centers for Disease Control and Prevention (CDC), EPTB included lymphatic (40% of EPTB), pleural (20%), bone or joint (11%), peritoneal (5%), meningeal (5%), and genitourinary (7%).

Reference: Centers for Disease Control and Prevention (CDC)

189. Where do latent herpes virus stay?

A. Macrophages.

Answer: sensory neuron

Explanation:

HZ results from reactivation of latent VZV from dorsal root or cranial nerve ganglia, present since primary infection. VZV is a double-stranded DNA herpes virus, spreading from direct person-to-person contact with an infected individual or lesion and from air droplets

Reference: (BMJ)

190. Treatment of enteric fever?

- A- Ciprofloxacin
- B- Chloramphenicol

Answer: A

Explanation:

- In general, preferred antibiotics include ceftriaxone 1 g IM or IV q 12 h for 14 days. "As empiric treatment".
- fluoroquinolones (eg, ciprofloxacin 500 mg po bid for 10 to 14 days , levofloxacin 500 mg po or IV once/day for 14 days , moxifloxacin 400 mg po or IV once/day for 14 days)
- in case of Enteric fever resistance to chloramphenicol the treatment of choice is a fluoroquinolone such as ciprofloxacin
- Quinolone antibiotic (e.g ciprofloxacin), ceftriaxone, or macrolide could be used for treating enteric fever.

Reference:

Toronto note 2016, page ID43, Table 28

191. Missing question

192. A patient had repeated attacks of reddish rash and plaques in mouth. What is the diagnosis?

- A- Candidiasis

Answer: A

Explanation:

Chronic mucocutaneous candidiasis present with recurrent or persistent superficial candidal infections of the oral cavity (thrush) or intertriginous or periorificial areas. Infants often present with recalcitrant thrush, candidal diaper dermatitis, or both. More extensive scaling of skin lesions, thickened nails, and red, swollen periungual tissues can follow these infections. Oral examination may reveal the white adherent plaques of thrush.

Reference:

<http://emedicine.medscape.com/article/1091928-clinical#b1>

193. Characteristic features of enteric fever?

- B. Nausea.
- C. Vomiting.
- D. Fever

Answer: C

Explanation:

- 1) Onset is usually gradual, with fever, headache, arthralgia, pharyngitis, constipation, anorexia, and abdominal pain and tenderness. Less common symptoms include dysuria, nonproductive cough, and epistaxis.
- 2) Enteric fever (Typhoid) caused by *Salmonella typhi* and *Salmonella paratyphi*. Clinical manifestation include Sustained fever 39°-40°C (103°-104°F) Abdominal pain, headache, loss of appetite, cough, constipation. Diagnosed with Stool, urine, or blood sample positive for *S. typhi* or *S. paratyphi*.

Reference:

- 1) Merck manual
- 2) Toronto note 2016, page ID43, Table 28

194. Young patient with recurrent bacterial infections (I believe encapsulated organisms), history of arthritis treated with IVIG, lymph node biopsy (central, depletion) in investigation: (Immunoglobulin within normal range, low lymphocytes on CBC) >>> what is the disease (not the Dx the pathophysiology of the disease)?

Answer: adenosine Deaminase ADA deficiency (SCID)

Explanation:

Adenosine deaminase (ADA) deficiency is an autosomal recessive systemic purine metabolic disorder that affects lymphocyte development and function. The most severe phenotype is the severe combined immunodeficiency (SCID). It is usually evident before 6 months of life. These infants have a failure to thrive leading to severe weight loss and malnutrition. They are often susceptible to life-threatening infections caused by bacteria, viruses, and fungi. Severe thrush, opportunistic infections, and chronic diarrhea are very common. Additional clinical features include elevated liver enzymes, abnormal flaring of the anterior rib ends, prominent costochondral junctions, squared-off scapula, pelvic dysplasia, and neurologic abnormalities (hypotonia, head lag, nystagmus, ataxia). Affected individuals usually have a small underdeveloped thymus. The less severe "delayed onset" appears in children between 6 and 24 months, whereas "late onset" can affect adults during their second to fourth decade. The individuals with delayed and late onset are susceptible to infections, usually in the forms of recurrent otitis, sinusitis, and upper respiratory infections. If not treated, the immune function further deteriorates and signs of chronic pulmonary insufficiency and allergies develop. The least severe is the "partial ADA deficiency" in which affected children appear immunologically normal.

In labs:

Lymphopenia

All immunoglobulin classes are usually decreased, but not always.

Reference:

<http://www.mdedge.com/jfponline/dsm/1576/rare-diseases/adenosine-deaminase-ada-deficiency>

195. Missing question

196. Signs and symptoms of 1st syphilis?

A- Painless genital ulcer

Answer: A

Explanation:

Clinical Presentation

- characterized initially by a painless ulcer (chancre)
- following inoculation, systemic infection with secondary and tertiary stages

Etiology

- Treponema pallidum
- transmitted sexually, congenitally, or rarely by transfusion

Reference:

- 1) Toronto note 2016, page D32-33, Table 20
- 2) gov/std/syphilis/stdfact-syphilis-detailed.htm

197. lung infection (incomplete question):

A- Iv ceftriaxone

Answer: A

Explanation:

Community Acquired Pneumonia Treatment Guidelines 2007

Outpatient/

- 1) previously well or No antibiotic use in last 3 months----- Macrolide (azithromycin, clarithromycin, and erythromycin) OR Doxycycline
- 2) Comorbidities or Antibiotic use in last 3 months (use different class)----- Respiratory fluoroquinolone(moxifloxacin, gemifloxacin, levofloxacin) OR B-lactam(cefotaxime, ceftriaxone, ampicillin-sulbactam) + Macrolide

Inpatient/

- 1) Ward----- Respiratory fluoroquinolone OR B-lactam + Macrolide
- 2) ICU -----B-lactam + (Macrolide OR Respiratory fluoroquinolone)

For further reading about pneumonia and details treatment look Toronto note 2016, page ID8

Reference:

Toronto note 2016, page ID8, table 10

198. patient with cough and vomiting after cough fever for 3 wk?

A- Pertussis vaccine

Answer: A

Explanation:

Caused by Bordetella pertussis.

Stages:

- 1) prodromal catarrhal stage
 - lasts 1-7 d; URTI symptoms (coryza, mild cough, sneezing) with NO or LOW GRADE fever
- 2) paroxysmal stage
 - lasts 4-6 wk; characterized by paroxysms of cough (“100 day cough”), sometimes followed by inspiratory whoop (“whooping cough”)
 - infants <6 mo may present with post-tussive apnea, whoop is often absent
 - onset of attacks precipitated by yawning, sneezing, eating, physical exertion
 - ± post-tussive emesis, may become cyanotic before whoop
- 3) convalescent stage;
 - Lasts 1-2 wk; characterized by occasional paroxysms of cough, but decreased frequency and severity.
 - ✓ Prophylaxis
 - Macrolide (eg. erythromycin) antibiotics for all household contacts
 - prevention with vaccination

The best way to prevent pertussis (whooping cough) among babies, children, teens, and adults is to get vaccinated.

Reference:

- 1) Toronto note 2016, page P62
- 2) <http://www.cdc.gov/pertussis/about/prevention/index.html>

199. meningitis case: fever, headache, nuchal rigidity, and rash (pic) what is the most complication?

A- deafness

Answer: A

Explanation:

Meningitis complications:

- Disseminated intravascular coagulation (DIC; blood-clotting disorder)
- Encephalitis.
- Persistent fever.
- Seizures.
- Syndrome of inappropriate antidiuretic hormone (SIADH; causes fluid build-up)

Long-term complications:

- Behavioral and personality changes
- Vision loss (partial or total)
- Cerebral palsy
- Hearing loss (partial or total)
- Learning disabilities or mental retardation
- Paralysis (partial or total)
- Speech loss (partial or total)

Reference:

<http://www.healthcommunities.com/meningitis/complications.shtml>

200. Sore throat, gingivitis, papule pustule with erythematous base what is Dx?

A- HSV

Answer: A

Explanation:

HSV common in all ages and usually accompanied by other URTI symptoms like runny nose, cough conjunctivitis.

Viral infections the most common viral infections are herpes simplex virus type 1 (HSV-1) and 2 (HSV-2) and varicella-zoster virus. HSV is the most common viral infection of the oral/facial area. It has two subtypes: type 1, which affects the oral cavity; and type 2, which affects the genitals. Primary herpetic gingivostomatitis is most commonly observed in children from 7 months to 4 years of age but can also be found in adolescents or young adults. Children are often infected with HSV by their own parents if these have recurrent herpes lesions. The primary infection may be asymptomatic but can manifest as severe gingivostomatitis, in which the gingiva are painful, inflamed and ulcerated. Fever and lymphadenopathy are classic features and affected individuals experience difficulty in chewing. The incubation period of the virus is 1 week, and healing occurs after approximately 10 to 14 days. Recurrent herpes infections can be found intra- and extra-orally. Intraoral herpes infection manifests as a group of painful ulcerations involving the gingiva and hard palate. The infection can be clinically diagnosed and confirmed by isolating the virus. Varicella-zoster virus causes chickenpox, primarily in children, and later reactivation of the virus in adults causes herpes zoster (shingles). Both can involve the gingiva, presenting as vesicle

lesions that burst leaving fibrin-covered lesions. This infection is readily diagnosed from the intense associated pain and unilateral lesions, which generally heal after 1-2 weeks.

Reference:

- 1) <http://www.webmd.com/genital-herpes/pain-management-herpes>
- 2) <http://emedicine.medscape.com/article/218580-clinical>

201. what is the treatment of choice for Kawasaki?

Answer: Aspirin (5mg/kg for 14 days) and IVIg (400mg/kg for 4 days).

Explanation:

Therapy is started as soon as possible, optimally within the first 10 days of illness, with a combination of high-dose IGIV (single dose of 2 g/kg given over 10 to 12 h) and oral high-dose aspirin 20 to 25 mg/kg po qid.

The aspirin dose is reduced to 3 to 5 mg/kg once/day after the child has been afebrile for 4 to 5 days; some authorities prefer to continue high-dose aspirin until the 14th day of illness. Aspirin-metabolism is erratic during acute KD, which partially explains the high dose requirements. Some authorities monitor serum aspirin levels during high-dose therapy, especially if therapy is given for 14 days and/or fever persists despite IVIG treatment.

Reference:

Merck manual

202. which of the following antibiotics is DNA gyrase and it works on what organism?

Answer: fluoroquinolone----- pseudomonas

Explanation:

- Fluoroquinones represent an important class of antimicrobial, which work through inhibition of DNA gyrase.
- The microorganisms sensitive to fluoroquinolones are very numerous: Gram-negative bacilli, salmonellas, Escherichia coli, shigella, gonococci, Proteus, Enterobacter, Helicobacter, Gram-positive bacilli, staphylococci, streptococci...
- Effective in urinary tract infections (UTI) caused by multidrug resistant strains.
- Effective for diarrhea caused by Shigella, Salmonella, toxigenic E. coli or Campylobacter infections.

- Most fluorquinolones that achieve adequate tissue concentrations are effective in treating soft-tissue, bone, and joint infections by multidrug resistant strains of Pseudomonas and Enterobacter.
- Ciprofloxacin (Cipro) & Ofloxacin (Floxin):inhibit gram negative cocci and bacilli: Enterobacteriaceae, Pseudomonas, Neisseria, Haemophilus Campylobacter; Staphylococci and streptococci are inhibited; Legionella, Chlamydia, M. tuberculosis, M avium are inhibited; Anaerobes: generally resistant

Reference:

- 1) <http://www.pharmacology2000.com/Antibacterial/dnagyr1.htm>
- 2) <http://www.pharmacorama.com/en/Sections/Nucleic-acids-7.php>

203. Splenectomy case, what vaccines should be given afterwards or prior to spleen removal?

Answer: Spleen acts as a Macrophage to Encapsulated organisms, of those organisms the ones we should vaccinate with are as follows:

- 1) Pneumococcal vaccine
- 2) H. influenza vaccine
- 3) Meningococcus vaccine

Explanation:

- Current Center for Disease Control (CDC) recommendations for post-splenectomy vaccinations include the polyvalent pneumococcal (Pneumovax 23), the meningococcal (groups A, C, Y, W-135) polysaccharide diphtheria toxoid conjugate (Menactra, for patients ages 11-55) or the meningococcal polysaccharide (Menomune A/C/Y/W-135, ages <11 or >55), and the Haemophilus influenzae type b vaccines (Hib TITER) (12-14, 25- 28). All three of these vaccines may be administered simultaneously.

Reference:

- 1) Toronto Notes 2016, page GS55
- 2) Center for Disease Control (CDC)

204. Rheumatic fever acute management?

Explanation:

- Oral penicillin or erythromycin if allergic.
- Anti-inflammatory:
- Aspirin in patients with arthritis/carditis without CHF. If carditis with CHF, prednisone for 2-3 weeks
- Digoxin, salt restriction. Diuretics as needed.
- If chorea is only isolated finding, do not need aspirin; drug of choice is phenobarbital (then haloperidol or chlorpromazine)
- For prevention: treatment of choice is single intramuscular benzathine penicillin G every 4 weeks.

Reference:

Kaplan pediatrics, page 126

205. Infective endocarditis (migratory arthritis)? (Incomplete question)

Explanation:

- Duke criteria for diagnosis of infective endocarditis.
- Major: at least 2 separate + blood culture for a typical organism, Evidence of endocardial vegetations (via echo or new murmur)
- Minor: (fever >38.5, vascular and immunological phenomena as septic emboli, janeway lesion, osler's nodes, roth spot)
- The presence of 2 major or 1 major + 3 minor or 5 minor, diagnosis

endocarditis

Reference:

- 1) First Aid USMLE STEP 2 CK
- 2) For more information look table 17 in Toronto note 2016, page ID17

206. Meningitis finding in CSF due to bacteria?

Explanation:

Appearance: Clear, cloudy, or purulent

Opening pressure: Elevated (>25 cm H₂O)

WBC count: >100 cells/ μ L (>90% PMN)

Glucose level: Low (< 40% of serum glucose)

Protein level: Elevated (>50 mg/dL)

Reference:

<http://emedicine.medscape.com/article/2172226-overview>

223/ A patient presented with maculopapular rash and fever. (Case of rubella)?

Explanation:

Clinical Features:

- Rash (pink, maculopapular rash 1-5 d after start of symptoms).
- The rash starts on face and spreads to neck and trunk.
- Prodrome of low-grade fever and occipital/retroauricular nodes. STAR complex (sore throat, arthritis, and rash) and Positive serology for rubella IgM.
- Mode of transmission: droplet

Treatment:

- Infected: supportive
- Prevention: MMR vaccine

Outcomes and complications:

- Excellent prognosis with acquired disease
- Arthritis may last days to weeks
- Encephalitis
- Irreversible defects in congenitally infected patients (i.e. congenital rubella syndrome)

Reference:

Toronto note 2016, page P57, table 23

224/ about patient having some infection and having allergy from Penicillin. What other medications will you give?

Explanation:

- Tetracycline (e.g. doxycycline), quinolones (e.g. ciprofloxacin), macrolides (e.g. clarithromycin), aminoglycosides (e.g. gentamicin) and glycopeptides (e.g. vancomycin) are all unrelated to penicillin and are safe to use in the penicillin allergic patient.

- Clinical studies suggest that the incidence of cross-reactivity to cephalosporins in penicillin-allergic patients is around 10% but this is thought to be an overestimate. The true incidence of cross-sensitivity is uncertain. Second and third generation cephalosporins are unlikely to be associated with cross reactivity as they have different side chains to penicillin.

Reference:

<http://www.nhstaysideadtc.scot.nhs.uk/Antibiotic%20site/penhypers.htm#penic>

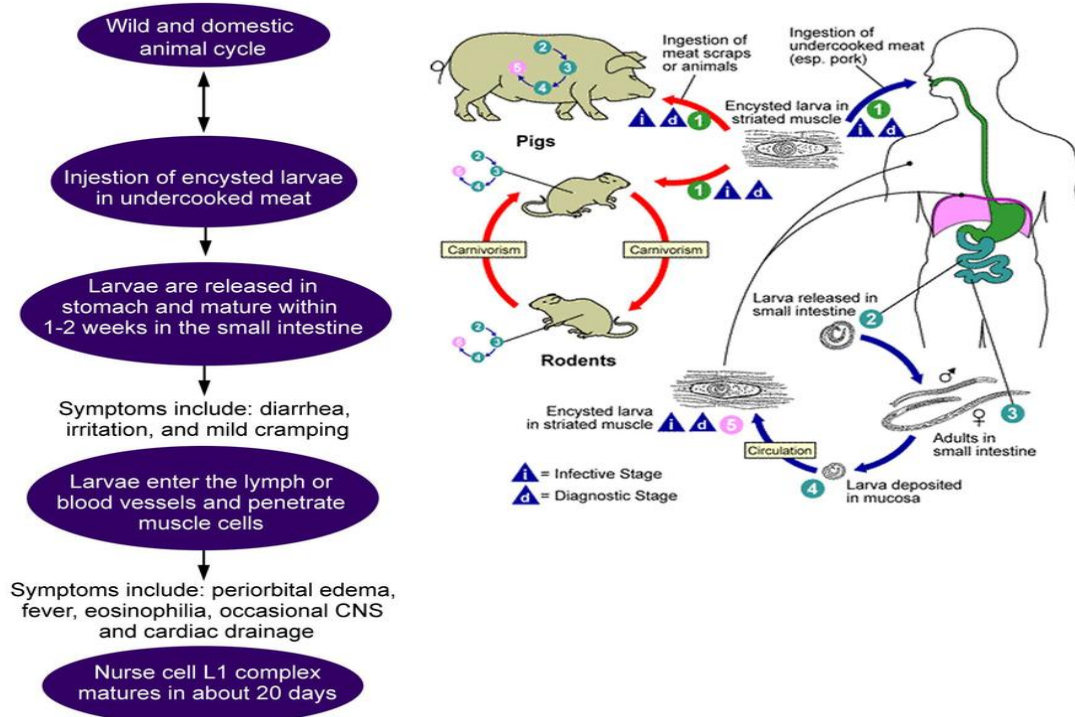
225/ Parasite infection in under cooked food?

A- Trichinellosis/Trichinosis

Answer: A

Explanation:

Infection is initiated by ingestion of viable larvae in raw or undercooked meat.



Reference: <http://emedicine.medscape.com/article/787591-overview>

226/ Ebola Question. (Incomplete question)

For more information:

<http://www.who.int/mediacentre/factsheets/fs103/en/>

227/ what is the anti-influenza medication that is given intranasal?

Explanation:

- Live Attenuated Influenza Vaccine (Nasal spray flu vaccine) provide protection against four flu viruses: an influenza A (H1N1) virus, an influenza A (H3N2) virus and two influenza B viruses.
- CDC recommends use of injectable influenza vaccines (including inactivated influenza vaccines and recombinant influenza vaccines) during 2016-2017. The nasal spray flu vaccine (live attenuated influenza vaccine or LAIV) should not be used during 2016-2017.

Reference:

<https://www.cdc.gov/flu/protect/keyfacts.htm>

228/ Infection in venous lines with needle insertion. (Something like that.)? (Incomplete question)

Explanation:

For the purpose of this guideline, short-term catheters are defined as those devices that are in situ for less than 14 days. Most catheter-related bloodstream infection (CRBSI) emanate from the insertion site, hub, or both. For long-term catheters—particularly tunneled catheters—the catheter hub is a prominent source of microbes causing bloodstream infection. In order of prevalence, the 4 groups of microbes that most commonly cause CRBSI associated with percutaneously inserted, non-cuffed catheters are as follows: coagulase-negative staphylococci, *S. aureus*, *Candida* species, and enteric gram-negative bacilli. For surgically implanted catheters and peripherally inserted CVCs, they are coagulase-negative staphylococci, enteric gram-negative bacilli, *S. aureus*, and *P. aeruginosa*.

Management: Vancomycin is recommended for empirical therapy in health care settings with an increased prevalence of methicillin-resistant staphylococci; for institutions with a preponderance of MRSA isolates that have vancomycin MIC values ≥ 12 mg/mL, alternative agents, such as daptomycin, should be used. Empirical coverage for gram-negative bacilli should be based on local antimicrobial susceptibility data and the severity of disease (e.g., a fourth-generation cephalosporin, carbapenem, or β -lactam/ β -lactamase combination, with or without an aminoglycoside). For empirical treatment of suspected catheter-related candidemia, use an echinocandin or, for selected patients, fluconazole (A-II). Fluconazole can be used for patients without azole exposure in the previous 3 months and in health care settings where the risk of *C. krusei* or *C. glabrata* infection is very low.

Reference:

http://www.idsociety.org/uploadedFiles/IDSA/Guidelines-Patient_Care/PDF_Library/Management%20IV%20Cath.pdf

229/ Bacteria sexual like behavior? (Incomplete question)

A- Conjunction

Answer: A

Reference:

1) <http://www.who.int/mediacentre/factsheets/fs366/en/>

2) Also look Lippincott's illustrated reviews of microbiology 2nd ed. Page 61 under gene transfer title.

230/ chronic granulomatous disease (CGD) is a primary immunodeficiency that affects phagocytes of the innate immune system and leads to recurrent or persistent intracellular bacterial and fungal infections. (Incomplete and not clear question)

Answer: Affected patients suffer recurrent serious bacterial and fungal infections, most commonly with *Staphylococcus aureus*, *Aspergillus* spp., *Nocardia*, *Serratia marcescens*, and *Burkholderia cepacia*.

Reference:

<http://emedicine.medscape.com/article/1116022-clinical#showall>

231/ Vancomycin plus a third-generation cephalosporin Ceftriaxone or cefotaxime. (Incomplete and not clear question)

Explanation:

According to age:

Age/Risk Factor	Regimen
<1 mo	Ampicillin + aminoglycoside or ampicillin + cefotaxime
>2 mo-50 y	Vancomycin + cefotaxime or ceftriaxone
>50 y	Ceftriaxone or cefotaxime + ampicillin + vancomycin
Post neurosurgical procedure, CSF shunt, penetrating head trauma	Vancomycin + cefepime, ceftazidime, or meropenem
Skull fracture	Vancomycin + ceftriaxone or cefotaxime

*CSF: cerebrospinal fluid.
Source: References 8, 12.*

Reference:

http://www.uptodate.com/contents/image?imageKey=ID%2F71968~ID%2F60707&topicKey=ID%2F1290&source=see_link

<http://www.uptodate.com/contents/image?imageKey=ID>

232/ Watery discharge, no itching? (Incomplete question)

Answer: Watery —viral conjunctivitis, allergic conjunctivitis, eye allergies, dry eyes, eye injury, dacryocystitis

Table 1. Bacterial vs. Viral vs. Allergic Conjunctivitis

Clinical Finding	Bacterial	Viral	Allergic
Bilateral eyes	50% to 74%	35%	Mostly
Discharge	Mucopurulent in younger children	Mild, watery, or "sleepers" only	Rare
Redness	Common in older children, uncommon in infants and toddlers	Usually	Usually
Acute otitis media	32% to 39%	10%	No
Pruritic	No (but many rub eyes)	No	Major

Refer
<https://ab2f>

233/

Sources: Block SL, et al. *Antimicrob Agents Chemother.* 2000;44:1650-1654; Bodor FF, et al. *Pediatrics.* 1985;76:26-28; Gigliotti F, et al. *J Pediatr.*

Explanation:

- **Hepatitis A:**
- RNA virus
- fecal-oral transmission; incubation period 4-6 weeks
- diagnosed by elevated transaminases, positive anti-HAV IgM
- in children: characteristically asymptomatic
- in adults: fatigue, nausea, arthralgia, fever, jaundice
- Serology:
- anti-HAV IgM :active infection is present, best test to detect active infection
- Anti-HAV IgG: previous infection was present, no active disease and patient is protected against infection.

Reference:

<http://www.who.int/mediacentre/factsheets/fs328/en/>

234/ *C.difficile* diagnosis (easy)?

Explanation:

Leukocytosis is common in *C difficile* infection (CDI) and the white blood cell (WBC) count levels may be quite elevated, a finding that portends a worse prognosis. Patients with *C difficile* are also prone to acute kidney injury. Therefore, white blood cell counts and serum creatinine should be measured in patients with *C difficile*. In severe disease, electrolyte imbalance, dehydration, hypoalbuminemia, and anasarca may occur.

The Society for Healthcare Epidemiology of America (SHEA) and the Infectious Diseases Society of America (IDSA) indicate that testing for *C difficile* and its toxins in symptomatic patients should be performed only on diarrheal stool, when individuals are asymptomatic, stool testing is not recommended. Stool cultures are the most sensitive tests for detecting *C difficile* and its toxins.

Although endoscopy is not routinely recommended for the diagnosis or management of *C difficile* infection (CDI), this procedure may demonstrate the presence of raised, yellowish white, 2- to 10-mm plaques overlying an erythematous, edematous mucosa.

The American College of Radiology (ACR) recommends abdominal computed tomography (CT) scanning as the imaging modality of choice for *C difficile* colitis.

Reference:

<http://emedicine.medscape.com/article/186458-workup>

235/ Laboratory diagnosis of *C. difficile* infection?

Reference:

<http://emedicine.medscape.com/article/186458-workup>

236/ Case of tonsillitis <<< antibiotic? (Incomplete question)

Explanation:

- antibiotics (for GAS/*S. pyogenes*)
- ✓ penicillin V or amoxicillin or erythromycin (if penicillin allergy) x 10 d
- ✓ can prevent rheumatic fever if given within 9 d of symptoms; does NOT alter risk of poststreptococcal GN
- supportive: hydration and acetaminophen for discomfort due to pain and/or fever

- follow-up: if uncomplicated course, no follow-up or post-antibiotic throat cultures needed
- prophylaxis: consider tonsillectomy for proven, recurrent streptococcal tonsillitis
- GAS: sore throat (may be severe), fever, malaise, headache, abdominal pain, N/V, absence of other URTI symptoms
- viral: sore throat (often mild), conjunctivitis, cough, rhinorrhea, hoarseness, diarrhea, flu-like symptoms (fever, malaise, myalgias)
- Physical exam:
- GAS: febrile, pharyngeal/tonsillar erythema and exudates, enlarged (>1 cm) and tender anterior cervical lymph nodes, palatal petechiae, strawberry tongue, scarlatiniform rash
- viral: afebrile, absent/mild tonsillar exudates, minor and non-tender adenopathy, viral exanthems

Reference:

Toronto note 2016, page P58-59

237/ Question about meningitis how to interpretation of types of meningitis and how to treat children with meningitis?

Explanation:

Table 24. CSF Findings of Meningitis

Component	Normal Child	Normal Newborn	Bacterial Meningitis	Viral Meningitis	Herpes Meningitis
WBC (/μL)	0-6	0-30	>1,000 (cloudy, xanthochromic)	100-500*	10-1,000
Neutrophils (%)	0	2-3	>50	<40	<50
Glucose (mmol/L)	2.2-4.4	1.8-6.7	<1.66	>1.66	>1.66
Protein (mg/dL)	0.2-0.3	0.19-1.49	>1.0	0.50-1.0	>0.75
RBC (/μL)	0-2	0-2	0-10	0-2	10-50

*Lymphocytes predominate Modified from *Peds in Review* 1993;14:11-18 and *Ped Inf Dis J* 1996;15:298-303

Table 25. Antibiotic Management of Bacterial Meningitis

Age	Main Pathogens	Antibiotics
0 to 28 d	GBS, <i>E. coli</i> , <i>Listeria</i> Other: Gram-negative bacilli	Ampicillin + cefotaxime
28 to 90 d	Overlap of neonatal pathogens and those seen in older children	Cefotaxime + Vancomycin (+ Ampicillin If immunocompromised)
>90 d	<i>S. pneumoniae</i> , <i>N. meningitidis</i>	Ceftriaxone ± vancomycin If Penicillin allergic: Vancomycin + Rifampin

Reference:

Toronto Notes 2016, page P60-61.

238/ Patient come from Africa, I forgot the symptoms, what to do? (Incomplete and not clear question)

- A- blood culture
- B- stool culture

Answer: ?

239/ Motile, urease and oxidase negative what is the best treatment?

Explanation:

Salmonella gastroenteritis is usually a self-limiting disease. Fluid and electrolyte replacement may be indicated in severe cases. Because antibiotics do not appear to shorten the duration of symptoms and may actually prolong the duration of convalescent carriage.

Reference:

<http://emedicine.medscape.com/article/228174-treatment>

-
-

240/ Side effect of the medication used to treat infection (you saw Donovan body)?

Explanation:

ACTUALLY DONOVAN BODIES seen in 2 diseases one of them is visceral leishmaniasis

- 1) amphotericin B - side effect: Fever, shaking, chills, flushing, loss of appetite, dizziness, nausea, vomiting, headache, shortness of breath, or fast breathing may occur 1 to 3 hours after the infusion is started.
- 2) Miltefosine - side effect: vomiting, nausea, diarrhea, decreased appetite, dizziness, motion sickness, headache, weakness, stomach or abdominal pain, general feeling of being unwell (malaise), fever, drowsiness, itching, and testicular pain.

Recommended for visceral leishmaniasis:

- Liposomal amphotericin B alone, given as a single dose (currently recommended as the drug of choice by the Kala-Azar elimination programme of India)
- Liposomal amphotericin B in a single dose, in combination with 7 days of oral miltefosine or 10 days of paromomycin
- Miltefosine plus paromomycin for 10 days
- Amphotericin B deoxycholate: 0.75-1 mg/kg/day via infusion, daily or on alternate days for 15-20 doses
- Miltefosine orally for 28 days or paromomycin intramuscularly for 28 days
- Pentavalent antimonials: 20 mg Sb⁵⁺/kg/day intramuscularly or intravenously for 30 days in areas where they remain effective: Bangladesh, Nepal, and the Indian states of Jharkhand, West Bengal, and Uttar Pradesh

Other disease **granuloma inguinal**
treatment could cause

Hepatotoxicity

and the treatment plan Recommended dosing is as follows:

- **Azithromycin** 1 g PO once a week or 500 mg/day for at least 3 weeks or until all lesions have completely healed have side effect hepatotoxicity
- **Doxycycline** 100 mg PO twice a day for at least 3 weeks or until all lesions have completely healed should be avoided in pregnancy, especially after 15 weeks' gestation because of the risk of maternal hepatitis and brown discoloration of the infant's deciduous teeth and inhibition of bone growth. It should also be avoided in patients who are breastfeeding, since prolonged exposure beyond 3 weeks may also cause decreased bone growth
- **Erythromycin** base 500 mg PO 4 times a day for at least 3 weeks or until all lesions have completely healed have side effect hepatotoxicity
- **Ciprofloxacin** 750 mg PO twice a day for at least 3 weeks or until all lesions have completely healed associated with damage to fetal cartilage. When given to breastfeeding women, observe for diarrhea in the infant since it can cause pseudomembranous colitis.
- **Trimethoprim-sulfamethoxazole** 1 double strength (160 mg/800 mg) tablet PO twice a day for at least 3 weeks or until all lesions have completely healed is a risk of cardiovascular defects when given in the first trimester, and it is associated with preterm delivery, low birth rate, and miscarriage. Sulfonamides are also associated with serious kernicterus in patients with G-6-P deficiency, and, when given in the third trimester of pregnancy, there is a higher risk of neonatal hyperbilirubinemia.

References:

- 1) <http://www.webmd.com/drugs/2/drug-13565/amphotericin-b-injection/details#side-effects>
- 2) <http://www.rxlist.com/impavido-side-effects-drug-center.htm>
- 3) <http://emedicine.medscape.com/article/220298-treatment#d11>

241/ Typical presentation of coxsackie B virus?

Explanation:

They are divided into groups A and B:

- Coxsackievirus A:
 - Usually affects skin and mucous membranes.
 - Causes herpangina and hand-foot-and-mouth disease HFMD.
 - There are a number of different viruses within the group. The most common causes of HFMD are Coxsackievirus A16 (CA16) along with the closely related enterovirus 71 (EV71).
 - Coxsackievirus B:
 - Usually affects the heart, lungs, pancreas and liver.
 - Causes Bornholm disease, hepatitis, myocarditis and pericarditis.
- Coxsackieviruses of both types are a leading cause of aseptic meningitis. They may also cause nonspecific febrile and upper respiratory tract illnesses.
- More than 90% of coxsackieviruses infections are asymptomatic or cause nonspecific febrile illnesses

Reference:

- 1) <http://emedicine.medscape.com/article/215241-clinical>
- 2) <http://patient.info/doctor/coxsackievirus-infection>

242/ Taenia saginata. (Incomplete question)

Explanation:

Taenia saginata (beef tapeworm): Humans can become infected with these tapeworms by eating raw or undercooked beef (larvae) presented with Mild GI symptoms diagnosed by stool sample treated with either praziquantel or niclosamide.

Taenia solium (pork tapeworm): Humans can become infected with these tapeworms by Undercooked pork (larvae), human feces (eggs) presented with:

- Taeniasis: mild abdominal symptoms
 - Cysticercosis: mass lesions in CNS, eyes, skin, Seizures
- ✓ Treated with Corticosteroids + albendazole for cysticercosis
- ✓ Antiepileptics if seizures
- ✓ Praziquantel for adult tapeworm in gut (taeniasis)

Taenia asiatica (Asian tapeworm)

References:

- 1) Toronto note 2016, page ID41, table 27
- 2) <http://emedicine.medscape.com/article/999727-clinical>
- 3) <http://www.cdc.gov/parasites/taeniasis/treatment.html>

243/ Derma description of a lesion that is loose and easy to fall defining of (scales, other skin lesions)?

A- Ehlers-Danlos syndrome

Answer: A

Explanation:

Ehlers-Danlos syndromes are a group of disorders which share common features including easy bruising, joint hypermobility (loose joints), skin that stretches easily (skin hyperelasticity or laxity), and weakness of tissues.

Faulty collagen synthesis causing hyperextensible skin, tendency to bleed (easy bruising), and hypermobile joints. 6 types. Inheritance and severity vary. Can be autosomal dominant or recessive. May be associated with joint dislocation, berry aneurysms, organ rupture. Type I or Type V collagen most frequently affected in severe classic Ehlers-Danlos syndrome.

The diagnosis of Ehlers-Danlos syndrome is based upon the clinical findings of the patient and the family history. Ehlers-Danlos syndromes are treated according to the particular manifestations present in a given individual.

References:

- 1) First Aid for USMLE step 1, page 78
- 2) http://www.medicinenet.com/ehlers-danlos_syndrome/article.htm

244/ Treatment of herpes zoster?

Explanation:

Episodes of herpes zoster are generally self-limited and resolve without intervention; they tend to be more benign and mild in children than in adults.

Conservative therapy includes the following:

- Nonsteroidal anti-inflammatory drugs (NSAIDs)
- Wet dressings with 5% aluminum acetate (Burrow solution), applied for 30-60 minutes 4-6 times daily
- Lotions (eg, calamine)

Primary medications for acute zoster-associated pain include the following:

- Narcotic and nonnarcotic analgesics (both systemic and topical)
- Neuroactive agents (eg, tricyclic antidepressants [TCAs])
- Anticonvulsant agents

Steroid treatment for herpes zoster is traditional but controversial. Typically, a substantial dose (eg, 40-60 mg of oral prednisone every morning) typically is administered as early as possible in the course of the disease and is continued for 1 week, followed by a rapid taper over 1-2 weeks.

Antiviral therapy for herpes zoster may decrease the length of time for new vesicle formation, the number of days to attain complete crusting, and the days of acute discomfort. Usually, the earlier antiviral medications are started, the more effective they are in shortening the duration of zoster and in preventing or decreasing the severity of postherpetic neuralgia (PHN). Ideally, therapy should be initiated within 72 hours of symptom onset.

Oral treatment with the following has been found beneficial:

- Acyclovir
- Famciclovir
- Valacyclovir

Hospital admission should be considered for patients with any of the following:

- Severe symptoms
- Immunosuppression
- Atypical presentations (eg, myelitis)
- Involvement of more than 2 dermatomes

- Significant facial bacterial superinfection
- Disseminated herpes zoster
- Ophthalmic involvement
- Meningoencephalopathic involvement

Prevention and treatment of PHN:

Prompt treatment of acute zoster and its associated pain (eg, with antiviral therapy) can prevent the development of PHN. Once PHN has developed, various treatments are available, including the following:

- Neuroactive agents (eg, TCAs)
- Anticonvulsant agents (eg, gabapentin, pregabalin)
- Narcotic and nonnarcotic analgesics, both systemic (eg, opioids) and topical

Reference:

<http://emedicine.medscape.com/article/1132465-treatment>

245/ Patient given yellow fever vaccine, started vomiting and SOB? (Incomplete question)

Explanation:

Reactions to yellow fever vaccine are generally mild and include headaches, muscle aches, and low-grade fevers. There have been reports of rare but serious events following yellow fever vaccination. These events include life-threatening allergic reaction, disease affecting the nervous system, and disease affecting certain internal organs. Testing can be performed to look for certain serious adverse events. Talk to your healthcare provider or travel health clinic provider if you have symptoms that concern you following your yellow fever vaccination.

Because certain people have an increased risk of developing a serious adverse event if vaccinated with yellow fever vaccine, vaccine is not recommended (i.e., contraindicated) for people with:

- Allergy to a vaccine component
- Age <6 months
- Symptomatic HIV infection or CD4+ T-lymphocytes <200/mm³ (<15% of total in children aged <6 years)
- Thymus disorder associated with abnormal immune function
- Primary immunodeficiencies
- Malignant neoplasms
- Transplantation
- Immunosuppressive and immunomodulatory therapies

Reference:

1) <https://www.cdc.gov/yellowfever/vaccine/index.html>

2) <http://www.rxlist.com/yellow-fever-vaccine-drug/side-effects-interactions.htm>

246/ repeated question

247/ What is the organism for someone sky with diver? (Incomplete and not clear question)

248/ GE salmonella which AB274- Another same Q what is the mechanism?

Explanation:

After ingestion, infection with salmonellae is characterized by attachment of the bacteria by fimbriae or pili to cells lining the intestinal lumen. Salmonellae selectively attach to specialized epithelial cells (M cells) of the Peyer patches. The bacteria are then internalized by receptor-

mediated endocytosis and transported within phagosomes to the lamina propria, where they are released. Once there, salmonellae induce an influx of macrophages (typhoidal strains) or neutrophils (nontyphoidal strains).

Reference:

<http://emedicine.medscape.com/article/228174-overview#a5>

249/ Treatment of type of bacteria "fragilis"?

Explanation:

The available parenteral antimicrobials for most infections include metronidazole, a penicillin (ie, ticarcillin, ampicillin, piperacillin) and a beta-lactamase inhibitor (ie, clavulanic acid, sulbactam, tazobactam), tigecycline (approved only for intra-abdominal and skin and soft tissue infections), and the carbapenems (eg, imipenem, meropenem, doripenem, ertapenem).

References:

<http://emedicine.medscape.com/article/233339-treatment>

250/ missing question

251/ Question about Herpes diagnosis?

Explanation:

- 1) Herpes zoster: diagnosed clinically, no investigation required, but can do Tzanck test, direct fluorescence antibody test, or viral culture to rule out HSV.
- 2) herpes simplex:
 - Tzanck smear with Giemsa stain shows multinucleated giant epithelial cells
 - viral culture, electron microscopy, and direct fluorescence antibody test of specimen taken from the base of a relatively new lesion
 - serologic testing for antibody for current or past infection if necessary

References:

- 1) Toronto note 2016, page D30-31
- 2) <http://emedicine.medscape.com/article/1132465-workup>

252/ Question about HPV infectious mono (incomplete question).

Reference:

<http://emedicine.medscape.com/article/219110-overview>

253/ Gram + cocci what is the organism?

Explanation:

Could be any one of them:

Gram-Positive Bacteria		
	Cocci	Bacilli (rods)
Aerobes	<i>Staphylococcus</i> <i>S. aureus</i> <i>S. saprophyticus</i> <i>S. epidermidis</i> <i>Streptococcus</i> <i>S. pneumoniae</i> <i>S. pyogenes (GAS)</i> <i>S. agalactiae (GBS)</i> <i>Enterococcus</i> <i>E. faecalis</i>	<i>Bacillus</i> <i>B. anthracis</i> <i>Listeria</i> <i>Nocardia</i> (modified acid fast positive)
Anaerobes	<i>Peptostreptococcus</i>	<i>Clostridium</i> <i>C. difficile, C. tetani,</i> <i>C. botulinum,</i> <i>C. perfringens</i>

Reference:

<https://www.uptodate.com/contents/table-of-contents/infectious-diseases/gram-positive-cocci>

254/ Male patient has diarrhea after he back from Indonesia and ate from their foods, what is the organism?

Explanation:

Traveler's diarrhea. The most common culprit is a bacteria called E.coli.

Etiology

- bacterial (80-90%): *E. coli* most common (ETEC), *Campylobacter*, *Shigella*, *Salmonella*, *Vibrio* (non-cholera); wide regional variation (e.g. *Campylobacter* more common in Southeast Asia)
- viral: norovirus, rotavirus, and astrovirus account for 5-8%
- protozoal (rarely): *Giardia*, *Entamoeba histolytica*, *Cryptosporidium*, *Cyclospora* for ~10% in long-term travelers
- pathogen-negative traveler's diarrhea common despite exhaustive microbiological workup

Reference:

<http://www.webmd.com/digestive-disorders/travelers-diarrhea>

255/ After 2 weeks msn come gimrom sudan gmhe developed abdominal pain, lethargy? (Incomplete and not clear question)

256/ Male patient after traveling present with abdominal pain, dysentery and bloody diarrhea what is the causative organism?

Explanation:

The World Health Organization (WHO) identifies two main types of dysentery.

Bacillary dysentery, or shigellosis:

This type produces the most severe symptoms. It is caused by the *Shigella* bacillus. Poor hygiene is the main source. Shigellosis can also spread because of tainted food. In Western Europe and the U.S., it is the most common type of dysentery in people who have not visited the tropics shortly before infection.

Amoebic dysentery, or amoebiasis:

This type is caused by *Entamoeba histolytica* (*E. histolytica*), an amoeba. The amoebae group together to form a cyst, and these cysts emerge from the body in human feces. In areas of poor sanitation, the amoebae can contaminate food and water and infect other humans, as they can survive for long periods outside the body. They can also linger on people's hands after using the

bathroom. Good hygiene practice reduces the risk of spreading infection. It is more common in the tropics, but it sometimes occurs in parts of rural Canada.

Other causes: Include a parasitic worm infection, chemical irritation, or viral infection.

Reference:

<http://www.medicalnewstoday.com/articles/171193.php>

257/ missing question

258/ missing question

259/ How can differentiate true fever from factitious fever?

Explanation:

- Fever produced artificially by a patient. This is done by artificially heating the thermometer or by self-administered pyrogenic substances. An artificial fever may be suspected if the pulse rate is much less than expected for the degree of fever noted.

- Diagnostic criteria — we suggest diagnosing factitious disorder imposed on self- according to the criteria in DSM-5, which require each of the following:
 - Falsification of physical or psychological signs or symptoms, or induction of injury or disease, associated with identified deception
 - The individual presents himself or herself to others as ill, impaired, or injured
 - The deceptive behavior is evident even in the absence of obvious external rewards
 - The behavior is not better explained by another mental disorder, such as delusional disorder or another psychotic disorder

Reference:

- 1) <http://medical-dictionary.thefreedictionary.com/Factitious+Fever>
- 2) <https://www.uptodate.com/contents/factitious-disorder-imposed-on-self-munchausen-syn->
- 3) https://www.uptodate.com/contents/factitious-disorder-imposed-on-self-munchausen-syndrome?source=see_link%252523H121098997

260/ Whose lactose fermenting oxidase negative, green..etc. and whose not (many questions for case the result of the culture described so you have to choose which one is the bacteria).

Explanation:

Non-Lactose Fermenters:

"If you dont lac-toes you can work as a Sneaky **SPY**"

Salmonella

Shigella

Proteus

Yersinia

Fast Lactose Fermenters:

"If you lac-toes at least you have a **KnEE**"

Klebsiella Pneu

Ecoli

Enterobacter Cloacae

Slow Lactose Fermenters:

"Lac-toes or not, one should move slow in a **Serene City**"

Serratia marcescens

Citrobacter

Reference:

<http://www.usmle-forums.com/usmle-step-1-mnemonics/46676-lactose-fermentation-bacteria-mnemonic.html>

261/ Patient with infection, culture and sensitivity show Methicillin sensitive organism, which antibiotic you will select?

A- Piperacillin

B- Oxacillin

Answer: A

Explanation:

Investigation of the activity of piperacillin/tazobactam against 51 strains of Methicillin-sensitive Staphylococcus aureus (MSSA) confirm continuing high potency with 100% piperacillin susceptibility.

Reference:

<http://www.medscape.com/viewarticle/587892>

262/ Pt with antibodies of toxoplasma (IgM), how to confirm diagnosis?

Explanation:

- The diagnosis of toxoplasmosis is confirmed with the demonstration of *T gondii* organisms in blood, body fluids, or tissue. *T gondii* may be isolated from the blood via either inoculation of human cell lines or mouse inoculation. Mouse inoculation may require a longer time to yield results and also is likely to be more expensive. Isolation of *T gondii* from amniotic fluid is diagnostic of congenital infection by mouse inoculation.
- Real-time PCR detection of *T gondii* DNA based on the 529 bp repetitive element is the most frequently used molecular diagnostic approach for toxoplasmosis.

Reference:

<http://emedicine.medscape.com/article/229969-workup>

263/ side effect of vancomycin?

Explanation:

(>10%)

Bitter taste (PO)

Erythematous rash on face and upper body (IV; red neck or red man syndrome; related to infusion rate)

Hypotension accompanied by flushing (IV)

Nausea and vomiting (PO)

(1-10%)

Chills (IV)

Drug fever (IV)

Eosinophilia (IV)

Rash (IV)

Fatigue (PO)

Peripheral edema (PO)

Urinary tract infection (PO)

Back pain (PO)

Headache (PO)

Reversible neutropenia (IV)
Phlebitis (IV)
(<1%)
Nephrotoxicity
Ototoxicity (especially with large doses)
Stevens-Johnson syndrome
Thrombocytopenia
Vasculitis

Reference:

<http://reference.medscape.com/drug/vancocin-vancomycin-342573#4>

264/ repeated question

265/ Painless genital ulcer?

Explanation:

Depend on scenario and choices could be:

- 1) Syphilis (primary): The ulcer (also called chancre) is a firm painless ulceration, 5–15 mm and sharply demarcated. Often, a painless inguinal lymphadenopathy can be observed.
- 2) Lymphogranuloma venereum: a genital papule or pustule develops and leads to a singular ulcer (2–10 mm). The genital ulcers heal spontaneously. A tender and painful lymphadenopathy is a typically symptom of lymphogranuloma venereum. At the time of presentation, the genital ulcer may have already healed.
- 3) Granuloma inguinale (donovanosis)
- 4) Penile Cancer: painless, slowly progredient: genital ulcer and induration.

Reference:

- 1) <http://www.aafp.org/afp/2012/0201/p254.html>
- 2) <http://www.urology-textbook.com/genital-ulcer.html>

266/ Young boy with pain in his knee, aspiration of fluid reveal yellowish and turbid appearance, what is the diagnosis?

Explanation:

Most properly joint infection depend on the age and fluid joint aspiration types:

- Fracture or ligament injuries may show blood in the fluid.
 - Meniscus injury or osteoarthritis may show straw colored or pale yellow fluid.
 - Presence of crystals may mean gout or pseudogout.
 - Turbid fluid or presence of pus may mean there is an infection.
-
- Gram staining and culture tests of the fluid can help in detecting the microorganism causing infection.
-
- In septic joint, the joint aspirate will be: cloudy yellow fluid, WBC >50,000 with >90% neutrophils, protein level >4.4 mg/dL, joint glucose level < 60% blood glucose level, no crystals, positive Gram stain results.

Reference:

- 1) Toronto note 2016, page OR 10
- 2) <http://www.epainassist.com/joint-pain/knee-pain/knee-aspiration>

267/ N. Meningitidis meningococemia, prophylaxis for family: another scenario: patient in college diagnosed with meningitis proved and she receiving treatment How to prevent the spread to the roommate?

Answer: give prophylaxis vaccination dose

Explanation:

Prevention:

• **Immunization**

- children: immunization against H. influenzae type B (Pentacel®), S. pneumoniae (Synflorix®, Prevnar-13®), N. meningitidis (Menjugate®, Menactra®, Bexsero®)
- adults: immunization against N. meningitidis in selected circumstances (outbreaks, travel, epidemics) and S. pneumoniae (Pneumovax®) for high-risk groups

• **Prophylaxis:**

Close contacts of patients infected with H. influenzae type B should be treated with rifampin if they live with an inadequately immunized (<4 yr) or immunocompromised child (<18 yr); ciprofloxacin, rifampin, or ceftriaxone if close or household contact of a patient with N.meningitidis.

- Ciprofloxacin 500 mg in a single dose is probably the easiest option in adults. Children could receive either a single IM injection of ceftriaxone or 4 oral doses of rifampin over 2 days, according to body weight.

Reference:

- 1) Toronto Note 2016, page ID19
- 2) <http://emedicine.medscape.com/article/1165557-treatment#d11>

268/ HIV attacks?

- A. B cells
- B. T cytotoxic cells
- C. Macrophages

Answer: B should be “T helper CD4”

Explanation:

HIV produces cellular immune deficiency characterized by the depletion of helper T lymphocytes (CD4+ cells). The loss of CD4+ cells results in the development of opportunistic infections and neoplastic processes. There is a specific decline in the CD4+ helper T cells, resulting in inversion of the normal CD4/CD8 T-cell ratio and dysregulation of B-cell antibody production

Reference:

<http://emedicine.medscape.com/article/211316-overview#a3>

There are questions in pages 69-70 repeated in pulmonary

ALLERGY AND IMMUNOLOGY

1. A patient with signs and symptoms of Atopy. Which cell produce these mediators?

- A. Mast cells
- B. Nk cells

C. Macrophage

D. B cells

Answer: A

Explanation:

IgE-MEDIATED REACTIONS — Immunoglobulin E (IgE)-mediated food allergic reactions are rapid in onset, typically beginning within minutes to two hours from the time of ingestion. IgE-mediated reactions to carbohydrate allergens in meats, a type of reaction reported mainly in adults, represent an exception to this temporal pattern since these reactions begin four to six hours after ingestion. Most patients react to one or two specific foods/food groups, although an increasing number of patients react to multiple foods. (See "Allergy to meats".)

Signs and symptoms can involve the skin, respiratory and gastrointestinal tracts, and cardiovascular system and are believed to be caused by mediator release from tissue mast cells and circulating basophils (table 2). Two distinct presentations are the oral allergy syndrome and food-dependent, exercise-induced anaphylaxis. (See "Clinical manifestations and diagnosis of oral allergy syndrome (pollen-food allergy syndrome)" and "Exercise-induced anaphylaxis: Clinical manifestations, epidemiology, pathogenesis, and diagnosis" and "Anaphylaxis: Acute diagnosis", section on 'Diagnostic pitfalls'.)

Reference:

https://www.uptodate.com/contents/clinical-manifestations-of-food-allergy-an-overview?source=search_result&search=allergy&selectedTitle=2~150

2. Patient got rapid swelling response after a bee sting what type of hypersensitivity?

A. 1

B. 2

C. 3

D. 4

Answer: A

Explanation:

TYPE I REACTIONS — Type I reactions require the presence of drug-specific IgE. A small minority of patients form drug-specific IgE upon exposure to a medication, while most do not even with prolonged treatment. Once formed, drug-specific IgE occupies surface receptors on mast cells and basophils throughout the body. If the drug is encountered again, it (or its metabolite) may bind to these IgE molecules, causing crosslinking of the receptors and activation of the cells, resulting in symptoms. IgE-mediated reactions are dose dependent, although this may not be clinically apparent because even very low doses can cause severe systemic symptoms.

Clinical features — The signs and symptoms of type I reactions are directly attributable to the vasoactive mediators released by mast cells and basophils. The most common signs and symptoms are urticarial rash (picture 1 and picture 2); pruritus; flushing; angioedema of the face, extremities, or laryngeal tissues (leading to throat tightness with stridor, or rarely asphyxiation); wheezing; gastrointestinal symptoms; and/or hypotension.

Anaphylaxis is the most severe presentation of an IgE-mediated drug reaction. Mast cell tryptase and histamine can be elevated in the circulation in the first several hours after anaphylaxis, and the detection of these mediators implicates mast cells and basophils in the reaction, supporting the diagnosis of anaphylaxis. (See "Anaphylaxis: Emergency treatment" and "Laboratory tests to support the clinical diagnosis of anaphylaxis".)

The presence of urticaria is useful in identifying IgE-mediated reactions, because the classical wheal and flare are hallmark signs of mast cell degranulation. However, other skin findings in drug reactions can mimic urticaria and it can be difficult to discern if a rash was truly urticarial based upon history alone. Many delayed reactions involve a pruritic exanthem or rash that causes diffuse swelling of the skin, and affected patients will report raised, itchy areas of skin. However, these delayed-onset edematous exanthems are NOT urticarial rashes. In addition, they are generally not dangerous, provided the skin does not blister or slough and there are no signs of organ inflammation. Reactions involving rash and organ inflammation are discussed below. Conversely, urticarial rashes may be altered in appearance or suppressed by ongoing antihistamine therapies, such that in such patients the absence of urticaria should not be taken as evidence against anaphylaxis. (See "Type IV Reactions" below.)

Neither fever nor elevations in serum C-reactive protein are seen with IgE-mediated reactions. The absence of these features can help distinguish IgE-mediated reactions from some other adverse drug reactions.

Timing — The timing of onset of type I reactions is rapid, but varies with the clinical setting and presentation. IgE-mediated reactions occur rapidly after the last administered dose, which underlies the designation of immediate by the World Allergy Organization (WAO). The time to onset is influenced by the route of administration; intravenously administered medications may cause symptoms in seconds to minutes, while the same drug administered orally may cause symptoms in 3 to 30 minutes if taken on an empty stomach, and in 10 to 60 minutes if taken with food.

- IgE-mediated anaphylactic reactions should NOT begin several days into a course of therapy, if the patient's exposure to the drug has been continuous. However, if several doses are skipped, symptoms can appear when the drug is resumed.
- Urticaria appearing within minutes to hours after drug intake can also be seen in "pseudoallergic" reactions. (See "Pseudoallergic reactions" below.)
- Isolated urticarial skin eruptions can occur late during continuous therapy:
 - The delayed appearance of urticarial rashes with known allergenic drugs like beta-lactam antibiotics may reflect time required for significant IgE responses, (similar to late-occurring serum sickness reactions)
 - Urticaria appearing one to two weeks after therapy, and accompanied by arthralgias and fever suggests serum sickness. (See "Pseudoallergic reactions" below and "Serum sickness" below.)
 - Urticarial eruptions, often appearing days after start of therapy, sometimes also have maculopapular features. These urticarial rashes typically occur with drugs that rarely cause acute allergy (eg, macrolide antibiotics), and are unlikely to be IgE-mediated. T cells may also be involved, although the pathogenesis is not known.

Pathology is similar to other immunoglobulin E (IgE)-mediated allergic reactions.

References:

- 1) Reference: <https://www.uptodate.com/contents/drug-allergy-classification-and-clinical-features?source=machineLearning&search=type+i+hypersensitivity&selectedTitle=1~150§ion-Rank=1&anchor=H13#H13>
- 2) <http://emedicine.medscape.com/article/768764-overview#a5> <http://emedicine.medscape.com/article/768764-overview-a5>
- 3) First Aid for USMLE step 1, page 204

3. Bee sting since 18 hrs. With swelling and redness, what will you do?

A. Antihistamines

B. Steroids

C. Observe

Answer: A

Explanation:

Local reactions can be life threatening if swelling occludes the airway. Initiate invasive measures to secure the airway if this occurs. Otherwise, the following local care measures suffice:

- Provide supplemental oxygen
- Diphenhydramine (antihistamine) limits the size of the local reaction.

- Clean the wound and remove the stinger if present.
- Apply ice or cool packs.
- Elevate the extremity to limit edema.

*Treatment should include an initial intravenous (IV) bolus of 10-20 mL/kg isotonic crystalloids in addition to diphenhydramine and epinephrine.

*If the patient has not removed the stinger, it should be removed as soon as possible by the first caregiver on the scene. Delay increases venom load, so the fastest removal technique is the best. Pinching and traction is an acceptable technique.

Reference:

- 1) <http://emedicine.medscape.com/article/768764-treatment>
- 2) Toronto Notes 2016, Page ER48

4. Man got a bee sting then his wife trying to look for the epinephrine what it going to inhibit?
- A. leukotriene release from macrophages
 - B. Cross reactivity with the cardiac.
 - C. inhibit immunocomplex formation
 - D. Widespread histamine release.

Answer: D

Explanation:

Epinephrine maintains blood pressure (by agonist alpha and beta-adrenergic receptors), antagonizes the effects of the released mediators, and inhibits further release of mediators.

Here in the link below the same Q (Q10) but there is extra choice and it is the Right Answer:

<https://quizlet.com/8362963/immuno-block-4-practice-exam-flash-cards/>

Reference:

http://www.medscape.com/viewarticle/578750_2

5. Itching only & CASE OF LADY WITH COMPLAINT OF pursuits. Physical examination not towards specific infection what to do?
- A. Referral to sexual transmitted disease
 - B. Re-evaluate if symptomatic with inflammatory manifestation?
 - C. She is okay not need to come
 - D. Give ttt for all possible infections
- Answer:?? Could not find the answer

6. Case is allergic to sulfa, shellfish, penicillin what will give him?

- A. Nitrofurantoin
- B. Tm/sMZ
- C. Penicillin
- D. Amoxicillin

Answer: A

Explanation:

- Penicillin antibiotics are the most common cause of drug allergies. Some people who are allergic to penicillin are also allergic to other closely related antibiotics, including cephalosporins, such as cefprozil, cefuroxime, and cephalexin.
- Antibiotics containing chemicals called sulfonamides can trigger a reaction if you have a sulfa allergy eg. Sulfamethoxazole-trimethoprim

Reference:

- 1) <http://www.webmd.com/allergies/tc/penicillin-allergy-topic-overview#1>
- 2) <http://www.mayoclinic.org/diseases-conditions/drug-allergy/expert-answers/sulfa->

7. Treatment of pyoderma gangrenosum?

A. Methotrexate.

B. Antibiotics.

C. Systemic Steroids.

Answer: C

Explanation:

SUMMARY AND RECOMMENDATIONS

- Pyoderma gangrenosum (PG) is an uncommon inflammatory and ulcerative disorder that may occur independently or in association with a variety of systemic diseases. (See 'Introduction' above.)
- Data on treatments for PG are limited and definitive guidelines for patient management are lacking. Treatment typically involves the use of one or more topical or systemic immunomodulatory agents. (See 'Approach to treatment' above.)
- Wound care measures in PG are intended to optimize the environment for wound healing. Wound dressings that maintain a moist wound environment are preferred. Due to the potential for pathergy (exacerbation of PG at sites of tissue injury), unnecessary trauma should be avoided. (See 'Wound management' above.)
- The role of surgery is controversial in PG due to the possibility of the induction of pathergy. Surgical procedures should be avoided in most cases. Surgery may be necessary in select cases, such as those in which tissue necrosis presents a risk for infection or in which exposure of vital tissues such as tendons or ligaments is present. (See 'Surgery' above.)
- The severity of PG influences the approach to treatment. For patients with mild, localized PG (few superficial ulcers or a plaque of vegetative PG), we suggest initial treatment with a high potency or superpotent topical corticosteroid or topical tacrolimus (Grade 2C). Patients with mild PG who fail to improve with local interventions should be treated with systemic therapy. We often attempt treatment with dapsone or minocycline prior to the initiation of more aggressive immunomodulatory therapies. (See 'Limited disease' above.)
- For patients with more extensive PG, systemic treatment is indicated. We suggest initiating treatment with systemic glucocorticoids (Grade 2C). Cyclosporine with or without systemic glucocorticoids may be used as an alternative first-line therapy. (See 'More extensive disease' above.)
- A wide variety of other systemic immunomodulatory agents appear to have efficacy in PG. Infliximab was effective for PG in a randomized trial, and may be particularly useful in patients who require treatment of both PG and Crohn's disease. The cost of infliximab and the requirement for infusion are potential limiting factors for the use of infliximab therapy. (See 'Second-line and adjunctive therapies' above.)
- It is estimated that with treatment, more than half of patients with PG achieve wound healing within one year, and almost all patients achieve remission with longer follow-up. However, relapses can occur after long periods of disease remission. (See 'Prognosis' above.)

- Mild, localized PG topical corticosteroid and for more extensive PG systemic glucocorticoids. UpToDate
- No specific therapy is uniformly effective for patients with pyoderma gangrenosum. In patients with an associated, underlying disease, effective therapy for the associated condition may be linked to a control of the cutaneous process as well.
- Topical therapies include gentle local wound care and dressings, super-potent topical corticosteroids, cromolyn sodium 2% solution, nitrogen mustard, and 5-aminosalicylic acid. The topical immune modifiers tacrolimus and pimecrolimus may have some benefit in certain patients.
- Systemic therapies include corticosteroids, cyclosporine, mycophenolate mofetil, azathioprine, dapsone, tacrolimus, cyclophosphamide, chlorambucil, thalidomide, tumor necrosis factor-alpha (TNF-alpha) inhibitors (eg, thalidomide, etanercept, infliximab, adalimumab, clofazimine), and nicotine.

Reference:

- 1) http://www.uptodate.com/contents/pyoderma-gangrenosum-treatment-and-prognosis?source=search_result&search=pyoderma%2Bgangrenosum&selectedTitle=2%7E68%25252523H2054609
- 2) <http://emedicine.medscape.com/article/1123821-treatment>

8. Pyoderma gangrenosum is associated with which one of these diseases?

A. Ulcerative colitis.

Answer: A

Explanation:

ASSOCIATED DISORDERS — More than 50 percent of patients with PG have an associated systemic disease, most commonly inflammatory bowel disease (14 to 34 percent), arthropathies (11 to 25 percent), and hematologic disease or hematologic malignancy (20 percent) [5,7]. PG may precede or follow the diagnosis of an associated disorder, and may or may not parallel the clinical course of the associated disease [9,21].

- **Inflammatory bowel disease** — PG is one of the most common skin disorders linked to inflammatory bowel disease. The proportion of patients with inflammatory bowel disease who develop PG appears to be small [36,37]. In a cohort study of 2402 patients with inflammatory bowel disease, PG was detected in only 0.75 percent of patients [36]. (See "Dermatologic and ocular manifestations of inflammatory bowel disease" section on "Pyoderma gangrenosum.")
 - **Hematologic disorders** — PG may occur in patients with hematologic disorders or hematologic malignancies. The most common type of paraproteinemia associated with PG is IgA monoclonal gammopathy [9]. Examples of other hematologic disorders that have been associated with PG include myeloma, leukemia, myelodysplasia, lymphoma, and polycythemia vera [6,7,9].
 - **Arthritis** — PG may occur in association with rheumatoid arthritis, seronegative arthritis, ankylosing spondylitis, and less frequently, other arthropathies [6,9].
 - **PAPA syndrome** — PAPA syndrome is an autosomal dominant disorder that presents with pyogenic sterile arthritis, PG, and acne. PAPA syndrome occurs secondary to a defect in the *PSTPIP1/CD2BP1* gene. (See "Pathogenesis" above and "Periodic fever syndromes and other autoinflammatory diseases: An overview" section on "PAPA syndrome".)
- PG is more common in UC (5–12%) than CD (1–2%).

Reference:

- 1) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3273725/table/T1/>
- 2) https://www.uptodate.com/contents/pyoderma-gangrenosum-pathogenesis-clinical-features-and-diagnosis?source=search_result&search=Pyoderma%2Bgangrenosum&selectedTitle=1%7E68

9. What is the most common pathogen in patient with chronic granulomatous disease?

A. *Aspergillus* species then *staphylococcus aureus*

Answer: A

Explanation:

Organisms — In general, the organisms that infect patients with CGD are catalase producing. Catalase is an enzyme that inactivates the **hydrogen peroxide** normally produced by some bacteria and fungi during growth. Although most micro-organisms produce hydrogen peroxide, some do not. It was thought that CGD phagocytes could use the hydrogen peroxide produced by catalase-negative microbes to generate reactive oxidants, thereby bypassing the intrinsic CGD defect. However, the majority of pathogens in general are catalase positive, and only a few cause infections in CGD, suggesting that catalase production alone is insufficient for pathogenicity. Furthermore, targeted deletion of the catalase gene in *Aspergillus nidulans* and *Staphylococcus aureus* did not affect virulence in animal models of CGD, indicating that microbial catalase is not a significant virulence factor for CGD infections.

The overwhelming majority of severe infections in North America are due to five organisms (estimated incidence of severe infections in 268 patients followed at a single center over a 40-year period is shown) [37]:

- *Aspergillus* species (2.6 cases per 100 patient-years)
- *S. aureus* (1.44 per 100 patient-years)
- *Burkholderia (Pseudomonas) cepacia* complex (1.06 per 100 patient-years)
- *Serratia marcescens* (0.98 per 100 patient-years)
- *Nocardia* species (0.81 per 100 patient-years)

Reference:

https://www.uptodate.com/contents/chronic-granulomatous-disease-pathogenesis-clinical-manifestations-and-diagnosis?source=see_link

10. Immune deficient patient, what vaccine could be given?

- A. Measles
- B. Rubella
- C. Pneumococcus
- D. varicella

Answer: C

Explanation:

- Inactivated vaccines can be administered safely to persons who have altered immunocompetence, but the effectiveness of such vaccines may be suboptimal. In general, severely immunocompromised children should not receive live vaccines, either viral or bacterial, because of the risk of disease caused by vaccine strains. Oral poliovirus vaccine and live bacterial

vaccines, such as bacillus Calmette-Guérin (BCG) and Salmonella typhi Ty21, are contraindicated for immunocompromised patients.

- Inactivated vaccines can generally be used without risk but the patients who are most at risk for infectious morbidity and mortality as a result of their severely immunosuppressed state are also those least likely to respond to vaccination. However, vaccination against pneumococci, Haemophilus influenzae and influenza are generally recommended.

Reference:

- 1) <http://pedsinreview.aappublications.org/content/31/1/38>
- 2) <https://www.ncbi.nlm.nih.gov/pubmed/23051059>
- 3) Q: 66, Page: 98, Brattons Family Medicine Board Review, 5th edition

11. Wheal with erythematous base, itching, lymph node enlargement, periorbital swelling, hepatosplenomegaly?

- A. Rheumatic arthritis
- B. Angioedema
- C. Cholinergic urticaria

Answer: probably C (not sure).itching more with urticarial

Reference:

<http://www.merckmanuals.com/professional/dermatologic-disorders/approach-to-the-dermatologic-patient/urticaria>

12. Clear presentation of Sjogren Syndrome, asking about the complication?

- A. Pulmonary fibrosis
- B. Malabsorption
- C. Lymphocytic tissue infiltration

Answer: C

Explanation:

- Sjögren syndrome is an idiopathic autoimmune disorder secondary to antibodies predominantly against lacrimal and salivary glands.
- “Dangerous” complication of Sjögren is lymphoma.
- Morbidity associated with Sjögren syndrome is mainly associated with the gradually decreased function of exocrine organs, which become infiltrated with lymphocytes.

Reference:

- 1) <http://emedicine.medscape.com/article/332125-clinical>
- 2) Master the board USMLE step 2 CK, page 189

13. Peanut allergy mechanism of action?

- A- Immunoglobulin E (IgE) mediated

Answer: A

Explanation:

- The discovery of IgE and its relation to allergic reactions provided a major step in the understanding of the pathogenesis of food allergy.

Reference:

IgE-MEDIATED REACTIONS

Immunoglobulin E (IgE)-mediated food allergic reactions are rapid in onset, typically beginning within minutes to two hours from the time of ingestion. IgE-mediated reactions to carbohydrate allergens in meats, a type of reaction reported mainly in adults, represent an exception to this temporal pattern since these reactions begin four to six hours after ingestion. Most patients react to one or two specific foods/food groups, although an increasing number of patients react to multiple foods. (See "Allergy to meats".)

https://www.uptodate.com/contents/clinical-manifestations-of-food-allergy-an-overview?source=search_result&search=allergy&selectedTitle=2%7E150

14. What types of hypersensitivity rapid onset of?

- A- hypersensitivity I (immediate) (IgE)
- B- hypersensitivity 2
- C- hypersensitivity 3

Answer: A

Explanation:

- ✓ divided the hypersensitivity reactions into the following 4 types:
 - Type I reactions (ie, immediate hypersensitivity reactions) involve immunoglobulin E (IgE)-mediated release of histamine and other mediators from mast cells and basophils.
 - Type II reactions (ie, cytotoxic hypersensitivity reactions) involve immunoglobulin G or immunoglobulin M antibodies bound to cell surface antigens.
 - Type III reactions (ie, immune-complex reactions) involve circulating antigen-antibody immune complexes.
 - Type IV reactions (ie, delayed hypersensitivity reactions, cell-mediated immunity) are mediated by T cells rather than by antibodies.

Reference:

IgE-MEDIATED REACTIONS

Immunoglobulin E (IgE)-mediated food allergic reactions are rapid in onset, typically beginning within minutes to two hours from the time of ingestion. IgE-mediated reactions to carbohydrate allergens in meats, a type of reaction reported mainly in adults, represent an exception to this temporal pattern since these reactions begin four to six hours after ingestion. Most patients react to one or two specific foods/food groups, although an increasing number of patients react to multiple foods. (See "Allergy to meats".)

- 1) <http://emedicine.medscape.com/article/136217-overview>
- 2) https://www.uptodate.com/contents/clinical-manifestations-of-food-allergy-an-overview?source=search_result&search=allergy&selectedTitle=2%7E150

15. Patient have Hx of recurrent URTI and LRTI his father and uncle have the same complain on examination there is eczema, Thrombocytopenia what is the diagnosis ?

- A- severe combined immunodeficiency
- B- Bruton agammaglobulinemia
- C- wiskott-aldrich syndrome

Answer: C

Explanation:

Wiskott-Aldrich syndrome (WAS) is an X-linked disorder characterized by the clinical triad of microthrombocytopenia, eczema, and recurrent infections.

Reference:

<http://emedicine.medscape.com/article/137015-overview>

16. Patient complaining of hematuria and cough with saddle nose?

A. Wegener's Granulomatosis

Answer: A

Explanation:

Signs and Symptoms of Wegener's Granulomatosis:

- Systemic
 - ✓ malaise, fever, weakness, weight loss
- HEENT
 - ✓ sinusitis or rhinitis, nasal crusting and bloody nasal discharge, nasoseptal perforation, saddle nose deformity
 - ✓ proptosis due to: inflammation/vasculitis involving extra-ocular muscles, granulomatous retrobulbar space occupying lesions or direct extension of masses from the upper respiratory tract
 - ✓ hearing loss due to involvement of CN VIII
- Pulmonary
 - ✓ cough, hemoptysis, granulomatous upper respiratory tract masses
- Renal
 - ✓ hematuria
- Other
 - ✓ joint, skin, eye complaints, vasculitic neuropathy

Reference:

Toronto Notes 2016, page RH19

17. Question about chronic granulomatous disease? (Incomplete question)

Explanation:

- Lack of NADPH oxidase \longrightarrow reactive oxygen species (e.g., superoxide) and absent respiratory burst in neutrophils. \downarrow
- Increase susceptibility to catalase positive organisms (e.g., *S. aureus*, *E. coli*, *Aspergillus*).
- Abnormal dihydrorhodamine (DHR) flow cytometry test. Nitroblue tetrazolium dye reduction test no longer preferred.

Reference: First Aid for the USMLE Step 1 2013, page 207

18. Goodpasture syndrome >>>> types of GN: Rapidly Progressive GlomeruloNephritis Type I (RPGN Type 1) (Incomplete question)

Explanation:

- Antibodies against type IV collagen present in lungs and GBM
- More common in 3rd and 6th decades of life, males slightly more affected than females
- present with RPGN type I and hemoptysis/dyspnea
- Pulmonary hemorrhage more common in smokers and males
- treat with plasma exchange, cyclophosphamide, and prednisone

Reference:

Toronto Notes 2016, Page NP23

19. X-LINKED agammaglobulinemia? (Incomplete question)

Explanation:

X-linked (Bruton) Agammaglobulinemia

X-linked agammaglobulinemia presents in **male children** with increased sino-pulmonary infections. B cells and lymphoid tissues are diminished. There is a decrease or **absence of the tonsils, adenoids, lymph nodes, and spleen**. T cells are normal. Treat the infections as they arise. Long-term regular administration of intravenous immunoglobulin (IVIG) keeps these children healthier.

Reference:

Master the Board USMLE Step 2 CK, Page 45

20. What most commonly cause itching?

- A - bile salt retention
- B - eczema
- C - pregnancy

Answer: B

Explanation:

Pruritus, or itch, is most commonly associated with a primary skin disorder such as xerosis, atopic dermatitis, urticaria, psoriasis, arthropod assault, mastocytosis, dermatitis herpetiformis, or pemphigoid. However, when a primary skin condition cannot be identified as the cause of pruritus, then a systemic or neuropathic cause must be sought. Patients without signs of a primary skin condition should undergo a thorough evaluation of potential systemic causes of itching.

Reference:

<http://emedicine.medscape.com/article/1098029-overview>

CARDIOLOGY

1 - What is first thing to do in MI?

A- ECG

Answer: A

Explanation: The first goal for healthcare professionals is to diagnose in a very rapid manner whether the patient is having an STEMI or NSTEMI because therapy differs between the 2 types of myocardial infarction.

All patients presenting to the the emergency department with symptoms suggestive of acute myocardial infarction (MI) should be evaluated with a targeted history and focused physical examination (see Presentation). A 12-lead electrocardiogram (ECG) interpreted by an experienced physician should be completed within 10 minutes of arrival, in addition to establishing intravenous (IV) access.

Reference: <http://emedicine.medscape.com/article/155919-treatment>

2 - A Female C/O leg pain when she walks 300 Meters. Relief by rest:

A- Claudication

B- DVT

Answer: A

Explanation: Claudication, which literally means “to limp”, is one of the symptoms of lower extremity peripheral artery disease (PAD), but can also occur in patients who have other vascular problems (eg, aneurysm). Claudication is defined as a pain or discomfort in a group of muscles, usually the legs, thighs, or buttocks, that is worsened by exercise (ie, walking) and relieved with rest.

Reference: <https://www.uptodate.com/contents/peripheral-artery-disease-and-claudication-beyond-the-basics>

3 - Patient HTN and hyperlipidemia with chest pain and when he is coming to hospital take drug relieve his symptoms which drug:

a- Nitrate

b- digoxin

c- nitric oxide

answer: A

Explanation: Nitrate agents may be used in the treatment of ischemic chest pain, symptoms of heart failure, or hypertension, but these drugs are not associated with appreciable long-term clinical benefit. Nitrate agents are contraindicated for patients with right ventricular infarction, hypertrophic cardiomyopathy (HOCM), and severe aortic stenosis.

Reference: <http://emedicine.medscape.com/article/159383-treatment#d8>

4. patient has history of MI suddenly he became breathlessness and harsh systolic murmur heard what the cause:

A. PE

B. rupture aortic cusp

C. tricuspid regurgitation

D. rupture of papillary muscle >>MR

E. ventricle septal rupture.

Answer: E

Explanation: Patients with a ruptured septum usually present with the precipitous onset of hemodynamic compromise characterized by hypotension, biventricular failure (often predominantly right-sided failure), and a new murmur. The murmur is harsh, loud, and holosystolic, and is heard best at the lower left and usually right sternal borders, with occasionally widespread radiation. In some cases, the murmur is heard best at the apex and may be mistaken for acute mitral regurgitation. A thrill can be detected in up to 50 percent of patients; right ventricular lift and a hyperdynamic precordium may also be noted.

The clinical manifestations of papillary muscle rupture include the acute onset of hypotension and pulmonary edema with a hyperactive precordium and a mid-, late-, or holosystolic murmur that may have widespread radiation. Although the murmur may be loud, a thrill is generally not present. Furthermore, as noted above, many patients have no or only a soft murmur.

Reference: <https://www.uptodate.com/contents/mechanical-complications-of-acute-myocardial-infarction#H17>

5. Which heart disease is common in down syndrome:

a- VSD

b- atrioventricular septal defect

c- coarctation of aorta

Answer: B

Explanation: Of those children with Down syndrome who are born with congenital heart disease, an atrioventricular septal defect is the most common. In less severe cases, Ventricular Septal Defects and Atrial Septal Defects can also occur separately.

Reference: <http://www.ndss.org/Resources/Health-Care/Associated-Conditions/The-Heart--Down-Syndrome/>

https://www.uptodate.com/contents/down-syndrome-clinical-features-and-diagnosis?source=search_result&search=down%20syndrome&selectedTitle=1~150#H7

6. Best initial screening test for pt suspected with coarctation of aorta?

a-echo/Doppler (initial test)

b-CT cardiac

c-MRI cardiac

d-cardiacangio (most accurate)

Answer: A

Explanation: The clinical diagnosis of coarctation of the aorta is based upon the characteristic findings of systolic hypertension in the upper extremities, diminished or delayed femoral pulses (brachial-femoral delay), and low or unobtainable arterial blood pressure in the lower extremities. The diagnosis is confirmed by noninvasive imaging methods, particularly echocardiography.

Echocardiography — In most patients, high-quality two-dimensional and Doppler echocardiography can establish the diagnosis and severity of coarctation of the aorta, including in neonates with a patent ductus arteriosus. Echocardiography can also detect associated cardiac defects, including aortic hypoplasia, and can be used for follow-up after repair.

Reference: <https://www.uptodate.com/contents/clinical-manifestations-and-diagnosis-of-coarctation-of-the-aorta#H18>

7. What is the commonest cause of HTN in adolescent:

A-idiopathic

B -Renal

Answer: A

Explanation: hypertension can be categorized as primary or essential hypertension (PH) when there is no identifiable cause and secondary hypertension (SH) when there is an underlying cause for hypertension. PH is now the most common cause of hypertension in adolescents and young adults. It is usually characterized by stage I (mild) hypertension and associated with a positive family history of hypertension.

Reference: [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3947917/step up \(429 P\)](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3947917/step up (429 P))

Age groups	Percentage of hypertension with an underlying cause	Most common etiologies†
Children (birth to 12 years)	70 to 85	Renal parenchymal disease Coarctation of the aorta
Adolescents (12 to 18 years)	10 to 15	Renal parenchymal disease Coarctation of the aorta
Young adults (19 to 39 years)	5	Thyroid dysfunction Fibromuscular dysplasia
Middle-aged adults (40 to 64 years)	8 to 12	Renal parenchymal disease Aldosteronism Thyroid dysfunction Obstructive sleep apnea Cushing syndrome Pheochromocytoma
Older adults (65 years and older)	17	Atherosclerotic renal artery stenosis Renal failure Hypothyroidism

*—Excluding dietary and drug causes and the risk factor of obesity.
†—Listed in approximate order of frequency within groups.
Information from references 2, 3, and 30 through 34.

8. Patient on warfarin 7 mg presented with melena, INR was very high. What will you do?

- a. Stop warfarin, Give vit. K
- b. Lower the dose of warfarin

Answer: A

Explanation: **Minimal bleeding** — There is little guidance as to how patients with minimal bleeding in the setting of an elevated INR (eg, >5) should be treated. Options include withholding warfarin, holding warfarin and giving vitamin K, or more aggressive reversal as outlined for patients with more significant bleeding

Reference: https://www.uptodate.com/contents/management-of-warfarin-associated-bleeding-or-supratherapeutic-inr?source=search_result&search=Warfarin&selectedTitle=10~150#H745238
https://www.uptodate.com/contents/approach-to-acute-upper-gastrointestinal-bleeding-in-adults?source=see_link#H72879436
<http://www.nps.org.au/publications/health-professional/health-news-evidence/2013/managing-warfarin-and-bleeding-risk> (see tables).

9. Young pt with HTN discrepancy, what is the tx?

- A- Trans-aortic stenting
- B- Thiazides

Answer: A

Explanation: Blood pressure and pulses — The classic findings of coarctation of the aorta are systolic hypertension in the upper extremities, diminished or delayed femoral pulses (brachial-femoral delay), and low or unobtainable arterial blood pressure in the lower extremities

Stent placement — In children and adults, stent placement after balloon angioplasty or surgery reduces the complications, results in a minimal residual gradient, improves luminal diameter, and sustains hemodynamic benefit. Children with aortic stent placement are more likely to require a planned reintervention as the stent often needs to be dilated as the child grows.

Reference: https://www.uptodate.com/contents/management-of-coarctation-of-the-aorta?source=see_link#H2

10. Pt with long hx of uncontrolled HTN, he presented to you with headache and 160/90 BP, what you will see in his kidneys :

A-Decrease sclerosis

B-Increase hyalinization of arterioles

Answer: B

hyaline arteriosclerosis is associated with aging, long standing HTN and DM
Nephrosclerosis, commonly found in subjects with hypertension and diabetes, is marked by hyalinization of arterioles and fibroplasia of small arteries in the renal cortex.

<https://www.ncbi.nlm.nih.gov/pubmed/9108792>

11. Pt with migraine and HTN Best medication to treat HTN?

a) BB

b) ACEI

c) CCB

Answer: A

Beta blockers — Beta blockers were originally developed to treat high blood pressure. In addition, beta blockers reduce the frequency of migraine attacks in 60 to 80 percent of people. Commonly used beta blockers include propranolol, nadolol, atenolol, and metoprolol. Beta blockers may cause depression in some people or impotence in some men.

#Reference: www.uptodate.com/contents/migraine-headaches-in-adults-beyond-the-basics

12. Elderly pt with right leg swelling, pitting edema hx of knee swelling and pain, what is the next?

A. Echocardiogram

B. Doppler

C. Chest x-ray

Answer: B

Dvt diagnosis is typically by ultrasonography with doppler flow studies (duplex ultrasonography).

- Validated clinical prediction rules (eg, Wells) should be used to estimate the pretest probability of VTE and interpret test results

- In appropriately selected patients with low pretest probability of DVT or PE, it is reasonable to obtain a high-sensitivity D-dimer
- In patients with intermediate to high pretest probability of lower-extremity DVT, ultrasonography is recommended
- In patients with intermediate or high pretest probability of PE, diagnostic imaging studies (eg, ventilation-perfusion scan, multidetector helical CT, and pulmonary angiography) are required

<http://emedicine.medscape.com/article/1911303-overview?pa=fIJbJwx6TxmeDSGIzegOzYlhGIBnJEfHDr06txkwgyhLzyWMHs6md9%2Beu60w4ucLI3LLu%2B%2FrV0fy0%2FYIV60BfichrzF%2F7vlnSF6AEX%2F09M8%3D>

13. Patient with murmur in left sternal border change with stand or sitting what is Dx:

- a- pulmonary stenosis
- b- aortic stenosis
- c- cardiomyopathy
- d- innocent murmur

answer: D

Innocent murmurs are produced by the normal flow of blood through the heart. Changing the flow by changing the patient's position (for example, decreasing flow to the heart with the Valsalva maneuver) will change the intensity of the murmur.

#Reference: <http://www.aafp.org/afp/2011/1001/p793.html>

14. patient with chest pain for 6 hours what you will give :

- a- tPA
- b- aspirin

answer: A

#Reference: step up (P11) master of the board 120P.

15 (long scenario) case of endocarditis with negative bacterial culture, there is diastolic murmur radiate to the left axilla. What is the most likely diagnosis?

- a. SLE
- b. Rheumatoid arthritis.
- c. Acute myocarditis.

Answer: A

Libman-Sacks endocarditis (otherwise known as verrucous, marantic, or nonbacterial thrombotic endocarditis) is the most characteristic cardiac manifestation of the autoimmune disease systemic lupus erythematosus. One cohort study reported that pure mitral regurgitation was the most common valvular abnormality, followed by

aortic regurgitation, combined mitral stenosis and regurgitation, and combined aortic stenosis and regurgitation.

Reference:<http://emedicine.medscape.com/article/155230-overview#showall>

Blood culture-negative infective endocarditis (IE)

:<http://www.uptodate.com/contents/epidemiology-microbiology-and-diagnosis-of-culture-negative-endocarditis>

16. Best exercise to patient with HTN :

a- weight loss

b- aerobic exercise

answer: b

N.B anaerobic increase blood pressure

Cardiovascular, or aerobic, exercise can help lower your blood pressure and make your heart stronger. Examples include walking, jogging, jumping rope, bicycling (stationary or outdoor), cross-country skiing, skating, rowing, high- or low-impact aerobics, swimming, and water aerobics.

<https://www.ncbi.nlm.nih.gov/pubmed/15107009>

17. pregnant lady with DVT what is the best investigation to diagnose?

a- d-dimer

b- duplex US to calf muscle (VCUS)

c- CT-angio

answer: B

<http://emedicine.medscape.com/article/1911303-workup#c10>

18. Pt had MI , he was given sublingual nitrate and analgesia , the MOA of the analgesic that was given ?

Answer: morphine bind to Mu receptor

Reference: <http://www.news-medical.net/health/Morphine-Pharmacology.aspx>

<http://www.clevelandclinicmeded.com/medicalpubs/diseasemanagement/cardiology/complications-of-acute-myocardial-infarction/>

<https://www.nursingtimes.net/clinical-archive/cardiology/complications-associated-with-myocardial-infarction/205206.article>

19. Which of the following is side effect of morphine:

a- dry cough

b- nausea , vomiting

c- tachypnea

d- anxiety

answer: B

The most common **adverse effects** of morphine are Pruritus, Urinary retention, **Vomiting**, Constipation, Headache, and Somnolence.

Source: Medscape <http://reference.medscape.com/drug/ms-contin-astramorph-morphine-343319#4>

20. Man wants to increase awareness about stroke prevention, what will he do

A. HTN campaign in mole

Answer: A

Repeated, HTN is the most important factor for stroke prevention.

#Reference: Step up CNS chapter.

21. Which of the following is most likely to be the presentation of a patient with early STEMI?

A. Troponin of 0.12 with T inversion in V1-V4

B. Pathological Q wave with subsided chest pain. (**Q wave is usually a late sign**)

C. Presence of chest pain with 0.3 mg elevation in ST segment in leads 2,3, AVf

D. ST depression in 2,3, AVf. (**ST depression considered STEMI only if it's in lead V1 and V2**)

Answer: C.

Usual ECG evolution of a Q-wave MI:

1. Normal ECG prior to MI

2. Hyperacute T wave changes - increased T wave amplitude and width; may also see ST elevation

3. Marked ST elevation with hyperacute T wave changes (transmural injury)

4. Pathologic Q waves, less ST elevation, terminal T wave inversion (necrosis)

o (Pathologic Q waves are usually defined as duration ≥ 0.04 s or $\geq 25\%$ of R-wave amplitude)

5. Pathologic Q waves, T wave inversion (necrosis and fibrosis)

6. Pathologic Q waves, upright T waves (fibrosis)

<http://ecg.utah.edu/lesson/9>

QT prolongation and hyperacute T waves are the earliest-described electrocardiographic sign of acute ischemia, preceding ST-segment elevation.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4500486/>

22. (long scenario) man with chest pain and abnormal EKG. Which one of the following will be elevated?

a. ESR.

b. M2 Protein.

c. C-RP.

d. Creatinine.

Answer: C

It has been shown that CRP is increased in patients with unstable angina; however, owing to lack of sensitivity and specificity, it cannot be used as a diagnostic marker. As a prognostic indicator, high CRP levels have also been associated with poor outcome.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4660641/>

CRP is a useful prognostic indicator in patients with ACS, as elevated CRP levels are independent predictors of cardiac death, acute MI, and CHF.
<http://emedicine.medscape.com/article/811905-overview#showall>

<http://www.ncbi.nlm.nih.gov/pubmed/19805833>

23. According to the modified criteria of rheumatic fever which is considered as a minor criteria ?

a. Carditis

b. Fever

c. Arthritis

Answer: B

Source: Step-up to medicine.

Table 7. Revised Jones Criteria For The Diagnosis Of Rheumatic Fever.

Diagnosis is made by the presence of: <ul style="list-style-type: none">- one required criteria, two major criteria, and zero minor criteria; or- one required criteria, one major criteria, and two minor criteria
Required criteria: <ul style="list-style-type: none">- Evidence of streptococcal infection (e.g., increased titer of anti-Streptococcal antibodies [ASO, others]; positive throat culture for group A Streptococcus; recent scarlet fever)
Major diagnostic criteria: <ul style="list-style-type: none">- Carditis- Polyarthritits- Chorea- Erythema marginatum- Subcutaneous nodules
Minor diagnostic criteria: <ul style="list-style-type: none">- Fever- Arthralgia- Previous rheumatic fever or rheumatic heart disease- Acute phase reactions (ESR / CRP / leukocytosis)- Prolonged PR interval

24. Patient come with precordial pain, ECG ST segment elevation, patient given aspirin and nitrate, but no relieve of pain what next step you will do?

Answer: A

Refractory chest pain treat by IV morphin

25. 27 Y/O female , recurrent palpitations ECG :

Answer: Supraventricular tachycardia

The most common type of SVT is AVNRT. Most patients with AVNRT do not have structural heart disease; the group most often affected is young, healthy women.

<http://www.aafp.org/afp/2010/1015/p942.html>

<http://www.practicalclinicalskills.com/mobile/ekg/supraventricular-tachycardia.aspx>

26. MI patient within 6 hours what is the most expected complication :

A. PE

B. Arrhythmia

Answer : B

Arrhythmia is the most expected complication of MI within 6 hours(especially VF)

Ventricular arrhythmia is a common complication of acute MI, occurring in almost all patients, even before monitoring is possible.

Reference: FA step 1

<http://www.clevelandclinicmeded.com/medicalpubs/diseasemanagement/cardiology/complications-of-acute-myocardial-infarction/>
<https://www.nursingtimes.net/clinical-archive/cardiology/complications-associated-with-myocardial-infarction/205206.article>

27. Patient with chest pain and ST changes, you will find elevation in:

- A. ALT B. AST
- C. Troponin

Answer: C

ALT, AST are liver enzymes

Troponin is cardiac enzyme, and go more commonly with this case presentation

Ref. Toronto note p75 (Cardiac biomarkers)

28. infective rheumatic fever. ! Rash ,

- A. Reticulocyte count

Answer: ??

Long term infection can lead to low reticulocyte count

29. Pt with decreased lower limbs pulses and intercostal notching in x-ray. What is the diagnosis?

- A- Coarctation of Aorta

Answer: A

Reference: <http://emedicine.medscape.com/article/895502-clinical>

30. What lower blood pressure the most ??

- A- Weight loss
- B- Salt restricted diet
- C- Exercise

Answer: A

*Weight loss helps to prevent hypertension (range of approximate systolic BP reduction [SBP], 5-20 mm Hg per 10 kg).

*Reduce sodium intake to no more than 100 mmol/d (2.4 g sodium or 6 g sodium chloride; range of approximate SBP reduction, 2-8 mm Hg)

*Engage in aerobic exercise at least 30 minutes daily for most days (range of approximate SBP reduction, 4-9 mm Hg)

REF. Toronto note p337 (Treatment: Diet)

27. Which murmur is a Crescendo-decrescendo murmur?

- A-Systolic Ejection (Aortic stenosis)
- B-Physiologic murmur
- C-Innocent murmur

Answer: A

Classic crescendo-decrescendo systolic murmur of aortic stenosis begins shortly after the first heart sound.

Reference: <http://emedicine.medscape.com/article/150638-overview>

28. Patient has HTN and BPH. .WHICH DRUG CAN USE.?

- A.PRAZOSIN

Answer: A

Reference: www.drugs.com

29. Patient with chest pain .. Pic of ECG ..NO ST ELEVATION LAP RESULT, HIGH TROPONIN, HIGH LDH, HIGH ASPARTAT

Answer : Increase LDH, AST ,Troponin in skeletal muscle injury and MI (NSTEMI)
So answer according the pic.

Reference: [http://www.ayubmed.edu.pk/JAMC/PAST/14-4/Rehan%](http://www.ayubmed.edu.pk/JAMC/PAST/14-4/Rehan%20et%20al.pdf)

30. Ischemic heart pt with lap result of high lipid .. What the next order ?

- A. TFT
- B. LFT

Answer: B

recommend treating all patients with CVD with high-dose statin therapy

In 2012, the US Food and Drug Administration revised its labeling information on statins to only recommend liver function testing prior to initiation of statin therapy and to only repeat such testing for clinical indications

uptodate

22. Patients with unstable angina (UA) are at a higher risk of developing:

1. Low risk
2. NSTEMI
3. STEMI

Answer: B

NSTEMI and UA are conditions collectively termed non-ST elevation acute coronary syndromes (NSTEACS).

First Aid USMLE STEP 2 CK

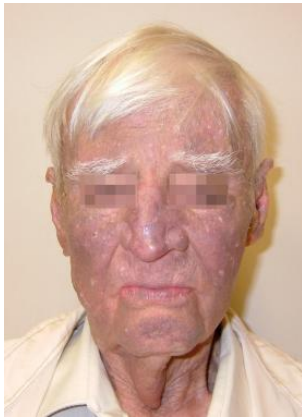
<https://www.ncbi.nlm.nih.gov/books/NBK62747/>

23. 69 y/o female on antiarrhythmic and she developed hyperpigmentation. What is the

medication she is on?

- Cordarone (Amiodarone)

Answer: 1



Amiodarone pigmentation.

<https://www.drugs.com/sfx/cordarone-side-effects.html>

24. Patient with heart failure and AF, digoxin was added. What is the benefit?

- decrease heart failure
- slow ventricular rate
- decrease ventricular efficacy

Answer: 2

Uptodate

MECHANISM OF ACTION — Digitalis acts by inhibiting the Na-K-ATPase pump in myocardial cells [3]. Increased intracellular sodium promotes sodium-calcium exchange, leading to a rise in the intracellular calcium concentration. This results in improved isolated myocyte contractile performance (increased shortening velocity) and overall left ventricular (LV) systolic function [3,4].

Digitalis also exerts an antiadrenergic action in patients with heart failure (HF) by inhibiting sympathetic outflow and augmenting parasympathetic tone. These actions may contribute to the clinical utility of digitalis in some patients.

Digitalis can also be beneficial in patients with HF due to systolic dysfunction with atrial fibrillation (AF) with rapid ventricular response [1], though other agents are preferred for rate control. For patients with compensated systolic HF and AF, a beta blocker (with or without adjunctive *digoxin*) is generally preferred for rate control. Digitalis slows the ventricular rate during AF, largely via increased parasympathetic tone. Through both rate control and improved contractility, digitalis relieves symptoms of systolic HF when associated with AF and a rapid ventricular rate. (See "[Control of ventricular rate in atrial fibrillation: Pharmacologic therapy](#)" and "[The management of atrial fibrillation in patients with heart failure](#)".)

25. Long scenario asking how amlodipine cause LL edema

- Increase capillary oncotic pressure
- Decrease plasma ...
- Decrease cardiac output
- Increase capillary hydrostatic pressure

Answer: 4

Calcium channel blocker (CCB)-related edema is quite common in clinical practice and can

effectively deter a clinician from continued prescription of these drugs. Its etiology relates to a **decrease in arteriolar resistance that goes unmatched in the venous circulation**. This disproportionate change in resistance increases hydrostatic pressures in the precapillary circulation and permits fluid shifts into the interstitial compartment.

http://www.medscape.com/viewarticle/460070_1

26. Patient with murmur at midsternal not radiation high pitched first sound with crescendo-decrescendo?

- Ejection diastolic
- Ejection systolic
- Physiologic
- Innocent

Answer: 2

All crescendo-decrescendo murmurs are systolic murmurs:

- Aortic stenosis: high-pitched, crescendo-decrescendo (diamond shaped), midsystolic murmur located at the aortic listening post and radiating toward the neck.
- Pulmonic stenosis: midsystolic, high-pitched, crescendo-decrescendo murmur heard best at the pulmonic listening post and radiating slightly toward the neck
- Hypertrophic obstructive cardiomyopathy: high-pitched, non-radiating, crescendo-decrescendo, midsystolic murmur heard best at the left lower sternal border

<https://www.healio.com/cardiology/learn-the-heart/cardiology-review/topic-reviews/heart-murmurs>

27. Patient with damaged valve got infective endocarditis after a tooth extraction. What is the organism?

- strep viridans
- staph aureus

Answer: 1

Oral commensal bacteria are important etiologic agents in infective endocarditis especially in those who have a predisposed risk for this disease, such as those with heart valve diseases, pacemaker implantation after common dental procedures, even non-surgical dental procedures. Streptococcus viridans comprise the largest group in the member of Streptococcus, and they are the most dominant oral commensals in the oral cavity.

28. Elderly heavy smoker with pain on walking and on examination he has loss of hair and pallor of feet. What's the dx?

- Peripheral Arterial Disease

Answer: 1

<http://www.merckmanuals.com/professional/cardiovascular-disorders/peripheral-arterial-disorders/peripheral-arterial-disease#v940571>

29. Infective endocarditis (migratory arthritis)

Answer: Duke Criteria for diagnosis of infective endocarditis

Modified Duke Criteria:

- Definitive diagnosis if: 2 major, OR 1 major + 3 minor, OR 5 minor
- Possible diagnosis if: 1 major + 1 minor, OR 3 minor

Table 17. Modified Duke Criteria

Major Criteria (2)
1. Positive blood cultures for IE <ul style="list-style-type: none">• Typical microorganisms for IE from 2 separate blood cultures (<i>Streptococcus viridans</i>, HACEK group (see ID16), <i>Streptococcus gallolyticus</i> (previously known as <i>S. bovis</i>), <i>Staphylococcus aureus</i>, community-acquired enterococci) OR• Persistently positive blood culture, defined as recovery of a microorganism consistent with IE from blood drawn >12 h apart OR• All of 3 or a majority of 4 or more separate blood cultures, with first and last drawn >1 h apart OR• Single positive blood culture for <i>Coxiella burnetii</i> or antiphase I IgG antibody titer >1:800
2. Evidence of endocardial involvement <ul style="list-style-type: none">• Positive echocardiogram for IE (oscillating intracardiac mass on valve or supporting structures, or in the path of regurgitant jets, or on implanted material in the absence of an alternative anatomic explanation OR abscess OR new partial dehiscence of prosthetic valve) OR• New valvular regurgitation (insufficient if increase or change in preexisting murmur)
Minor Criteria (5)
1. Predisposing condition (abnormal heart valve, IVDU)
2. Fever (38.0°C/100.4°F)
3. Vascular phenomena: major arterial emboli, septic pulmonary infarcts, mycotic aneurysms, ICH, conjunctival hemorrhages, Janeway lesions
4. Immunologic phenomena: glomerulonephritis, rheumatoid factor, Osler's nodes, Roth's spots
5. Positive blood culture but not meeting major criteria OR serologic evidence of active infection with organism consistent with IE

Toronto Notes

30. Food should be avoided in high cholesterol patients:

- Organic meat
- Egg white
- Avocado
- Chicken

Answer: 1

<http://www.webmd.com/cholesterol-management/foods-to-avoid-for-high-cholesterol>

44- women complain of buttock pain ,In angiogram which artery most likely occluded?!

- a. Internal iliac
- b. external iliac
- c. femoral
- d. pudendal

Answer: A

Ref:<http://emedicine.medscape.com/article/461285-clinical>

<http://www.vascular-disease-management.com/content/bilateral-internal-iliac-artery-occlusion-evar>

45- Coarctation of aorta, what can cause:

- a- coronary artery disease
- b- aortic dissection

Answer: B

Complications of untreated patient include: HTN, stroke, aortic aneurysm, aortic dissection, premature coronary artery disease, HF, brain aneurysm or hemorrhage. The most common complication in adult is

HTN and CAD.

Ref: <http://www.mayoclinic.org/diseases-conditions/coarctation-of-the-aorta/basics/complications/con-20031772>

46- Patient on diuretics developed palpitation. Due to the disturbance of which of these electrolytes lead to his presentation?

- a- Na
- b- K
- c- Cl
- d- Ca

Answer: B

Hyperkalemia: usually asymptomatic but may develop nausea, palpitations, muscle weakness, muscle stiffness, paresthesias, areflexia, ascending paralysis, and hypoventilation. Can be caused by K⁺-sparing diuretics such as Spironolactone, Amiloride and Triamterene.

Reference: Toronto Notes 2014., c53

47- Which of these anti HTN medications decrease afterload and preload?

- a- ACEI

Answer: A

ACE inhibitors have the following actions:

Dilate arteries and veins by blocking angiotensin II formation and inhibiting bradykinin metabolism. This vasodilation reduces arterial pressure, preload and afterload on the heart.

Ref: <http://cvpharmacology.com/vasodilator/ACE>

48- patient with mitral valve disease and murmur radiating to the axilla, right ventricle is enlarged. How will you manage?

- c- Mitral valve replacement
- d- Medical treatment C- PCI

Answer: A

It's Mitral Regurgitation. Valve replacement is indicated when the heart starts to dilate. Do not wait for left ventricular end systolic diameter (LVESD) to become too large because the damage will be irreversible.

*Toronto note 2014 ,c39

Surgery if: acute MR with CHF, papillary muscle rupture, NYHA class III-IV CHF, AF, increasing LV size or worsening LV function, earlier surgery if valve repairable (>90% likelihood) and patient is low-risk for surgery

Surgical Options

Valve repair: >75% of pts with MR and myxomatous mitral valve prolapse – annuloplasty rings, leaflet repair, chordae transfers/shorten/replacement

Valve replacement: failure of repair, heavily calcified annulus

49- Prophylactic antiarrhythmic therapy:

- a- Procainamide
- b. Lidocaine
- c. Amiodarone

Answer: C

Don't give the patient any anti-arrhythmic medication unless he has an arrhythmia.

Reference: Step up to Medicine.

C is the best answer compared to A and B (if not post MI)

The question might be similar to this (Post MI):

In this case the answer will be Metoprolol, which is a beta blocker (Prophylaxis for arrhythmias after MI: Beta blocker).

Reference: Lippincott Illustrated Reviews Pharmacology.

*Reference: (Davidson's Essentials of Medicine)

Treatment with amiodarone will reduce the risk of recurrence following successful cardioversion, but it is associated with ischemic heart disease. Beta-blockers will be the first line.

17.1 A 66-year-old man had a myocardial infarct. Which one of the following would be appropriate prophylactic antiarrhythmic therapy?

- A. Lidocaine.
- B. Metoprolol.
- C. Procainamide.
- D. Quinidine.
- E. Verapamil.

Correct answer = B. β -Blockers, such as metoprolol, prevent cardiac arrhythmias that occur subsequent to a myocardial infarction. None of the other drugs has been shown to be particularly effective in preventing postinfarct arrhythmias.

50- Why are we concerned about anti hypertensive agents in elderly patients?

- a- Hypotension
- b- Hypokalemia
- c- CNS side effect

Answer: A

Reference: <http://www.ncbi.nlm.nih.gov/pubmed/11574742> <http://www.ncbi.nlm.nih.gov/pubmed/11574742>

51- Cardiac patient on Aspirin, no new complaints. He is having low platelet (less than 10) for the last 6 months. What is your management?

Answer: ?the diagnosis is rare and called aspirin induced thrombocytopenia Stop aspirin and find the cause (Answered by a senior cardiologist consultant)

52- "right coronary artery dominance" is explained as right coronary artery giving branch to:

- a- Circumflex
- b- Anterior Descending
- c- Posterior Descending
- d- Marginal

Answer: C

Reference :Toronto note C2,2014 –

*right coronary artery give branches to :acute marginal branches ,AV nodal artery , posterior descending artery .

*Left coronary artery give branches to: anterior descending artery , Circumflex, oblique marginal

53. A patient presented with frothy red sputum, flushed cheeks, etc (long scenario). What is the diagnosis?

A. mitral stenosis

Answer: A

Explanation: symptoms of MS: SOB on exertion, orthopnea, fatigue, palpitation, right sided heart failure (peripheral edema, ascites, hepatomegaly), hemoptysis due to rupture of pulmonary vessels, malar flush (bluish discoloration over cheeks seen in fair people only, due to reduced oxygen saturation).

Reference: Master the boards; Medical diagnosis and Management by Mohammad Inam Danish; Toronto note 2014 C39; Kaplan step 2 CK for Pediatrics 2016;
<http://medicscientist.com/mitral-stenosis-causes-symptoms-treatment>.

54. A male patient came to the ER complaining of palpitations, tachycardia ... ECG shows deep S wave in lead (?) and tall R wave in lead (?), Dx ?

- a. LBBB
- b. RBBB

Answer: ?

Explanation:

LBBB:

QRS duration >120 msec

V1 and V2: W pattern and wide deep slurred S wave

V5 and V6: wide QRS complex with M pattern or rabbit ear pattern

RBBB: the opposite of LBBB

QRS duration >120 msec

V1 and V2: wide QRS (more than 3 small squares) with ear rabbit pattern or M shape pattern

V5 and V6: wide and deep/slurred

LVH:

S in V1 + R in V5 or V6 > 35mm above age 40, (>40 mm for age 31-40, > 45 mm for age 21-30)

R in aVL >11mm

R in I + S in III >25mm

smle ,2017

RVH:

Right axis deviation

R/S ratio > 1 or qR in lead V1

RV strain pattern: ST segment depression and T wave inversion in leads V1-2

Reference: Toronto Notes

55. long standing trip, swelled LL, no pain, high D-Dimer management?

A- aspirin

B- LMWH

C- warfarin

D- unfractionated heparin with warfarin

Answer: D

Explanation: Admitted patients may be treated with a LMWH, fondaparinux, or unfractionated heparin (UFH). Warfarin 5 mg PO daily is initiated and overlapped for about 5 days until the international normalized ratio (INR) is therapeutic >2 for at least 24 hours.

For admitted patients treated with UFH, the activated partial thromboplastin time (aPTT) or heparin activity level must be monitored every 6 hours while the patient is taking intravenous (IV) heparin until the dose is stabilized in the therapeutic range. Patients treated with LMWH or fondaparinux do not require monitoring of the aPTT.

Platelets should be monitored. Heparin or LMWH should be discontinued if the platelet count falls below 75,000. Fondaparinux is not associated with heparin-induced thrombocytopenia (HIT).

*so, Heparin (LMWH or UFH) and warfarin are started together. Heparin to be continued for ~5-7 days or until INR is therapeutic. Warfarin to be continued for 6 months.

Reference: <http://emedicine.medscape.com/article/1911303-treatment>; Kaplan step 2 CK for Pediatrics 2016.

56. Patient symptoms of rheumatic fever with heart involvement and history of sore throat was not treated.. Treatment?

A. Aspirin and steroid

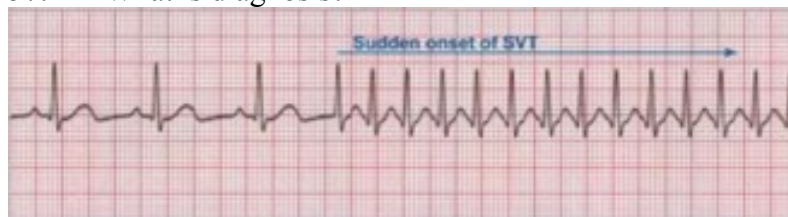
Answer: A

Explanation: give penicillin to eliminate any residual streptococcus infection + high dose aspirin + corticosteroid (prednisolone)

And long term prophylaxes with penicillin should be given

Reference : Davidson's; <http://emedicine.medscape.com/article/333103-treatment>

57. What is diagnosis?



“same ECG that shows SVT in UQU cardiology section”<< couldn't find it, so I uploaded another ECG strip.

A. SVT

B. AF

C. VT

smle ,2017

D. VF

Answer: A

Explanation: Read about other arrhythmias.

-The atria depolarize faster than 150 b/min

-P wave superimposed on the T wave of the preceding beats

Reference: [ECG made easy](#)

58. Patient known case of aortic stenosis had syncope. What is the cause?

a. systemic hypotension

Answer: A

Explanation: Syncope from aortic stenosis often occurs upon exertion when systemic vasodilatation in the presence of a fixed forward stroke volume causes the arterial systolic blood pressure to decline. It also may be caused by atrial or ventricular tachyarrhythmias. Syncope at rest may be due to transient ventricular tachycardia, atrial fibrillation, or (if calcification of the valve extends into the conduction system) atrioventricular block. Another cause of syncope is abnormal vasodepressor reflexes due to increased LV intracavitary pressure (vasodepressor syncope).

-syncope in AS usually occur on exertion when cardiac output fails to rise to meet demand because of severe outflow obstruction, causing a fall in B/P.

Reference: <http://emedicine.medscape.com/article/150638-clinical>; Davidson's Essentials of medicine

59. Which one of these can cause LBBB:

a. Aortic stenosis

b. PE

c. Cardiomyopathy

Answer: C

Explanation: Arteriosclerotic coronary artery disease is the most common adult cardiovascular disease. As a result, it is the most common cause of left bundle branch block. Hypertension, aortic valve disease and cardiomyopathies continue to be important but less common etiologic disorders.

Causes of LBBB include:

- Aortic stenosis
- Ischaemic heart disease
- Hypertension
- Dilated cardiomyopathy
- Anterior MI
- Primary degenerative disease (fibrosis) of the conducting system (Lenegre disease)
- Hyperkalaemia
- Digoxin toxicity

*from a cardiologist: “*Cardiomyopathy is much more common to cause LBBB, that's why it's class IIa to consider CRT (cardiac resynchronization therapy) in patient with HF with low EF less than 35% with LBBB (QRS more than 150 ms) and still symptomatic despite of optimal medical Rx.*

For AS its very rare to cause LBBB in direct way but it can cause it indirectly through LVH or post TAVI (trans-catheter Aortic valve implantation) due to edema around valve as the effect of compression on conduction systems (LB or RB) that's why LBBB can be temporarily or more common to be permanent.

Then less frequently, to have CHB or alternating LBBB and RBBB post TAVI.”

Reference: Journal of the American College of Cardiology; <https://lifeinthefastlane.com/ecg-library/basics/left-bundle-branch-block/>; a cardiologist.

60. Patient is hypertensive. In addition to antihypertensive medications, the patient was given phytosterol. What is the mode of action of phytosterol?

- a. Decrease plasma triglycerides
- b. Decrease plasma cholesterol
- c. Inhibit fatty acid synthesis
- d. Decrease de novo synthesis of cholesterol

Answer: B

Explanation: Phytosterols are plant sterols structurally similar to cholesterol that act in the intestine to lower cholesterol absorption.

Esterified phytosterols are hydrolyzed by cholesterol reductase post-prandially in the small intestine to active forms. Thus, it is important for the products to be consumed with meals for activation to occur. Free phytosterols are then available to limit cholesterol absorption and displace it from incorporating into micelles. Plant stanols may also promote increased movement of cholesterol into the intestinal lumen causing increased cholesterol elimination in the feces. Although reductions of up to 40% in dietary cholesterol absorption have been observed with plant stanol administration, a compensatory increase in cholesterol synthesis counteracts some of this effect. Plant sterols produce similar effects on cholesterol absorption. So, Phytosterols (referred to as plant sterol and stanol esters) are a group of naturally occurring compounds found in plant cell membranes. Because phytosterols are structurally similar to the body's cholesterol, when they are consumed they compete with cholesterol for absorption in the digestive system. As a result, cholesterol absorption is blocked, and blood cholesterol levels reduced.

Reference: Pubmed; <http://my.clevelandclinic.org/services/heart/prevention/nutrition/food-choices/phytosterols-sterols-stanols>; http://www.medscape.com/viewarticle/725629_3.

61. A Patient had an MI and was treated for it, after that he developed chest pain that worsen with movement and taking deep breath. On examination there was distant heart sounds and pericardial rub. What is the most ECG changes associated with this condition?

- A. ST changes
- B. PR prolongation

Answer: A

Explanation:

Case of pericarditis.

ECG: initially diffuse elevated ST segments ± depressed PR segment, the elevation in the ST segment is concave upwards >> 2-5 d later ST isoelectronic with T wave flattening and inversion.

*PR depression is very specific.

Reference: Toronto Notes; <http://emedicine.medscape.com/article/156951-overview>; Kaplan step 2 CK for Pediatrics 2016.

62. Which medication will delay the surgery for chronic aortic regurgitation?

- a. Digoxin
- b. Verapamil
- c. Nifedipine
- d. Enalapril

Answer: C

- In **acute AR**, aortic valve replacement (AVR) is the only life-saving treatment.
- Medical treatment may improve the hemodynamic state temporarily before surgery.
- The primary goal is to optimize the time of the AVR. If there is any symptom and/or left ventricular (LV) dysfunction, early AVR is required.
- Vasodilators should only be considered as a short-term treatment before surgery if there is evidence of severe heart failure or as a long-term treatment if AVR is contraindicated because of cardiac or noncardiac factors.
- In asymptomatic patients with severe chronic AR and normal LV function (even if the left ventricle is moderately dilated), vasodilators may prolong the compensated phase of chronic AR, although proof of their efficacy in delaying AVR is limited.
- Nifedipine is the best evidence-based treatment in this indication.
- ACE inhibitors are particularly useful for **hypertensive patients with AR**.
- Beta-Adrenoceptor antagonists (beta-blockers) may be indicated to slow the rate of aortic dilatation and delay the need for surgery in patients with **AR associated with aortic root disease**.

<https://www.ncbi.nlm.nih.gov/m/pubmed/15725042/>

Many classes of vasodilators have been studied, with long-term hydralazine or nifedipine therapy being associated with higher EF and less LV dilation in smaller trials. Results with enalapril and quinapril have been less consistent.

<http://emedicine.medscape.com/article/150490-medication#1>

63. long scenario I don't remember exactly but there is upper limb hypertension and low or absent lower limb pulse What is Dx?

A. Coarctation of aorta

Answer: A

<http://www.merckmanuals.com/professional/cardiovascular-disorders/diseases-of-the-aorta-and-its-branches/aortic-dissection>

64. mid diastolic murmur in left sternum ?

- A- Mitral stenosis
- B- mitral regurgitation
- C- aortic stenosis
- D- aortic regurgitation

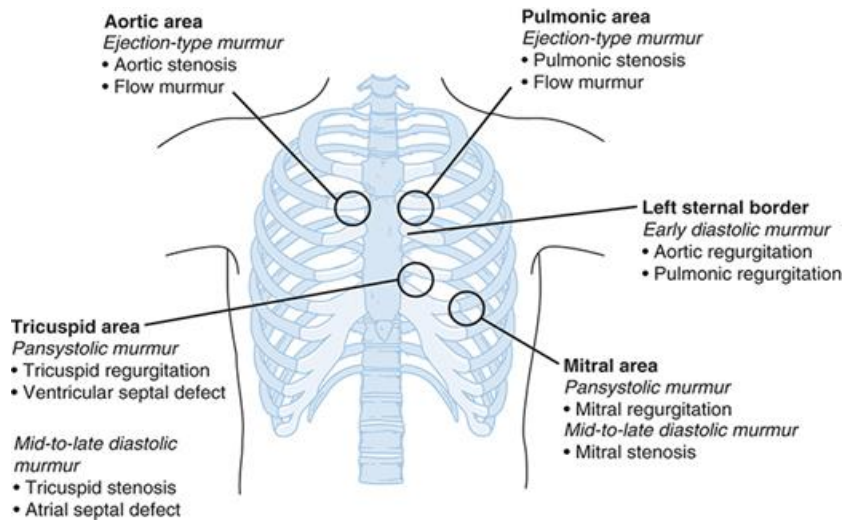
Answer: A

MS: mid diastolic to late diastolic , rumbling

MR: Holosystolic ‘pansystolic ‘, blowing radiate to left axilla AS: Midsystolic , harsh radiated to carotid artery

AR: early diastolic

Reference: <http://emedicine.medscape.com/article/155724-clinical#b4>



65. Pt HTN came with uric acid 200 you prescribe antihypertensive drug for him after 1 week uric acid 400 and gout what is the drug ?

Answer: **Thiazide diuretics**

Reference: <http://www.uptodate.com/contents/diuretic-induced-hyperuricemia-and-gout>

Reference: first aid step 1 2017

Thiazide diuretics	Hydrochlorothiazide, chlorthalidone, metolazone.
MECHANISM	Inhibit NaCl reabsorption in early DCT → ↓ diluting capacity of nephron. ↓ Ca ²⁺ excretion.
CLINICAL USE	Hypertension, HF, idiopathic hypercalciuria, nephrogenic diabetes insipidus, osteoporosis.
ADVERSE EFFECTS	Hypokalemic metabolic alkalosis, hyponatremia, hyperglycemia, hyperlipidemia, hyperuricemia, hypercalcemia. Sulfonamide allergy.

66. Aspirin inhibit which product formation

A. **Thromboxane A2**

Answer: **A**

Thromboxane A2 (TXA2) is a type of thromboxane that is produced by activated platelets and ...Aspirin irreversibly inhibits platelet cyclooxygenase 1 preventing the formation of prostaglandin H2, and therefore thromboxane A2

Reference: https://en.wikipedia.org/wiki/Mechanism_of_action_of_aspirin

67. ASD :

****Fixed wide s2 splitting (two q about it)**

<http://emedicine.medscape.com/article/162914-clinical#b2>

Findings in a pt with ASD depend upon the following factors:

- Size of the ASD.
- Presence or absence of pulmonary hypertension.
- Presence of shunt reversal.

✚ The **second heart sound is widely split** because closure of the pulmonary valve is delayed due to increased pulmonary blood flow. The splitting is fixed in relation to respiration because the communication between the atria prevents the normal pressure differential between right and left sides that occurs during respiration. This is referred to as **fixed splitting of the second heart sound**.

✚ The increased pulmonary blood flow causes a **mid-systolic pulmonary flow murmur**.

smle ,2017

✚ If pulmonary hypertension has developed, there is reduction of the left-to-right shunt and the pulmonary flow murmur disappears; instead there is a loud pulmonary component to the second heart sound because the increased pressure causes the pulmonary valve to slam shut.

✚ Resource: Crash course cardiology

68. Which murmur is associated with Mitral stenosis ?

A-Mid systolic

B- Holo systolic

C- Mid diastolic

D- early systolic

Answer : C

Reference : <http://emedicine.medscape.com/article/155724-clinical#b4>

Explanation:

The principal clinical findings in mitral stenosis are:

- ✚ Loud first heart sound (S 1) because of slow diastolic filling
- ✚ A tapping apex beat that is not displaced (a palpable S 1).
- ✚ An opening snap after the second heart sound (S 2) followed by a low rumbling mid-diastolic murmur, heard best at the apex with the patient on his or her left side and in expiration. If you have not listened in exactly this way you cannot exclude MS. Both the opening snap and loud S 1 may be absent if the valve is heavily calcified.
- ✚ A presystolic accentuation of the mid-diastolic murmur, if the patient is in sinus rhythm; this is absent if the patient has atrial fibrillation. Severity is related to the duration, not the intensity, of the mid-diastolic murmur.
- ✚ Loud and palpable pulmonary component of the second heart sound (P 2), if pulmonary hypertension has developed, and there may be a right ventricular heave. Tricuspid regurgitation may be present.
- ✚ Reference : Crash course cardiology

69. Which antilipid medications decrease LDL and Triglycerides, and increase HDL?

a.Statin

b.Fibrate

Answer: Answer: Can be both A or B they all have the same effects on all 3 parameters but to different extent for example statins reduce LDL the most. U can check the schedule from the latest guidelines for the exact percentages. U can also find the guidelines in the link bellow.

Table 13
Primary Lipid-Lowering Drug Classes

Drug class	Metabolic effect ^a	Main considerations ^b
HMG-CoA reductase inhibitors (statins): lovastatin, pravastatin, fluvastatin, simvastatin, atorvastatin, rosuvastatin, pitavastatin)	Primarily ↓ LDL-C 21-55% by competitively inhibiting rate-limiting step of cholesterol synthesis in the liver, leading to upregulation of hepatic LDL receptors Effects on TG and HDL-C are less pronounced (↓ TG 6-30% and ↑ HDL-C 2-10%)	Liver function test prior to therapy and as clinically indicated thereafter. Myalgias and muscle weakness in some patients Potential for drug-drug interaction between some statins and CYP450 3A4 inhibitors, cyclosporine, warfarin, and protease inhibitors. Myopathy/rhabdomyolysis in rare cases; increased risk with co-administration of some drugs (see product labeling). Simvastatin dosages of 80 mg are no longer recommended. Do not exceed 20 mg simvastatin daily with amlodipine or ranolazine. Plasma elevations of rosuvastatin may be higher among Asian persons than other ethnic groups. New-onset diabetes is increased in patients treated with statins; however, it is dose-related, occurs primarily in patients with MetS, appears to be less common with pravastatin and possibly pitavastatin, and occurs overall to a lesser extent than the associated decrease in ASCVD.

smle ,

<p>Fibric acid derivatives (gemfibrozil, fenofibrate, fenofibric acid)</p>	<p>Primarily ↓ TG 20-35%, ↑ HDL-C 6-18% by stimulating lipoprotein lipase activity</p> <p>Fenofibrate may ↓ TC and LDL-C 20-25%</p> <p>Lower VLDL-C and LDL-C; reciprocal rise in LDL-C transforms the profile into a less atherogenic form by shifting fewer LDL particles to larger size</p> <p>Fenofibrate ↓ fibrinogen level</p>	<p>Gemfibrozil may ↑ LDL-C 10-15%. GI symptoms, possible cholelithiasis. May potentiate effects of orally administered anticoagulants.</p> <p>Gemfibrozil may ↑ fibrinogen level^c.</p> <p>Gemfibrozil and fenofibrate can ↑ homocysteine independent of vitamin concentrations.</p> <p>Myopathy/rhabdomyolysis when used with statin (uncommon with gemfibrozil, but increased risk with all statins except fluvastatin); interaction less likely with fenofibrate or fenofibric acid (no apparent difference by statin).</p> <p>Fibrates are associated with increased serum creatinine levels, which may not reflect renal dysfunction.</p> <p>Fenofibrate dose should be cut by two-thirds and gemfibrozil by one-half when eGFR is 15-60, and fibrates should be avoided when eGFR is <15.</p> <p>May cause muscle disorders.</p> <p>Can improve diabetic retinopathy.</p>
--	--	--

Reference : <https://www.aace.com/files/lipid-guidelines.pdf>

70. 29 yrs old female , came for her annual check up , her father was dx with dyslipi- demia one year ago and she is anxious about she will have the same thing , he lab were all normal except for high triglycerides , what will you give her ?

Answer: 6 week trial of diet and exercise if very high not respond start fibrate

Explanation:

-We recommend lifestyle therapy, including dietary counseling to achieve appropriate diet composition, physical activity, and a program to achieve weight reduction in overweight and obese individuals as the initial treatment of mild-to-moderate hypertriglyceridemia

-For severe and very severe hypertriglyceridemia (>1000 mg/dl), we recommend combining reduction of dietary fat and simple carbohydrate intake with drug treatment to reduce the risk of pancreatitis

-We suggest that three drug classes (fibrates, niacin, n-3 fatty acids) alone or in combination with statins be considered as treatment options in patients with moderate to severe triglyceride levels

-We recommend that a fibrate be used as a first-line agent for reduction of triglycerides in patients at risk for triglyceride-induced pancreatitis.

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3431581/>

the ECG finding ostium secundum atrial septal defect?

A: Left axis deviation

B: Right bundle branch block (+ right axis deviation)

C: Left ventricular hypertrophy

D: Wolff-Parkinson-White syndrome

Answer: B

Explanation: Atrial defects should show right bundle branch block.

When ostium secundum atrial septal defect is present, the ECG reveals right axis deviation.

Ostium secundum ASD

- Complete RBBB, RBBB pattern or rsR' pattern in lead C1.
- Normal axis or right axis deviation due to right ventricular diastolic overload.
- Right atrial abnormality (*may not be observed in children*).
- Prolongation of the PR interval: first degree atrioventricular block (*less frequent than ostium primum ASD*).
- **Crochetage sign** : notched R wave in inferior limb leads (*may disappear after closure of the defect*).
- If the defect is very large, severe atrial dilatation results in atrial flutter or fibrillation in adults.
- In adult patients with ASD, closure of the defect **does not** decrease the incidence of atrial fibrillation.

Reference: <https://www.healio.com/cardiology/learn-the-heart/ecg-review/ecg-topic-reviews-and-criteria/atrial-septal-defect-review>

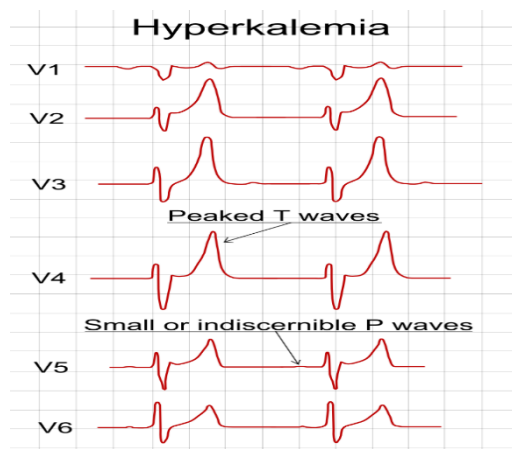
Q72: A patient is on digoxin + ACE inhibitor + calcium channel blocker. What his expected electrolyte imbalance?

A: Hyperkalemia

B: Hypokalemia

Answer: A

Explanation: Hyperkalemia is a side effect of ACE inhibitors. EKG changes include tall peak T waves, short unappreciable P waves



Reference: <https://en.wikipedia.org/wiki/Hyperkalemia>

Q73: What is the most significant modifiable risk factor of stroke?

A: Hypertension

B: Obesity

C: Smoking

Answer: A •

Explanation: They are all modifiable, but controlling HTN seems to have the most significant negative predictive value. "Systolic blood pressure (SBP) remains the most modifiable risk factor for stroke"

smle ,2017

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4308422>

Q74: Patient with migraine with hypertension. What is the drug of choice to manage his HTN.

A: Beta blocker

B: ACE inhibitor

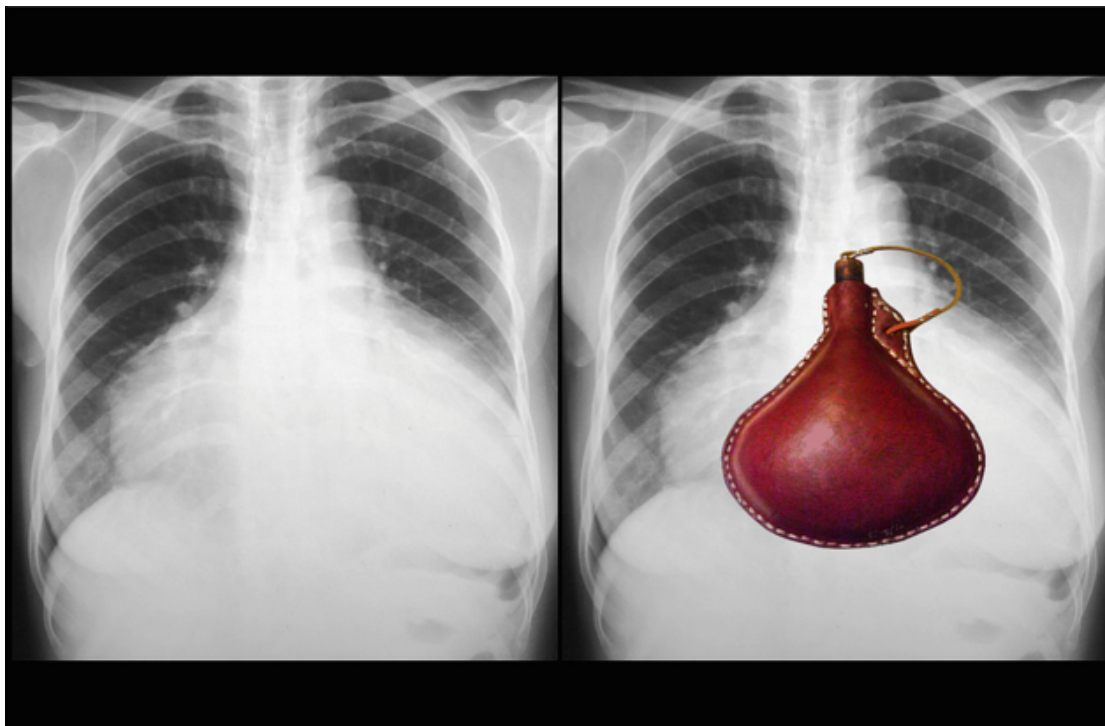
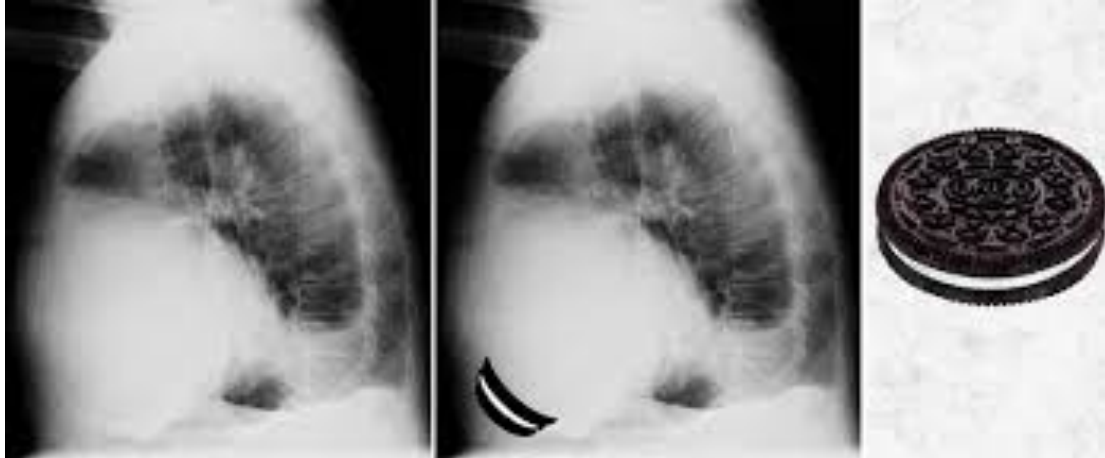
Answer: A

Explanation: Beta blockers reduce the frequency of migraine attacks in 60 to 80 percent of people.

Reference: <http://www.uptodate.com/contents/migraine-headaches-in-adults-beyond-the-basics>

Q75: About X-ray of pericardial effusion.

Answer:



Explanation: Water-bottle appearance of heart shadow in AP view. Oreo cookie sign in lateral view.

Reference: <https://radiopaedia.org/articles/pericardial-effusion>

Q76: Which coagulation factor mutation leads to tendency to thrombosis?

Answer: Factor V Leiden mutation, and Prothrombin 20210 mutation.

smle ,2017

Reference: <https://www.ncbi.nlm.nih.gov/pubmed/17101102>

77. what medication dissolve thrombus?

Answer: Streptokinase, Alteplase, Reteplase, Tenecteplase, Lanotopase

Ref: up-to-date

78. Mid diastolic rumble with opening snap and dysphagia. Where is the lesion?

- a) Left atrium
- b) Aortic arch
- c) Left ventricle

answer: A reference:

<http://doknotes.wikidot.com/mitral-stenosis>

79. mitral stenosis cause enlargement in which chamber

- a) left atrium
- b) right atrium
- c) left ventricle
- d) right ventricle

Answer: A

***** I don't know what is the question for this one**

- Dysphagia from left atrium (LA) pressing on the esophagus
- Hoarseness (LA pressing on laryngeal nerve)

80. obese male pt. presented to family physician complaining of chest pain for 2 days. ECG normal ...what to do next?

- a) Treadmill
- b) Coronary angio
- c) 24 hrs. monitoring

Answer: A

81. What is the best to dx coarctation of aorta?

- a) Cardiac MRI
- b) echo

Answer: B

Clinical features include upper body systolic hypertension, lower body hypotension, a blood pressure gradient between the upper and lower extremities (.20 mm Hg indicates significant coarctation of the aorta), radio-femoral pulse delay, and palpable collaterals.

Echocardiography provides information regarding site, structure, and extent of coarctation

smle ,2017

of the aorta, left ventricular function and hypertrophy, associated cardiac abnormalities, and aortic and supra-aortic vessel diameters. Doppler gradients are not useful for quantification, neither in native nor in post-operative coarctation. MRI and CT are the preferred non-invasive techniques to evaluate the entire aorta in adults. Both depict site, extent, and degree of the aortic narrowing, the aortic arch, the pre- and post-stenotic aorta, and collaterals. Both methods detect complications such as aneurysms, re-stenosis, or residual stenosis. Cardiac catheterization with manometry (a peak-to-peak gradient .20 mm Hg indicates a hemodynamically significant coarctation of the aorta in the absence of well-developed collaterals), and angiography are still the 'gold standard' for evaluation of this condition at many centers before and after operative or interventional treatment.

Reference: <http://eurheartj.oxfordjournals.org/content/ehj/35/41/2873.full.pdf>

83. What valve lesion you'll find in acute infective endocarditis?

- a) Mitral stenosis
- b) Mitral regurgitation
- c) Aortic stenosis
- d) Aortic regurgitation.

Answer: B

*Mitral valve is most frequently involved (1st aid USMLE step 1)

In the past, rheumatic heart disease with mitral stenosis was the most common valvular defect in patients with IE. Recently, the most common predisposing lesions are mitral regurgitation, aortic valve disease (stenosis and regurgitation), and congenital heart disease. Mitral valve prolapse is a risk factor for IE, primarily when regurgitation is present.

Reference: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2726828/>

84. Pt with heart valve lesion developed endocarditis ...what's the most likely causative organisms?

Answer: streptococcus viridans if subacute. Staph Aureus in acute.

It depends on the presentation of the patient. Mostly if the history suggests a very sick patient with high grade fever and fast worsening of the sx, it is most likely S. Aureus. In strep. viridans, the presentation is over a longer period (2 weeks) and the sx are less aggressive than in staph.

Reference: www.ncbi.nlm.nih.gov/pmc/articles/pmc2726828/

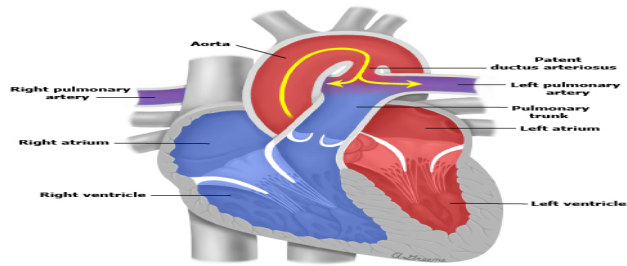
84. Anomaly between aortic arch and pulmonary trunk ?

- A) Patent ductus arteriosus.
- B) Patent foramen ovale
- C) Tetralogy of fallot
- D) Transportation of great vessels

Answer: A

Explanation: The ductus arteriosus (DA) is a fetal vascular connection between the main pulmonary artery and the aorta

Patent ductus arteriosus



Reference: https://www.uptodate.com/contents/clinical-manifestations-and-diagnosis-of-patent-ductus-arteriosus-in-term-infants-children-and-adults?source=search_result&search=A.%09Patent%20ductus%20arteriosus.&selectedTitle=1~150

85. Enzyme that get elevated in MI ?
- A) Creatinine phosphokinase
 - B) Alanine amino transferase
 - C) Creatinine kinase
 - D) Amylase

Answer: A

Explanation: CARDIACBIOMARKES — A variety of biomarkers have been used to evaluate patients with a suspected acute myocardial infarction (MI). The cardiac troponins I and T as well as the MB isoenzyme of creatine kinase (CK-MB) are the most frequently used.

Creatine Kinase-MB,

Reference : <https://www.uptodate.com/contents/criteria-for-the-diagnosis-of-acute-myocardial-infarction?source=machineLearning&search=cardiac%20enzymes&selectedTitle=5~150§ionRank=1&anchor=H20#H20>

86. smokers obese patient can't exercise with family history of MI came with vague chest pain . But ECG is normal Next step ?
- A) 24 hours ECG
 - B) exercise with ECG
 - C) pharmacology induced stress with thallium uptake
 - D) exercise with Echo

Answer: C

Explanation:

Patients who cannot exercise to a target heart rate of >85% of maximum:

COPD • Amputation

Deconditioning • Weakness/previous stroke

Lower-extremity ulcer • Dementia • Obesity

Reference: Master The Board

87. With thyrotoxicosis, what is the most common arrhythmia:
smle ,2017

- A) AFIB
- B) VT
- C) VFib
- D) WPW

Answer: A

Explanation: Atrial fibrillation occurs in 10 to 20 percent of patients with hyperthyroidism, and is more common in older patients. In one study, 8 percent of all patients and 15 percent of patients between ages 70 to 79 developed atrial fibrillation within 30 days of the diagnosis of hyperthyroidism [8]. Even subclinical hyperthyroidism is associated with an increased rate of atrial ectopy and a threefold increased risk of atrial fibrillation

Reference: <https://www.uptodate.com/contents/overview-of-the-clinical-manifestations-of-hyperthyroidism-in-adults?source=machineLearning&search=hyperthyroidism&selectedTitle=2~150§ionRank=1&anchor=H4#H4>

88. An ECG with ST elevation in V1-V4. :

- A) anterior septal MI
- B) High lateral MI
- C) Inferior MI
- D) Pericarditis

Answer: A

Explanation:

Anterior, lateral, and apical MI — ST-segment elevation or Q waves in one or more of the precordial leads (V1 to V6) and leads I and aVL has traditionally been used to suggest anterior wall ischemia or infarction (waveform 1A-B). Although characteristic ECG changes in leads V1 to V3 are considered typical of anteroseptal ischemia, they may be more indicative of apical ischemia. This was illustrated in a review of 50 patients with new Q waves in leads V1 to V3 Inferior and right ventricular MI ST-segment shifts or Q waves in leads II, III, and aVF suggest inferior wall ischemia or infarction (waveform 2). If there is evidence of inferior wall ischemia, Posterior wall MI — Acute posterior wall MI induces ST elevations in leads placed over the back of the heart, eg, leads V7 to V9 (waveform 3and figure 1) [10-12]. This is usually associated with reciprocal ST–segment depression in leads V1 to V2 or V3

Reference: https://www.uptodate.com/contents/electrocardiogram-in-the-diagnosis-of-myocardial-ischemia-and-infarction?source=search_result&search=antrior%20STEMI&selectedTitle=2~150#H9

89. A patient with sudden chest pain, diaphoresis, best test to order

- A) Echo
- B) ECG
- C) Cardiac enzymes
- D) Cardiac cath

Answer: B

Explanation: Unless there is an obvious cause of chest pain (eg, pneumonia or suspected pneumothorax) and/or the patient is low risk for CVD, we obtain an electrocardiogram (ECG) for all patients with new onset chest pain or pain that is different than previous episodes associated with an established noncardiac etiology.

Reference: <https://www.uptodate.com/contents/outpatient-evaluation-of-the-adult-with-chest-pain?source=machineLearning&search=chest%20pain&selectedTitle=1~150§ionRank=3&anchor=H25#H4>

90. hypertensive patient on ACEI but not controlled BP, what to add?

- A) CCB
- B) thiazide
- C) BB
- D) Hydralazie

Answer: A it was B

Explanation: Based upon the results of the ACCOMPLISH trial [38], we suggest that combination therapy consist of a long-acting dihydropyridine calcium channel blocker plus a long-acting ACE inhibitor/ARB (such as amlodipine plus benazepril). Thus, if the patient is being treated with one of the drugs, add the other. In patients being treated with a thiazide diuretic, we suggest discontinuing the thiazide and starting combination therapy.

Reference: <https://www.uptodate.com/contents/choice-of-drug-therapy-in-primary-essential-hypertension?source=machineLearning&search=hypertension&selectedTitle=2~150§ionRank=2&anchor=H28#H26>

91. A 72 y male disoriented and hallucinating and disorganized thinking had aorto popliteal graft and symptom fluctuates in the 2 days what the cause

- A) multi infarct dementia'
- B) mania
- C) Dementia
- D) Delirium

Answer: D (I could not find an exact answer form up-to-date)

Explanation: Older patients have a high incidence of post-anesthesia delirium and thus should have a men- tal state examination before and after surgery. (Canada Q bank)

During illness, hospitalization, or recovery from surgery or stroke, many people experience delir- ium, a rapidly developing and severe confusion accompanied by altered consciousness and an inability to focus.

It's the most common complication of hospitalization among people ages 65 and over: 20% of those admitted to hospitals, up to 60% of those who have certain surgeries, and almost 80% of those treated in ICUs develop delirium.

Referenced: <http://www.health.harvard.edu/staying-healthy/when-patients-suddenly-become-confused>

92. best initial screening test for pt suspected with coarctation of aorta

- A) echo/doppler
- B) ct cardiac
- C) mri cardiac
- D) cardiac angio

Answer: A

Explanation: The clinical diagnosis of coarctation of the aorta is based upon the characteristic findings of systolic hypertension in the upper extremities, diminished or delayed femoral pulses (brachial-femoral delay), and low or unobtainable arterial blood pressure in the lower extremities. The diagnosis is confirmed by noninvasive imaging methods, particularly echocardiography. The diagnosis of coarctation is generally confirmed by two-dimensional and Doppler transthoracic echocardiography. In adolescents, adults, and some pediatric cases, magnetic resonance imaging (MRI) or computerized tomography (CT) (image 6) is used as a complementary diagnostic tool. MRI or CT define the location and length of obstruction and identify collateral vessels and other associated lesions such as aortic dilatation.

Reference: <https://www.uptodate.com/contents/clinical-manifestations-and-diagnosis-of-coarctation-of-the-aorta?source=machineLearning&search=clinical-manifestations-and-diagnosis-of-coarctation-of-%20the-aorta&selectedTitle=1~140§ionRank=3&anchor=H25#H17>

93. Pt with retrosternal chest pain for 3 days increase in the last 24 hrs relieved by sublingual nitro Dx?

- A) Unstable angina
- B) Pericarditis
- C) MI
- D) CHF

Answer: A

Explanation:

Among patients considered to have angina, there are three presentations of angina that suggest an ACS:

- Rest angina, which is usually more than 20 minutes in duration
- New onset angina that markedly limits physical activity
- Increasing angina that is more frequent, longer in duration, or occurs with less exertion than previous angina

Unstable angina (UA) and acute non-ST elevation myocardial infarction (NSTEMI) differ primarily in whether the ischemia is severe enough to cause sufficient myocardial damage to release detectable quantities of a marker of myocardial injury (troponins):

- UA is considered to be present in patients with ischemic symptoms suggestive of an ACS and no elevation in troponins, with or without electrocardiogram changes indicative of ischemia (eg, ST segment depression or transient elevation or new T wave inversion).
- NSTEMI is considered to be present in patients having the same manifestations as those in UA, but in whom an elevation in troponins is present.

Reference: <https://www.uptodate.com/contents/overview-of-the-acute-management-of-unstable-angina-and-non-st-elevation-myocardial-infarction?source=machineLearning&search=unstable%20angina&selectedTitle=1~150§ionRank=1&anchor=H3#H3>

94. Pt had hx of AF and prior stroke, How to prevent this pt from second stroke?

- A) Dipyridamole
- B) Warfarin
- C) Bblocker
- D) Shock

Answer: B.

smle ,2017

Explanation: Anticoagulant therapy is effective in reducing the risk of systemic embolization in patients with nonvalvular atrial fibrillation (AF). Anticoagulation with warfarin, dabigatran, rivaroxaban, apixaban, or edoxaban reduces this risk by almost 70 percent, and should be considered for most nonvalvular AF patients. However, the use of anticoagulant therapy is also associated with an increased risk of major bleeding. While the benefit outweighs the risk in most patients, careful consideration of the risk-to-benefit ratio is necessary in those at relatively very low (CHA2DS2-VASc score of 0) and low risk (CHA2DS2-VASc score of 1).

For patients with a CHA2DS2-VASc score ≥ 2 (calculator 1), we recommend chronic anticoagulation

Reference: https://www.uptodate.com/contents/atrial-fibrillation-anticoagulant-therapy-to-prevent-embolization?source=search_result&search=Embolism%20risk%20and%20the%20role%20of%20anticoagulation%20in%20atrial%20fibrillation&selectedTitle=1~150#H31

95. woman underwent lung lavage “hemosiderin laden macrophages” seen indicates.. ?
- A) heart failure
 - B) sarcoidosis
 - C) silicosis
 - D) asbestoses

Answer A

Explanation: heart failure lead to diffuse alveolar hemorrhage syndromes, Diffuse pulmonary hemorrhage occurs in a variety of conditions and is frequently a life-threatening event one of the findings in BAL is presence of hemosiderin-laden macrophages.

Reference: https://www.uptodate.com/contents/the-diffuse-alveolar-hemorrhage-syndromes?source=see_link#H2

96. early detection of ST segment elevation MI :
- A) Typical chest pain with ... some ECG changes
 - B) Atypical chest pain with some ecg changes
 - C) no chest pain, increase cardiac enzymes
 - D) chest pain + increase cardiac enzymes

Answer: A

Explanation: Although not frequently seen, the earliest change in an STEMI is the development of a hyperacute or peaked T wave that reflects localized hyperkalemia. Thereafter, the ST segment elevates in the leads recording electrical activity of the involved region of the myocardium;

Reference: https://www.uptodate.com/contents/criteria-for-the-diagnosis-of-acute-myocardial-infarction?source=search_result&search=STEMI&selectedTitle=5~150#H12

97. character of MS murmur:
- A) Mid diastolic low pitched rumbling
 - B) pan systolic
 - C) midsystolic click
 - D) late diastolic low pitched rumbling

Answer: A

Explanation: The mid-diastolic murmur of mitral stenosis has a rumbling character and is best heard with the bell of the stethoscope over the left ventricular impulse with the patient in the left lateral decubitus position (movie 11 and movie 12). The murmur originates in the left ventricular cavity, explaining its location of maximum intensity.

Reference: https://www.uptodate.com/contents/auscultation-of-cardiac-murmurs-in-adults?source=search_result&search=mitral%20stenosis%20murmur&selectedTitle=1~150#H39

98. boy with Wide fix split of s2 +harsh systolic murmur + biventricular hypertrophy +..... dx?

- A) ASD
- B) VSD
- C) TOF
- D) HF

Answer: B

Explanation: https://www.uptodate.com/contents/pathophysiology-and-clinical-features-of-isolated-ventricular-septal-defects-in-infants-and-children?source=see_link#H21

Reference: https://www.uptodate.com/contents/pathophysiology-and-clinical-features-of-isolated-ventricular-septal-defects-in-infants-and-children?source=see_link#H21

99. The most effective medications are called anticoagulants and include

Answer: Warfarin, dabigatran, and 3.rivaroxaban

100. traveling women 18hr in flight Develope LL edema what will you do:

- A) Compression ultrasonography
- B) Angiography
- C) D-Dimer
- D) CT-spiral

Answer: since no clear history I assumed that the patient is low probity so the answer is C

Explanation: In patients with suspected first DVT, we suggest estimation of the clinical PTP. Subsequent measurement of the D-dimer level and compression ultrasonography are dependent upon the assigned PTP of DVT. Gestalt estimates of PTP may be facilitated/supplemented by prediction rules such as the Wells or modified Wells score, The total score in an individual patient denotes the following risk of DVT:

- 0 or less points – Low probability (see 'Low-probability' below)
- 1 to 2 points – Moderate probability (see 'Moderate-probability' below)
- 3 to 8 points – High probability (see 'High-probability' below)

The Wells score was best validated in a prospective study of 593 patients with suspected first DVT (in a subspecialty outpatient setting) [9]. The overall incidence of venographic-confirmed DVT was low, at 15 percent, with the following rates according to the probability of DVT:

- Low probability – 3 percent
- Moderate probability – 17 percent
- High probability – 50 to 75 percent

smle ,2017

In patients with a low PTP for first lower extremity DVT (ie, approximately 3 percent) (calculator 1) (table 2), we suggest that a high- or moderate-sensitivity D-dimer test be performed. D-dimer should not be done if it is expected to be positive due to another condition (eg, after recent surgery) (table 3); instead, these patients can proceed directly to ultrasonography (US).

Reference: <https://www.uptodate.com/contents/clinical-presentation-and-diagnosis-of-the-nonpregnant-adult-with-suspected-deep-vein-thrombosis-of-the-lower-extremity?source=machineLearning&search=DVT&selectedTitle=2~150§ionRank=1&anchor=H949823679#H949823679>

101. Most specific for coronary artery disease?

- A) Cholesterol
- B) LDL
- C) HDL
- D) Triglyceride

Answer: B

Explanation: Evidence for the pathogenic importance of serum cholesterol has largely come from randomized trials which showed that reductions in total and LDL-cholesterol levels (almost entirely with statins) reduce coronary events and mortality when given for primary and secondary prevention

Reference: <https://www.uptodate.com/contents/overview-of-the-risk-equivalents-and-established-risk-factors-for-cardiovascular-disease?source=machineLearning&search=lipid%20for%20cardiovascular%20disease&selectedTitle=1~150§ionRank=1&anchor=H9#H9>

102. Dyslipidemia on tx, developed muscle weakness, what's the drug he's taking?

- A) Statins
- B) Niacin
- C) Ezetimibe
- D) Aspirin

Answer: A

Explanation: Development of muscle toxicity is a concern with the use of statins. This problem, including predisposing drug interactions and an approach to management

Reference: https://www.uptodate.com/contents/statins-actions-side-effects-and-administration?source=see_link#H11

103. Indication of Defibrillator (pacemaker) is injury in ?

- A) SANode
- B) AVnode
- C) bundle branch
- D) Left atrium enlargement

Answer: A

Explanation: most likely the question mean pacemaker.

This question is incorrect since defibrillators and pacemakers are different devices and have totally different indications

smle ,2017

Defibrillators:

Defibrillation is the asynchronous delivery of energy, such as the shock is delivered randomly during the cardiac cycle.

Pacemakers

Cardiac pacemakers are effective treatments for a variety of bradyarrhythmias. By providing an appropriate heart rate and heart rate response, cardiac pacing can reestablish effective circulation and more normal hemodynamics that are compromised by a slow heart rate.

Reference:

-https://www.uptodate.com/contents/permanent-cardiac-pacing-overview-of-devices-and-indications?source=search_result&search=cardiac%20Pacemakers&selectedTitle=1~150

-https://www.uptodate.com/contents/general-principles-of-the-implantable-cardioverter-defibrillator?source=search_result&search=Defibrillators&selectedTitle=2~119

104. Scenario of Patient came with friction rub what is your next action

A) Echo and cardiology consultant

B) X - ray

C) Pericardiocentesis

D) Cardiac cath

Answer A

Explanation:

Acute pericarditis is diagnosed by the presence of at least two of the following criteria:

- Typical chest pain (sharp and pleuritic, improved by sitting up and leaning forward).
- Pericardial friction rub (a superficial scratchy or squeaking sound best heard with the diaphragm of the stethoscope over the left sternal border)
- Suggestive changes on the electrocardiogram (typically widespread ST segment elevation (waveform 1). (See 'Electrocardiogram' above.)
- New or worsening pericardial effusion. (See 'Echocardiogram' above.)

Reference: <https://www.uptodate.com/contents/acute-pericarditis-clinical-presentation-and-diagnostic-evaluation?source=machineLearning&search=pericarditis&selectedTitle=1~150§ionRank=2&anchor=H8#H12604290>

105. without tilling the dx) then asked about Mode of inheritance ?

A) X linked

B) AD

C) AR

D) Mitochondrial

Answer: B (I didn't get the question)

Explanation: Source: <http://ghr.nlm.nih.gov/condition/ehlers-danlos-syndrome#genes>

How do people inherit Ehlers-Danlos syndrome? The inheritance pattern of Ehlers-Danlos syndrome varies by type. The arthrochalasia, classical, hypermobility, and vascular forms of the disorder have an autosomal dominant pattern of inheritance. The dermatosparaxis and kyphoscoliosis types of Ehlers-Danlos syndrome, as well as some of the rare, less well-characterized types of the disorder, are inherited in an autosomal recessive pattern. cardiac case ..

106. Patient with CHF and low EF what is the drug that decrease the mortality rate:

smle ,2017

- A) Captopril
- B) Warfarin
- C) Oxygen
- D) Digoxin

Answer: A

Explanation: Prolongation of patient survival has been documented with beta blockers, ACE inhibitors, ARNI, hydralazine plus nitrate, and aldosterone antagonists. More limited evidence of survival benefit is available for diuretic therapy.

Reference: https://www.uptodate.com/contents/overview-of-the-therapy-of-heart-failure-with-reduced-ejection-fraction?source=search_result&search=congestive%20heart%20failure&selectedTitle=1~150#H565407275

107. Patient diagnosed with rheumatic heart disease and mitral stenosis. what is the treatment of choice?

- A) oral penicillin and aspirin
- B) IM penicillin once every month
- C) corticosteroids
- D) IV penicillin

Answer: B

Explanation: Patients with rheumatic MS should receive antibiotic prophylaxis for secondary prevention of rheumatic fever. Parenteral prophylaxis with penicillin G benzathine is preferred for all patients. The preferred parenteral antibiotic for prophylaxis is long-acting penicillin G benzathine administered intramuscularly every 21 to 28 days.

Reference: https://www.uptodate.com/contents/acute-rheumatic-fever-treatment-and-prevention?source=see_link§ionName=PREVENTION&anchor=H6#H8

108. Hypertension in child ?

- A) More than 120/70
- B) More than 140/90
- C) More than 90th percentile
- D) More than 95th

Answer: D

Explanation: Hypertension (HTN) – HTN is defined as either systolic and/or diastolic BP \geq 95th percentile measured upon three or more separate occasions.

Reference: <https://www.uptodate.com/contents/nonemergent-treatment-of-hypertension-in-children-and-adolescents?source=machineLearning&search=hypertension%20in%20children&selectedTitle=2~150§ionRank=3&anchor=H30#H1>

109. Patient came with ECG of narrow complex tachycardia with no P-wave and regular rhythm what most important to test?

- A) TSH
- B) EPS
- C) Coronary angiogram

D) Chest x-ray

Answer : A

Explanation: this is SVT which can be due to hyperthyroidism

Reference: <https://www.uptodate.com/contents/overview-of-the-clinical-manifestations-of-hyperthyroidism-in-adults?source=machineLearning&search=hyperthyroidism&selectedTitle=2~150§ionRank=1&anchor=H4#H4>

110. patient elderly k/c of DM and HTN with hx of previous TIA and ECG showed Atrial fib- rillation controlled on digoxin, what's next for him?

- A) Anticoagulant
- B) Bblocker
- C) Amiodarone
- D) Verapamil

Answer: A

Explanation: CHA2 DS2 VASCs score of this patient is more than 2 so he need AG

Reference: https://www.uptodate.com/contents/atrial-fibrillation-anticoagulant-therapy-to-prevent-embolization?source=search_result&search=prevention%20of%20stroke%20in%20AF&selectedTitle=1~150

111. lung curve for cardiac notch at what level of costal cartilage:

- A) 3
- B) 4
- C) 5
- D) 6

Answer: B

Explanation: The anterior border of the left lung curves away laterally from the line of pleural reflection, beginning at the level of the 4th costal cartilage (then curves back down behind the sixth costal cartilage). This produces a cardiac notch.

Reference: https://web.duke.edu/anatomy/Lab04/Lab5_preLab.html

112. Acute onset chest pain + image coronary angio not so clear ..

- A) Tpa
- B) Pci
- C) Heparin

Answer: the question not compleat.?

113. Mitral stenosis ECG :

- A) Bifid p wave left axis deviation
- B) Elevated p wave right axis deviation

Answer: A

Explanation: Left atrial hypertrophy and enlargement results in a P wave that becomes broader (duration in lead II>0.12 sec), is of increased amplitude, and is notched is one of the ECG findings in MS

Reference: <https://www.uptodate.com/contents/clinical-manifestations-and-diagnosis-of-mitral-stenosis?source=machineLearning&search=Mitral%20stenosis&selectedTitle=1~150§ionRank=1&anchor=H30#H5638468>

114. sign of pericardial tamponade:

- A) pericardial rub

smle ,2017

- B) HTN
- C) muffled heart sound
- D) diastolic murmur

Answer: c

Explanation: the findings associated with Beck's triad, namely low arterial blood pressure, dilated neck veins, and muffled heart sounds, are present in only a minority of cases of acute cardiac tamponade.

Reference: https://www.uptodate.com/contents/cardiac-tamponade?source=search_result&search=becks%20triad&selectedTitle=1~6

115. The best way for lifestyle management for Hypertensive patient:

- A) Na restriction less than 6
- B) Weight loss
- C) Exercise
- D) Swimming every day

Answer: B

Explanation:

Modification	Recommendation	Approximate systolic BP reduction, range*
Weight reduction	Maintain normal body weight (BMI, 18.5 to 24.9 kg/m ²)	5 to 20 mmHg per 10 kg weight loss
Adopt DASH eating plan	Consume a diet rich in fruits, vegetables, and low-fat dairy products with a reduced content of saturated and total fat	8 to 14 mmHg
Dietary sodium reduction	Reduce dietary sodium intake to no more than 100 meq/day (2.4 g sodium or 6 g sodium chloride)	2 to 8 mmHg
Physical activity	Engage in regular aerobic physical activity such as brisk walking (at least 30 minutes per day, most days of the week)	4 to 9 mmHg
Moderation of alcohol consumption	Limit consumption to no more than 2 drinks per day in most men and no more than 1 drink per day in women and lighter-weight persons	2 to 4 mmHg

Reference: https://www.uptodate.com/contents/overview-of-hypertension-in-adults?source=search_result&search=hypertension&selectedTitle=1~150#H27

116. Crescendo-decrescendo murmur best heard:

- A) at midsternal
- B) Innocent
- C) Systolic ejection
- D) Physiologic

Answer: C (I didn't edit anything)

Explanation: Systolic ejection or midsystolic murmurs are due to turbulent forward flow across the right and left ventricular outflow tract, aortic or pulmonary valve, or through the aorta or pulmonary artery.

The ejection murmur first increases and then decreases in intensity (known as a crescendo-decrescendo pattern) to give it a "diamond shaped" configuration.

http://www.cardiologysite.com/auscultation/html/ejection_murmurs.html

117. Pain management in MI:

- A) aspirin
- B) morphin
- C) Nitrate
- D) Statin

Answer: B

Explanation: in the setting of acute myocardial infarction, intravenous morphine should be avoided if possible and reserved for patients with an unacceptable level of pain

Reference: <https://www.uptodate.com/contents/overview-of-the-acute-management-of-st-elevation-myocardial-infarction?source=machineLearning&search=morphin%20in%20MI&selectedTitle=1~150§ionRank=1&anchor=H20#H20>

118. Which of the following classified as cyanotic heart disease.

- A) TOF
- B) ASD
- C) VSD
- D) PDA

Answer: A

Explanation: https://www.uptodate.com/contents/cardiac-causes-of-cyanosis-in-the-newborn?source=search_result&search=congenital%20heart%20disease&selectedTitle=7~150

Reference: https://www.uptodate.com/contents/cardiac-causes-of-cyanosis-in-the-newborn?source=search_result&search=congenital%20heart%20disease&selectedTitle=7~150

119. pt has HTN control on his medications , developed albuminuria , what should you add to his HTN medications :

- A) ACEI
- B) BB
- C) Lasix
- D) digoxin

Answer: A

Explanation: Renoprotective benefits with ACE inhibitors and ARBs compared with placebo have been noted in a number of trials

Reference: https://www.uptodate.com/contents/moderately-increased-albuminuria-microalbuminuria-in-type-2-diabetes-mellitus?source=search_result&search=albuminuria&selectedTitle=1~150#H12

120. 12 .old girl HTN:

- A) 120/80
- B) 140/99
- C) above 90 percentile
- D) above 95 percentile

Answer: D

Explanation:

Reference: <https://www.uptodate.com/contents/nonemergent-treatment-of-hypertension-in-children-and-adolescents?source=machineLearning&search=hypertension%20in%20children&selectedTitle=2~150§ionRank=3&anchor=H30#H1>

121. which of the following lead to dilatation of aorta?

- a) achala
- b) barre
- tt

Answer: both does not cause aorta dilation

Explanation:

Reference:

smle ,2017

122. 60 years old male, c/c chest pain, he was brought to ER of tertiary center. ECG showed ST elevation in leads II, V1, V2, V3, after initial management in the ER, next step is?

- A) Heparin
- B) Streptokinase
- C) C-tPA
- D) primary PCI

Answer: D

Explanation:

Reference: Kumar & Clark's clinical medicine, eighth edition, page 738 + 739
<http://circ.ahajournals.org/content/127/4/e362>

123. Pt on diuretics and digoxin, feels palpitation and muscle weakness, mostly because a disturbance in?

- A) K
- B) Ca
- C) Na

Answer: A

Explanation:

Reference: Kumar & Clark's clinical medicine, eighth edition, page 791

124. Clear case of Dressler syndrome, ask about ECG change?

- A) Diffuse ST segment elevation
- B) ST elevation in inferior leads with reciprocal changes
- C) Bifid P wave
- D) wide QRS

Answer: A

Explanation:

Reference: Kumar & Clark's clinical medicine, eighth edition, page 774

125. ECG with T inverted in some leads otherwise normal. Labs: troponin high, CK high. What is the Dx?

- A) Low risk unstable angina.
- B) High risk unstable angina.
- C) NSTEMI.
- D) Acute ST elevation MI.

Answer: C

Explanation: The usual ECG findings of NSTEMI are ST-segment depression or T-wave inversion. Cardiospecific isoenzyme CK-MB and cardiospecific proteins troponin T and troponin I are raised in blood in NSTEMI. On the other hand, unstable angina is considered to be an ACS in which there is no detectable release of the enzymes and biomarkers of myocardial necrosis.

Reference: <http://nSTEMI.org/>

126. Most common risk factor for CAD?

- A) smoker and 50 y m
- B) dyslipidemia and obesity
- C) HTN
- D) HX of PVD

Answer: c

Explanation: the worst is DM but the comments is HTN

Reference: MTB page 56

127. pt after 2 weeks post MI c/o unilateral leg swelling ,pale,loss of hair other leg is normal .Diagnosis?

- A) acute arterial emboli
- B) acute arterial thrombosis
- C) DVT
- D) dissecting artery

Answer: A

Explanation:

Reference:kumar&clarks clinical medicine , eight edition . page 786

<http://www.clevelandclinicmeded.com/medicalpubs/diseasemanagement/cardiology/complications-of-acute-myocardial-infarction/>

128. coarctation of aorta with ?

- A) down syndrome
- B) Turner syndrome
- C) Edouard syndrome
- D) Patau syndrome

Answer: B

Explanation: A genetic predisposition is suggested by reports of coarctation occurring in family members [11-13] and by its association with Turner syndrome.

Reference: https://www.uptodate.com/contents/clinical-manifestations-and-diagnosis-of-coarctation-of-the-aorta?source=search_result&search=turner%20syndrome&selectedTitle=6~150

129. patient with chronic Afib, came with ??? what is the next step?

Answer: The question is not clear.

130. A medication that will decrease cardiac output and decrease peripheral resistance?

- A) Carvedilol
- B) Hydralazine
- C) CCB

Answer: C

Explanation: I didn't find a great source but what I know is that carvedilol is both B1 blocker in addition to A1 blocker effect so it decrease the HR which decrease the CO and also affect PVR so my answer would be A

Reference: kumar&clarks clinical medicine , eight edition . page783

TABLE 2.1-16. Major Classes of Antihypertensive Agents

CLASS	AGENTS	MECHANISM OF ACTION	SIDE EFFECTS
Diuretics	Thiazide, loop, K ⁺ sparing	↓ extracellular fluid volume and thereby ↓ vascular resistance.	Hypokalemia (not with K ⁺ sparing), hyperglycemia, hyperlipidemia, hyperuricemia, azotemia.
β-blockers	Propranolol, metoprolol, nadolol, atenolol, timolol, carvedilol, labetalol	↓ cardiac contractility and renin release.	Bronchospasm (in severe active asthma), bradycardia, CHF exacerbation, impotence, fatigue, depression.
ACEIs	Captopril, enalapril, fosinopril, benazepril, lisinopril	Block aldosterone formation, reducing peripheral resistance and salt/water retention.	Cough, rashes, leukopenia, hyperkalemia.
ARBs	Losartan, valsartan, irbesartan	Block aldosterone effects, reducing peripheral resistance and salt/water retention.	Rashes, leukopenia, and hyperkalemia but no cough.
CCBs	Dihydropyridines (nifedipine, felodipine, amlodipine), nondihydropyridines (diltiazem, verapamil)	↓ smooth muscle tone and cause vasodilation; may also ↓ cardiac output.	Dihydropyridines: Headache, flushing, peripheral edema. Nondihydropyridines: ↓ contractility.
Vasodilators	Hydralazine, minoxidil	↓ peripheral resistance by dilating arteries/arterioles.	Hydralazine: Headache, lupus-like syndrome. Minoxidil: Orthostasis, hirsutism.
α ₁ -adrenergic blockers	Prazosin, terazosin, phenoxybenzamine	Cause vasodilation by blocking actions of norepinephrine on vascular smooth muscle.	Orthostatic hypotension.
Centrally acting adrenergic agonists	Methyldopa, clonidine	Inhibit the sympathetic nervous system via central α ₂ -adrenergic receptors.	Somnolence, orthostatic hypotension, impotence, rebound hypertension.

131. Genetics of hereditary hypercholesterolemia)

- A) apo c 11
- B) apo b100

Answer: LDLR , apoB , pcsk9 (the question is not complete)

Explanation:

Reference: <http://www.ncbi.nlm.nih.gov/m/pubmed/17380167>

132. Dm , osteoarthritis on NSAID came for regular check up .. Bp found to be 160/some- thing, Invest:Inccr +_ urea IncbicrbDec k lnla What is the cause of htn :

- A) Essential
- B) NSAID induced
- C) Primary hyperaldosteronism

Answer: NSAID induced

Explanation:

Reference: kumar&clarks clinical medicine , eight edition . page778

133. Acute onset chest pain + image coronary angio not so clear ..

- a) TPA

smle ,2017

- b) PCI
- c) ASA
- d) BB

Answer: the q is not clear

Explanation:

Reference:

134. Which antihypertensive drug can cause severe hypertension when stopped abruptly :
- a) Clonidine
 - b) Thiazide
 - c) Beta blocker

Answer: C

Explanation:

Reference:<http://www.ncbi.nlm.nih.gov/m/pubmed/39949/>

Although deleterious events following abrupt withdrawal of antihypertensive treatment are relatively uncommon, considerable attention has recently been focused on this problem. A withdrawal syndrome may occur after termination of almost all types of antihypertensive drugs, but most experience has been with the centrally acting agents and with beta-adrenoreceptor blockers. Abrupt discontinuation of high doses of centrally acting drugs such as alpha-methyldopa, clonidine, and guanabenz can produce a syndrome of sympathetic overactivity that includes agitation, headache, sweating, and nausea and less commonly can provoke rapid upswings in blood pressure. If beta blockers are suddenly stopped, a similar pattern can occur that may be related to excessive activity of thyroid hormones as well as sympathetic factors.

135. ACS which enzyme to order after 1 hour

Answer: myoglobin

Explanation:

Reference: MTB page 75

136. Acute MI pt will present with?
- a) high troponin I with ST elevation in V2-V6
 - b) Ongoing chest pain with high ST elevation in lead II - III and avF
 - c) ST elevation with no chest pain
 - d) ST depression with:/

Answer: B

Explanation:

Reference: kumar&clarks clinical medicine , eight edition . page 737

137. Heart defect result from malrotation of truncus arteriosus?
- A) Transposition of great arteries
 - B) TOF
 - C) ASD
 - D) VSD

Answer: A

smle ,2017

Explanation: I didn't find a source but I agree with A

138. What is the initial management of intracranial hypotension induced lumbar puncture?

- A) IV fluid
- B) Bed rest
- C) Second LP
- D) Epinephrine IV

Answer: B

Explanation: Treatment for persistent intracranial hypotension due to cerebrospinal fluid leak is often conservative. Measures such as bed rest can allow the defect to close, while caffeine can ameliorate symptoms.[8] When such measures fail, treatment with autologous epidural blood patch remains the initial invasive treatment of choice,[1] although one with its own associated complications.[5] In rare cases, surgery to repair persistent leaks with the assistance of myelography may be necessary

Reference: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4199149/>

139. Which of the following is clinically suggest of early onset st elevation MI?

- A) elevated troponin and long inverted T wave in lead 1,2 avf
- B) ST elevation of .3 mm in lead v1-v6 with chest pain
- C) St elevation without chest pain

Answer: B

Explanation:

Reference: https://www.uptodate.com/contents/criteria-for-the-diagnosis-of-acute-myocardial-infarction?source=search_result&search=STEMI&selectedTitle=5~150#H12

140. Or with MI he is on nitroglycerin and morphine . After 20 minutes he got worse with raised JVP and no lung finding. BP drop.

- A) Ruptured
- B) Arrhythmia
- C) RV infarction

Answer: C

Explanation: rupture present with murmur and pulmonary congestion and arrhythmia more with ECG changes and palpation

Reference: MTB, Page 82

141. Pt came e Hx of HF & pulmonary edema. Tx?!

- A) Diuretics
- B) BB
- C) ASA
- D) PCI

Answer: A

smle ,2017

Explanation:

Reference: kumar&clarks clinical medicine , eight edition . page 719

142. A 50-year-old male diabetic and hypertensive, unable to maintain an erection, started on Phosphodiesterase type 5 inhibitors. Which one of the following drug classes should be avoided?
- A) Steroids
 - B) Antibiotics
 - C) Narcotics
 - D) Nitrates

Answer: D

Explanation: both are vasodilators so will cause severe drop in BP.

Reference:<http://www.ncbi.nlm.nih.gov/m/pubmed/163875/66>

143. A 68-year-old diabetic, started 10 days ago on Amlodipine 10mg for hypertension, now he is complaining of gross ankle edema, on examination, JVP was not raised, by auscultation the chest no base crepitations: Labs: Na, K and Ca all within normal range? What is the most likely cause of his edema?
- A) Na and water retention
 - B) Increased capillary hydrostatic pressure
 - C) Decreased oncotic pressure

Answer: B

Explanation: The peripheral edema associated with calcium channel blockers is related to redistribution of fluid from the vascular space into the interstitium. In theory, increased calcium channel blocker-mediated vasodilation leads to increased pressure and subsequent permeability in the capillary circulation

Reference: https://www.uptodate.com/contents/major-side-effects-and-safety-of-calcium-channel-blockers?source=search_result&search=Amlodipine&selectedTitle=9~116#H4

144. pt on estrostin has high TGA (isolate other test normal) what drug give

- A) fenofibrate
- B) statin

Answer: A

Explanation:

The American Heart Association sets out four main categories of triglyceride levels:

healthy: below 100 milligrams per deciliter of blood (mg/dL)

borderline high: 150 to 199 mg/dL

high: 200 to 499 mg/dL

very high: 500 mg/dL and above.

Triglyceride-lowering drugs have been available for some time. The main ones are niacin and a class of drugs called fibrates. But the effects of these drugs are somewhat controversial. For example, two large clinical trials found no benefit from niacin therapy in preventing heart disease events, even though niacin both lowered triglyceride levels and raised the level of heart-healthy HDL (“good”) cholesterol. Not only did niacin not lower the risk of heart disease, it

smle ,2017

also caused troublesome side effects, such as flushing of the skin and an increased risk of infections. So, there is reason to be wary about taking niacin to lower triglyceride levels. A large clinical trial of fenofibrate (Tricor, other names), one of the fibrate drugs, showed that it also reduced triglyceride levels, but didn't lower the risk of heart disease. However, fenofibrate did seem to help a subgroup of people in the trial who had particularly high triglyceride levels and low HDL levels.

Reference: <http://www.health.harvard.edu/blog/a-promising-new-treatment-for-high-triglycerides-201507298160>

145. Description of congenital heart disease there is decrease vascularization of the lungs in the x-ray ,, cardiac shadow (they described boot shaped but not in a direct way)

- A) Tetralogy of fallot
- B) VSD
- C) ASD

Answer: A

Explanation:

Reference: illustrated textbook of paediatrics , fourth edition . page 312

146. Scenario of PT come with friction rub what is your next action

- A) Echo and cardiology consultation
- B) X - ray
- C) Pericardiocentesis

Answer: A

Explanation: repeated question

Reference:

147. Pt with rheumatic fever on aspirin developed heartburn what you will add

- A) Misoprostol
- B) pantoprazole
- C) lasix
- D) ranitidine

Answer: B

Explanation: A effective but may causes intolerable side effects B less effective

Reference: Reference:kumar&clarks clinical medicine , eight edition . page 511

148. Which type of the angina present when go to bed?

- A) Stable
- B) Unstable
- C) Prinzmetal (variant) angina
- D) None of the above

smle ,2017

Answer: C

Explanation:

Reference: <http://www.m.webmed.com/heart-disease/guid/heart-disease-angina>

149. Tx of acute myocarditis?!

- A) Ab
- B) Immunoglobulin
- C) Steroid

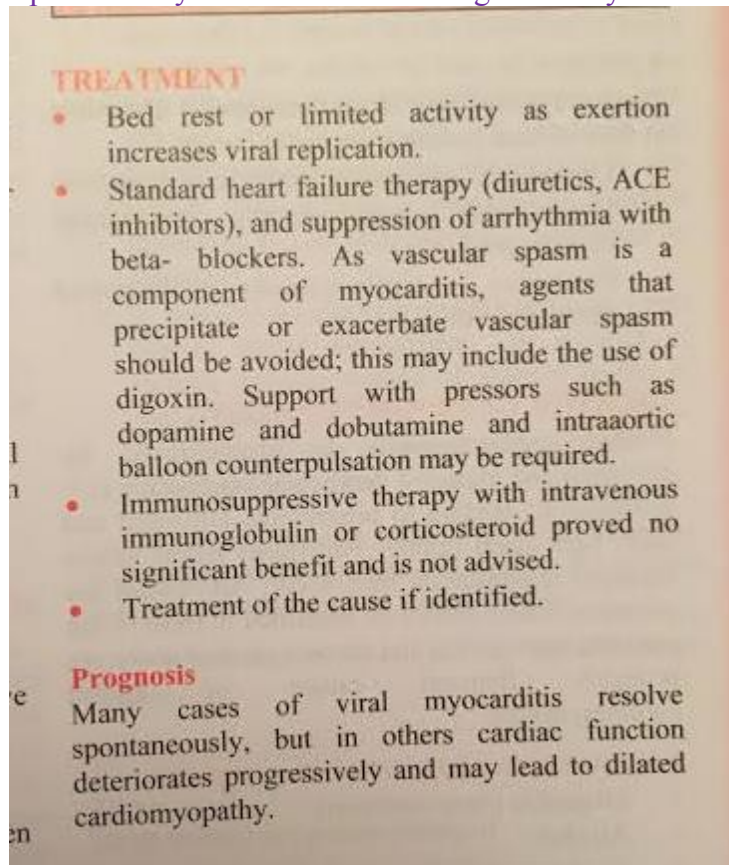
Answer: C??

Explanation:

Myocarditis is commonly treated with medications used to treat heart failure. Rest and a low-salt diet are often recommended. Steroids and other medications also may be used to reduce heart inflammation.

Reference:

<http://www.myocarditisfoundation.org/about-myocarditis/>



150. 50 Y/O male presented to ER with severe respiratory distress, no other history obtained, investigations were done to him CXR: pulmonary edema with infiltration ECG: he was having Atrial fibrillation, his pulse rate was 125 smle ,2017

what investigation you will do to him:

- A) Echocardiography
- B) spiral CT
- C) V\Q match
- D) Arteriogram

Answer: A

151. Scenario of PT come with friction rub what is your next action

- A) Echo and radiology consultant
- B) X - ray
- C) Pericardiocentesis

Answer: A

Explanation: repeated before

152. type of exercise is recommended for coronary artery disease?

- A) isometric
- B) isotonic
- C) yoga
- D) dynamic

Answer: B

Explanation:

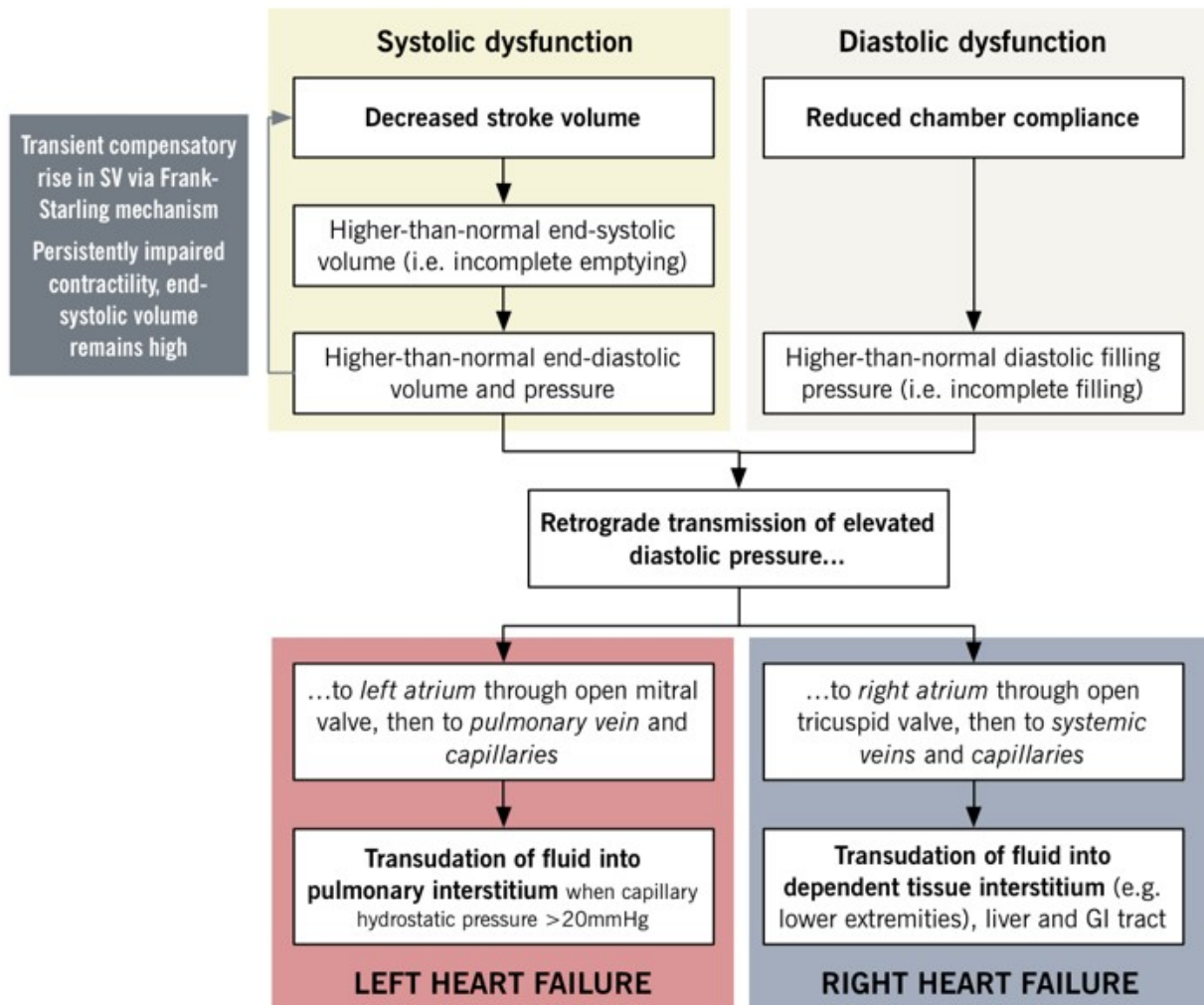
Reference: https://www.uptodate.com/contents/exercise-and-fitness-in-the-prevention-of-cardiovascular-disease?source=search_result&search=isotonic%20exercise&selectedTitle=2~150#H19

153. Pt had sign of heart failure (orthopnea ,pnd and ankle swelling) what is the patho- physiology ? With tables!!!

The question is not clear

Mechanism of cardiogenic pulmonary edema and peripheral edema in heart failure

Dominique Yelle



154. MI patient has big thrombus in left coronary artery what is drug that cause throm- bolytic action?

- A) TPA
- B) Heparin
- C) Clexane
- D) Dabigatran

Answer: A

Explanation: its well known that TPA destroy existing thrombus

Reference:

155. Which is thrombolytic ?

- A) Streptokinase
- B) Argatropan
- C) Heparin
- D) Warfarin

Answer: A

Explanation:

Reference:

156. In patients with an ostium secundum defect, electrocardiogram (ECG) results usually demonstrate the following:

- A) Left -axis deviation
- B) Right ventricular hypertrophy
- C) LV hypertrophy
- D) LA enlargement

Answer: B

Explanation: ASD cause more flow through RA to RV because of left to right shunt which make the RV get hypertrophy because it is not used to this amount of blood.

Reference: <http://emedicine.medscape.com/article/348121-overview>
<http://emedicine.medscape.com/article/348121-overview>

157. Patients with HTN and he has hypercalcemia RX

- A) Furosemide
- B) Thiazide
- C) CCB
- D) BB

Answer: A

Explanation:

Reference: kumar&clarks clinical medicine , eight edition . table at page783

158. Patient 24 hours with diarrhea and vomiting, Bp supine 120/80, Bp. 80/40.
What is the cause ?

- A) Decrease intravascular

Answer:

Explanation:

Reference:

159. What is the most common cause of secondary hypertension?

- A) renal disease
- B) cushing
- C) conn
- D) pheochromocytoma

Answer: A

Explanation:

Reference: <http://www.uptodate.com/contents/evaluation-of-secondary-hypertension>

160. patient has history of endocarditis and underwent to extract his teeth the doctor what will do before extraction?

- A) 2 g amoxicillin before
- B) 2 g clindamycin before

Answer: A

Explanation:

Reference: <http://emedicine.medscape.com/article/1672902-overview#a3>

161. ASD changes on ECG:

Reference: <http://emedicine.medscape.com/article/348121-overview#a1>

The ECG of a patient with an atrial septal defect (ASD) should show a right bundle branch block (sometimes incomplete) partially due to the right ventricular volume and pressure overload that occurs. When an ostium primum atrial defect is present, the ECG reveals left axis deviation. When an os- tium secundum atrial septal defect is present, the ECG reveals right axis deviation.

<http://www.healio.com/cardiology/learn-the-heart/ecg-review/ecg-topic-reviews-and-criteria/atrial-septal-defect-review>

162. 10 year old child with rheumatic fever without heart lesion, prophylaxis :

- A) for 10 years ,
- B) for 15
- C) 5 year or 21 which ever become first

Answer: C

The general principles for secondary prophylaxis are:

P	Duration
N	To 18 years
D	At least to

C	For life
---	----------

W	For life
---	----------

<http://apps.who.int/medicinedocs/en/d/Js2252e/3.2.2.html>

163. Pt CXR show notching in inferior ribs , what is diagnosis :
- A) coarctation of aorta.
 - B) Aortic regurgitation
 - C)ASD
 - D) TOF

Answer: A

Explanation:

Reference: <https://radiopaedia.org/articles/coarctation-of-the-aorta>

164. healthy woman travelled for 18 hours, examination were completely normal, investigation done and D dimer was 350, they give the normal value less than 250 what is the appropriate management:
- A) Heparin
 - B) LMWH and heparin
 - C) Unfractionated heparin

Answer: B

Explanation: actually, have low probability of having DVT since exam is normal and D-dimer is not specific but if the question asking which of heparin to use it is

Reference: <http://emedicine.medscape.com/article/1911303-treatment>

165. Pt with angina take pill under tongue , this pill work by?
- A) oxidized to nitric acid (something like that)
 - B)

Answer:

Explanation: Nitroglycerin forms free radical nitric oxide (NO) which activates guanylate cyclase, resulting in an increase of guanosine 3'5' monophosphate (cyclic GMP) in smooth muscle and other tissues. These events lead to dephosphorylation of myosin light chains, which regulate the contractile state in smooth muscle, and result in vasodilatation.

Reference:

166. What is the recommended management for a patient with carotid bruit with occlusion 60% of the left carotid artery?
- A) aspirin daily
 - B) Angiography
- smle ,2017

- C) carotid endarterectomy
- D) none of the above

Answer: A

Explanation: Patients with asymptomatic carotid artery stenosis should be treated with aspirin.

Reference: <http://emedicine.medscape.com/article/463147-treatment#d12/>

-

167. Pt with chest pain diagnosed with STEMI , what the other finding you can detect in his ECG?

- A) PR depression
- B) Peaked T wave

Answer: B

Explanation: Broad, asymmetrically peaked or 'hyperacute' T-waves are seen in the early stages of ST- elevation MI (STEMI) and often precede the appearance of ST elevation and Q waves. They are also seen with Prinzmetal angina.

Reference: <http://lifeinthefastlane.com/ecg-library/basics/>

124. Pt CXR show notching in inferior ribs , what is diagnosis :

A. coarctation of aorta.

Answer:A

Explanation: Bilateral symmetrical rib notching, readily appreciated on the chest image, is diagnostic of aortic coarctation. It is the result of obstruction of blood flow at the narrowed aortic segment, in conjunction with collateral blood flow through the intercostal arteries. Rib notching is unusual in infancy but becomes more frequent with increased age; it is present in 75% of adults with coarctation. Rib notching occurs along the inferior margin of the third to the eighth ribs; it is caused by pulsation of dilated intercostal arteries.

Reference: <http://emedicine.medscape.com/article/416623-overview#a2>

125. healthy woman travelled for 18 hours, examination were completely normal, investigation done and D dimer was 350, they give the normal value less than 250 what is the appropriate management:

- A. Heparin
- B. LMWH and heparin
- C. Unfractionated heparin

Answer:B

Explanation: Fractionated LMWH administered subcutaneously is now the preferred choice for initial anticoagulation therapy. Unfractionated IV heparin can be nearly as effective but is more difficult to titrate for therapeutic effect. Warfarin maintenance therapy may be initiated after 1-3 days of effective heparinization.

Reference: <http://emedicine.medscape.com/article/300901-medication#2>

126. Pt with angina take pill under tongue , this pill work by?

A)oxidized to nitric acid (something like that)

answer : A

Explanation: It has a direct relaxant effect on vascular smooth muscles, and inhibition of platelet aggregation is another effect that is probably of therapeutic value. Both the relaxing effect on vascular smooth muscle and the effect on platelets are considered to be due to a stimulation of soluble guanylate cyclase by nitric oxide derived from the organic nitrate ester molecule through metabolization catalyzed by enzymes such as glutathione S-transferase, cytochrome P-450, and possibly esterases. The cyclic GMP produced by the guanylate cyclase acts via cGMP-dependent protein kinase. Ultimately, through various processes, the protein kinase lowers intracellular calcium; an increased uptake to and a decreased release from intracellular stores seem to be particularly important.

Reference: <https://www.ncbi.nlm.nih.gov/pubmed/7873467>

127. What is the recommended management for a patient with carotid bruit with occlusion 60% of the left carotid artery?

A. aspirin daily

B. Angiography

C. carotid endarterectomy

D. none of the above

Answer:A

Explanation: Patients with asymptomatic carotid artery stenosis should be treated with aspirin.

Reference: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2665982/>

128.Pt with chest pain diagnosed with STEMI , what the other finding you can detect in his ECG :

A. inverted T wave

answer: A

Explanation: In STEMI, typical ST-segment elevation persists for hours and is followed by inversion of T waves during the first few days and by the development of Q waves.

High-probability ECG features of MI are the following:

- ST-segment elevation greater than 1 mm in two anatomically contiguous leads
- The presence of new Q waves

Intermediate-probability ECG features of MI are the following:

- ST-segment depression
- T-wave inversion
- Other nonspecific ST-T wave abnormalities

Reference: <http://emedicine.medscape.com/article/155919-workup#c13>

129. pt has HTN control on his medications , developed albuminuria , what should you add to his HTN medications :

A. ACEI

Answer:A

Explanation: Reduction of albumin excretion rate with drug treatment regimes (such as angiotensin converting enzyme inhibitors and angiotensin II receptor antagonists) correlates with a plateau of, or a decrease in, the rate of decline of renal function that is independent of the antihypertensive effect of these agents.

Reference: http://www.medscape.com/viewarticle/550608_2

130. HF patient what to order next ?

Answer:

131. Cyanotic heart disease?

A. coarctation of the aorta

B. Truncus arterio

answer: b

Explanation: The 5 Cyanotic Congenital Heart Defects are as easy as 1, 2, 3, 4, 5.

One big trunk: Truncus arteriosus.

Two interchanged vessels: Transposition of the Great Vessels.

Three: Tricuspid Atresia.

Four: Tetralogy of Fallot.

Five words: Total Anomalous Pulmonary Venous Return.

Reference: <https://firstaidteam.com/2015/09/14/mnemonic-monday-cyanotic-congenital-heart-defects/>

132. Came with MI CPR done the pt died what is the result of post Mortem finding?

Answer:

133. Pt with a family history of multiple sudden cardiac death pt has Marfan's syndrome features What might be the cause of death?


A. Ruptured aortic aneurysm

Answer: : A (if there is aortic dissection choose it)

Explanation: Aortic dissection and congestive heart failure due to aortic and mitral valvular anomalies accounted for over 90% of the known causes of death in Marfan syndrome patient.

smle ,2017

Review of cases and the literature shows that, although sudden death is most commonly the result of hemorrhage from acute aortic dissection, there may be a variety of other lethal mechanisms. These include intra- and extracranial arterial dissection, intra- and extracranial **arterial aneurysm rupture**, mitral valve prolapse, aortic valvular incompetence with acute cardiac failure, ventricular arrhythmia, endocarditis, and brainstem compression from atlanto-occipital instability

Reference:  <https://www.emedicine.medscape.com/article/1258926-overview#a2>
https://link.springer.com/chapter/10.1007/978-1-59259-921-9_4

134. Which is more at risk for CAD

a-25 male , smoker , sedentary life

b-35 female, type 1DM, obese

c-55 male , hypertension, high cholesterol

d-50 male , obese, DM

answer:C

Explanation: The strongest predictors of 10-year risk are identified as age, sex, race, total cholesterol, high-density lipoprotein cholesterol (HDL-C), blood pressure, blood-pressure treatment status, diabetes, and current smoking status

Reference: <http://www.emedicine.medscape.com/article/164163-overview#a7>

135. Cardiac case ..his brother die when walk Dx?

Answer: cardiomyopathy (hypertrophic cardiomyopathy)

Explanation: Hypertrophic cardiomyopathy (HCM) is a genetic cardiovascular disease. This disorder is caused by a mutation in cardiac sarcomere protein genes and is most frequently transmitted as an autosomal dominant trait. HCM has a variable presentation.

Symptoms of hypertrophic cardiomyopathy (HCM) can include dyspnea, syncope and presyncope, angina, palpitations, orthopnea, paroxysmal nocturnal dyspnea, congestive heart failure, dizziness, and sudden cardiac death. Sudden cardiac death This is the most devastating presenting manifestation of HCM. It has the highest incidence in preadolescent and adolescent children and is particularly related to extreme exertion. The risk of sudden death in children is as high as 6% per year.

Reference: <http://www.emedicine.medscape.com/article/152913-overview>

136.heart sound that supports pulmonary HTN.

Answer: loud p2

Explanation: pulmonary hypertension Physical examination findings may include the following: The intensity of the pulmonic component of the second heart sound (P₂) may be increased and the P₂ may demonstrate fixed or paradoxical splitting. A systolic ejection murmur may be heard over the left sternal border. The murmur may be augmented by inspiration. A right ventricular heave may be palpated.

Reference: <http://emedicine.medscape.com/article/303098-clinical#b3>

137. Elderly Patient presented with chest pain he is a smoker with positive family history of coronary artery disease and he is dyslipidemic he is also over weight and can not tolerate exercise his ECG is normal what will do:

- A. Stress echo
- B. Stress test
- C. Resting reperfusion scan

Answer : B

Explanation: Angiography is used to detect the anatomic location of coronary artery disease. Angiography is predominantly a test to detect the presence of narrowing that is best managed with surgery, angioplasty, or other methods of revascularization. Sometimes angiography is used if noninvasive tests such as EKG or stress testing are equivocal. Angiography is the most accurate method of detecting coronary artery disease.

Reference: master the board + step up to medicine

138. Patient has paroxysmal nocturnal dyspnea orthopnea and dyspnea with a history of mitral stenosis ... What is the most likely diagnosis:

- A. Acute respiratory distress syndrome
- B. Left heart failure
- C. Right heart failure

Answer : B

Explanation:

Table 13. Signs and Symptoms of Left vs. Right Heart Failure

	Left Failure	Right Failure
Low Cardiac Output (Forward)	Fatigue Syncope Systemic hypotension Cool extremities Slow capillary refill Peripheral cyanosis Pulsus alternans Mitral regurgitation S3	Left failure symptoms if decreased RV output leads to LV underfilling Tricuspid regurgitation S3 (right-sided)
Venous Congestion (Backward)	Dyspnea, orthopnea, PND Cough Crackles	Peripheral edema Elevated JVP with abdominojugular reflux, and Kussmaul's sign Hepatomegaly Pulsatile liver

Reference: Toronto notes, C36

139. Man with chest pain while exercises ,hx of chest pain in rest and exercise. Ejection systolic murmur at left sternal , not radiating , ecg> left atrial enlargement with no specific st changes . Dx

- A. pul stenosis ,
- B. restrictive cardiomyopathy
- C. hypertrophic cardiomyopathy.

Answer:C

Explanation: hypertrophic cardiomyopathy patient can have Systolic ejection crescendo-decrescendo murmur on auscultation. They can have left atrial enlargement too.

Reference: <http://emedicine.medscape.com/article/152913-overview>

<https://pdfs.semanticscholar.org/c47e/0e67fbd22539c374e6c9a09c00ead703ede0.pdf>

140. Rheumatic heart Dx prophylactic for 10 yrs old boy with no cardiac involvement?

- A. 3m
- B. 5 yrs
- C. 6 yrs

Answer : B

Explanation: In underdeveloped countries, prophylaxis should be continued as follows:

- Continue for 5 years after the first attack
- Continue indefinitely in patients with established heart disease
- Continue indefinitely in patients who are frequently exposed to streptococci and are difficult to monitor

Reference: <http://emedicine.medscape.com/article/333103-treatment>

141. Patient presented with chest pain ECG showing ST segment elevation in lead I ,aVL,V5 and V6 ?

- A. Lateral ischemia*
- B. Ant schema
- C. Post schema

Answer : A

Explanation: Localization of the involved myocardium based on distribution of ECG abnormalities in MI is as follows:

- Inferior wall - II, III, aVF
- Lateral wall - I, aVL, V₄ through V₆
- Anteroseptal - V₁ through V₃
- Anterolateral - V₁ through V₆
- Right ventricular - RV₄, RV₅
- Posterior wall - R/S ratio greater than 1 in V₁ and V₂, and T-wave changes in V₁, V₈, and V₉

Reference: <http://emedicine.medscape.com/article/155919-workup#c13>

142. Case of cardio change in ECG show , inversion T and ST change , what is cause ?

A. ischemia

B. (MI - infarction)

Answer: not clear, as we should know the type of the ST changes!

Explanation:

Ischemia deep symmetrically inverted T wave and he may has also ST segment depression with normal tachycardic rhythm in two consecutive leads.

Reference: <https://www.youtube.com/watch?v=AfIKODk0TZo>

143. What is condition should to take attention regarding prevention to Coronary artery disease

a)pt 25 age with DM1 and HTN

b)pt 55 age with DM and HTN

c)pt 55 (or50) with DM and high cholesterol

d)pt 25 with DM and >> something

Answer: B

144. about truncus arteriosus & Bulbus cordis , cause:

a-VSD

b-ASD

c-tetralogy of fallot

Answer : A

Explanation: Truncus Arteriosus:

- pathophysiology single great vessel gives rise to the aorta, pulmonary, and coronary arteries. Truncal valve overlies a large VSD. Potential for coronary ischemia with fall in pulmonary vascular resistance
- management: surgical repair within first 6 wk of life.

Reference: Toronto notes.

145. Which one risky (more) to stroke ?

A- 55 , male, HTN , obese

B- 50, male , DM, hypercholesterolemia

C- 22,female,smoker

Answer: A

Explanation: Hypertension (the most important) modifiable risk factor in stroke.

Reference: <http://emedicine.medscape.com/article/1916852-overview#a5>

146. ECG picture

A. AF

smle ,2017

- B. VT
 - C. SVT ?
- Answer:

147. hypertensive women 160/90 what will advice her:

- A. Reduce salt less than 6g
- B. Walk 1.3km 4 times per week
- C. Brisk walking 30min 3 time per week
- D. Somthing

Answer: A

Explanation: A reduction in dietary salt from the current intake of 9-12 g/day to the recommended level of less than 5-6 g/day will have major beneficial effects on cardiovascular health along with major healthcare cost savings around the world. The World Health Organization (WHO) strongly recommended to reduce dietary salt intake as one of the top priority actions to tackle the global non-communicable disease crisis and has urged member nations to take action to reduce population wide dietary salt intake to decrease the number of deaths from hypertension, cardiovascular disease and stroke.

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4105387/>

148. Mid diastolic rumble with opening snap and dysphagia. Where is the lesion?

- a)Left atrium
- b)Aortic arch
- c)Left ventricle

answer:A

Explanation: Besides the usual shortness of breath and CHF associated with all forms of valvular heart disease, mitral stenosis has a number of relatively unique features of presentation:

- Dysphagia from left atrium (LA) pressing on the esophagus
- Hoarseness (LA pressing on laryngeal nerve)
- Atrial fibrillation and stroke from enormous LA
- Hemoptysis

Reference: [master the boared USMLE step 2 CK](#)

149. Pt chest pain radiate to left shoulder and jaw what's best analgesics?

(all answers are painkillers medications,morphine was one of the answers).

Answer: Narcotic analgesics (eg.Morphine)

Explanation: Parenterally administered narcotic analgesics are very effective They not only relieve the sensation of severe pain but also reduce the effective and physiologic reaction to pain and thus reduce patient anxiety. Refractory or severe pain should be treated symptomatically with IV morphine. The use of other analgesic agents, such as nonsteroidal anti-inflammatory drugs

(NSAIDs) should be avoided if at all possible, as the use of these agents has been associated with adverse cardiovascular events.

Reference: <https://www.ncbi.nlm.nih.gov/pubmed/2901910>
<http://emedicine.medscape.com/article/155919-treatment#d6>

150. Down syndrome fix split s2 +harsh systolic murmur + biventricular hypertrophy +..... dx?

- a) ASD
- b) VSD
- c) atrioventricular septal defect

Answer: C

Explanation: Atrio-ventricular septal defect (AVSD) is the most common congenital heart disease (CHD) reported in DS.

Reference: <https://www.ncbi.nlm.nih.gov/pubmed/25391181>

151. A case of rheumatic fever he had a severe arthritis and mitral regurgitation what is your SHORT management?

- A/steroid and high dose aspirin
- B/daily steroid and aspirin
- C/IM penicillin
- D/monthly

Answer: C

Explanation: Most cases of ARF can be prevented by antibiotic treatment received within 9 days of GAS pharyngitis (level II evidence). After onset of ARF there is no effective treatment for the immune reaction. Salicylates and antibiotics for any current GAS infection remain the cornerstone for treating most cases (level II evidence). Salicylates give relief from fever and arthritis. They have no role in the treatment of carditis, which is addressed with bed rest (level II evidence). Prednisone is not useful for arthritis but it is the drug of choice for those patients who experience chorea (level II evidence)

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2682299/>

191. (long scenario), child with pansystolic (holosystolic) murmur. what is the cause?

- a- ASD
- b- VSD

Answer: B

Explanation: VSD is the commonest congenital heart disease and present with high pitched holosystolic murmur>

Reference: Master the board USMLE step 2 CK

192. Isosorbide dinitrate side effect?

Explanation:

Isosorbide dinitrate (ISDN) is an intermediate-acting nitrate approved for prevention of angina pectoris.

Side effects:

Cardiovascular: Rebound hypertension (uncommon), syncope, unstable angina flushing, hypotension/orthostatic hypotension, lightheadedness, palpitations, tachyarrhythmia

Central nervous system (CNS): Dizziness, headache, restlessness, weakness

Gastrointestinal (GI): Nausea

Hematologic: Methemoglobinemia (infrequent)

Commonly reported side effects of isosorbide dinitrate include: headache.

Reference: <http://www.medscape.com/viewarticle/727150>

<https://www.drugs.com/sfx/isosorbide-dinitrate-side-effects.html>

<http://reference.medscape.com/drug/dilatrate-sr-isordil-isosorbide-dinitrate-342276#4>

193. Africa with HT diagnosed now protein+2 Wtttt

A)Diuretic

B)ACEI

Answer: B

Explanation:

African Americans exhibit lesser blood pressure reductions on monotherapy with renin-angiotensin system inhibition compared with whites, but there are no differences in the cardiorenal benefits of renin-angiotensin system inhibition across racial or ethnic categories.

African Americans with hypertensive CKD and proteinuria should receive a diuretic, a renin-angiotensin system inhibitor, or both as initial therapy, with a target blood pressure of less than 130/80 mm Hg.

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3607200/>

194. Man loses his consciousness during playing football (syncopal attack) , he had history aortic stenosis. how can you explain this case: (no low cardiac output not mentioned in the choices!)

A)Cardiac arrhythmia.

Answer: A might be right because Aortic stenosis is common cause of atrial or ventricle tachyarrhythmia

Explanation: Syncope from aortic stenosis often occurs upon exertion when systemic vasodilatation in the presence of a fixed forward stroke volume causes the arterial systolic blood pressure to decline. It also may be caused by atrial or ventricular tachyarrhythmias.

Reference: emedicine.medscape.com/article/150638-clinical

smle ,2017

195. Q/pt present with Inferior MI which artery affected?

A. ST elevation in II, III

B. and aVF

C. ST elevation or depression

Explanation: This part of the heart muscle lies on the diaphragm and is supplied of blood by the right coronary artery (RCA) in 80% of patients. In the remaining 20% the inferior wall is supplied by the ramus circumflexus(RCX).

Reference: https://en.ecgpedia.org/wiki/Inferior_MI

196. professor present with headache sometimes resolve with panadol vital sign given his bp 170/100

what is the type of his HTN

1. essential

2. Secondary

3. Malignant

4. pain causing

Answer:A

Explanation: Primary or essential hypertension accounts for 90-95% of adult cases, and a small percentage of patients (2-10%) have a secondary cause.

Reference: <http://emedicine.medscape.com/article/241381-overview#a4>

197. relative contraindication of methergine ?

A) HTN

B) stable angina

C- unstable angina

Answer: A

Explanation: Do NOT use Methergine if you have high blood pressure, especially high blood pressure caused by pregnancy (toxemia or preeclampsia)

Reference: <https://www.drugs.com/cdi/methergine.html>

198. ST elevation at lead 2 , 3 , and AVF , that represent which cardiac parts?

A. inferiorMI

Answer:A

Explanation: Localization of the involved myocardium based on distribution of ECG abnormalities in MI is as follows:

- Inferior wall - II, III, aVF
- Lateral wall - I, aVL, V₄ through V₆
- Anteroseptal - V₁ through V₃

smle ,2017

- Anterolateral - V₁ through V₆
- Right ventricular - RV₄, RV₅
- Posterior wall - R/S ratio greater than 1 in V₁ and V₂, and T-wave changes in V₁, V₈, and V₉

Reference: <http://emedicine.medscape.com/article/155919-workup#c13>

199. hypertensive male on furosemide have dehydration ,Hypokalemia 3, hyponatremia 123 What will you give him?

A--Normal saline 5 kcl , 20cc /hr

B -normal saline 40 KCl, 80cc /hr

c-.45 , 5kcl, 20cc/hr

d- .45 , 40 kcl, 80cc/hr

200. 22 year old male patient presents with chest pain increase when he lying flat ,Ecg shows diffuse ST-Elevation in all leads wt is ur diagnosis?

a-myocardial infarction

b-pericarditis

c-Infective endocarditis

Answer: B

Explanation: ECG can be diagnostic in acute pericarditis and typically shows diffuse ST elevation.

Reference: <http://emedicine.medscape.com/article/156951-overview>

201. patient with MI Blood pressure 80/65 what is your action ecg shows (bradycardia) i think complete heart block :

a-dopamine/ norepinephrine

b-iv fluid bolus /sub

c-cutaneous pacemaker

answer: C

Explanation: All symptomatic bradycardia after MI are treated first with atropine then by pacemaker if atropine doesn't work

reference: Master the board USMLE step 2 CK

202. very obese smoker patient complain of chest pain how to test for myocardial perfusion :

a-exercise stress test

smle ,2017

b-24hr holter monitor

c-dobutamine stress test

answer:C

Explanation: pharmacologic stress testing is usually used when patients cannot walk on a treadmill long enough to reach their target heart rate because of deconditioning, musculoskeletal disorders, obesity, peripheral arterial disease, or other disorders. - holter is for arrhythmias.

Reference: [Http://www.merckmanuals.com/professional/cardiovascular-disorders/cardiovascular-tests-and-procedures/stress-testing](http://www.merckmanuals.com/professional/cardiovascular-disorders/cardiovascular-tests-and-procedures/stress-testing)

203. which of the following is major criteria of Infective endocarditis ?

a-positive blood culture

b-echo shows valvular

Answer: B its the answer coz we need 2+ve blood cultures

Explanation: Echocardiogram with oscillating intracardiac mass on valve or supporting structures, in the path of regurgitant jets, or on implanted material in the absence of an alternative anatomic explanation, or abscess, or new partial dehiscence of prosthetic valve or new valvular regurgitation (review duke criteria)

Reference: <http://reference.medscape.com/calculator/endocarditis-diagnostic-criteria-duke>

204. Which one is criteria of TOF ?

A-Pulm outflow stenosis ..

Answer:A

Explanation: A **mnemonic** for the underlying anatomic defects in tetralogy of Fallot is: PROV

- P: pulmonary stenosis
- R: right ventricular hypertrophy
- O: overriding aorta
- V: ventricular septal defect

Reference: <https://radiopaedia.org/articles/tetralogy-of-fallot-mnemonic>

205.2 Y old ejection systolic murmur cause: ??

Answer: Pulmonary stenosis is the most common pathological ejection systolic murmur heard in children

206.3 y/o k/c of cardiac what you make:

A-Eco

B-ecg

C-catheterization

D-observation

Answer: A??

207- 2. Pt had urti for 2 weeks later developed orthopnea, severe pulmonary edema, what is the dx?

A. Infective endocarditis

B. Acute epicarditis

C. Acute myocarditis

D. Acute bronchitis

Answer: c

Explanation: Patients with myocarditis have a clinical history of acute decompensation of heart failure, (e.g. Tachycardia, gallop, mitral regurgitation, edema). In viral myocarditis, patients may present with a history of recent (within 1-2 wk) flulike syndrome of fevers, arthralgia, and malaise or pharyngitis, tonsillitis, or upper respiratory tract infection.

Reference: <http://emedicine.medscape.com/article/156330-clinical#b1>

208. Urti after 1 week complaining of severe shortness of breath and orthopnea with no fever

A. Acute myocarditis

B. Acute pericarditis

C. Ie

Answer is a.

Explanation: Patients with myocarditis have a clinical history of acute decompensation of heart failure,(e.g. Tachycardia, gallop, mitral regurgitation, edema). In viral myocarditis, patients may present with a history of recent (within 1-2 wk) flulike syndrome of fevers, arthralgias, and malaise or pharyngitis, tonsillitis, or upper respiratory tract infection.

Reference: <Http://emedicine.medscape.com/article/156330-clinical#b1>

209- Old lady with sharp chest pain and fever diagnosed with pericarditis what will you do to dx the case, most accurate test is :

A. Acid fact stain

B. Pericardial biopsy (my answer)

Explanation: If tuberculous pericarditis is suspected, diagnostic accuracy can be improved with identification of the organism from pericardial fluid or pericardial biopsy.

Reference: <http://bestpractice.bmj.com/best-practice/monograph/243/diagnosis/tests.html>

210- Hypertensive patient on ACEI but not controlled Blood pressure , what to add?

- A. Thiazide
- B. Beta blocker
- C. Furosemide
- D. Nefidipine (calcium channel blocker)

Answer: d

Explanation: (ACCOMPLISH) trial:

1. Benazepril plus amlodipine offers the same effect at reducing blood pressure in hypertensive patients as benazepril plus hydrochlorothiazide.
2. Benazepril plus amlodipine was more effective than benazepril plus hydrochlorothiazide at reducing cardiovascular events in hypertensive patients at risk for such events.

Reference: <http://www.2minutemedicine.com/the-accomplish-trial-ace-inhibitors-and-calcium-channel-blockers-for-hypertension-classics-series/>

211- Hypertensive patient on ACEI but not controlled Blood pressure , what to add?

- A. Furosemide
- B. Thiazide
- C. Beta blocker

Answer: b (CCB if no option > thiazide)

Explanation: In the general nonblack population, including those with diabetes, initial anti-hypertensive treatment should include a thiazide diuretic, calcium channel blocker, angiotensin-converting enzyme (ACE) inhibitor, or angiotensin receptor blocker (ARB). In the general black population, including those with diabetes, initial treatment should include a thiazide diuretic or calcium channel blocker. If the target blood pressure is not reached within one month after initiating therapy, the dosage of the initial medication should be increased or a second medication should be added (thiazide diuretic, calcium channel blocker, ACE inhibitor, or ARB; do not combine an ACE inhibitor with an ARB).

Reference: <http://www.aafp.org/afp/2014/1001/p503.html>

212. The same scenario as the above question, how to treat?

- A. Aspirin
 - B. Heparin
- smle ,2017

C. Lmwh

D. Fracion heparin

Answer c

Explanation: According to medscape: regular unfractionated heparin was the standard of care until the introduction of lmwh products.

Reference: <http://emedicine.medscape.com/article/1911303-treatment#d10>

213-. Newly diagnosed hypertensive patient came to the primary clinic complaining of dry cough and shortness of breath. Which medication he used?

A. Perindopril

B. Valsartan

C. Atenolol

D. Thiazide

Answer: a- perindopril

Explanation: dry cough is one of the sides effect of ACEIs

Reference: <https://www.drugs.com/cdi/perindopril.html>

214-. Pt c/o sever uncontrolled htn, “renography” not sure”, showed I renal artery stenosis, next step is to?

A. Venography

B. lvp

C. CT angiograpgy

D. Renography

Answer: c

Explanation: Spiral CT angiography is a useful technique that avoids arterial catheterization and produces accurate images of renal artery anatomy.

Reference: <http://emedicine.medscape.com/article/245023-workup#c7>

215- 60 years old patient has only htn, what’s the best drug to start with?

A. ARB

B. ACEI

C. BB

D. Diuretics

Answer: d

Explanation: according to JNC 8 Guidelines thiazide is not better than ACEI, CCB and ARB

Key Points for Practice

- In the general population, pharmacologic treatment should be initiated when blood pressure is 150/90 mm Hg or higher in adults 60 years and older, or 140/90 mm Hg or higher in adults younger than 60 years.
- In patients with hypertension and diabetes, pharmacologic treatment should be initiated when blood pressure is 140/90 mm Hg or higher, regardless of age.
- Initial antihypertensive treatment should include a thiazide diuretic, calcium channel blocker, ACE inhibitor, or ARB in the general nonblack population or a thiazide diuretic or calcium channel blocker in the general black population.
- If the target blood pressure is not reached within one month after initiating therapy, the dosage of the initial medication should be increased, or a second medication should be added.

Reference: <http://www.aafp.org/afp/2014/1001/p503.html>

Master the board USMLE step 2 CK

216-.Which of the following is side effect of atropine:

- A. Vasoconstriction
- B. Decrease iop
- C. Decrease urine output
- D. Dry of mouth

Answer: d

Explanation: Most of the side effects are directly related to its antimuscarinic action. Dryness of the mouth, blurred vision, photophobia and tachycardia commonly occur with chronic administration of therapeutic doses. Anhidrosis also may occur and produce heat intolerance or impair temperature regulation in persons living in a hot environment. Constipation and difficulty in micturition may occur in elderly patients. Reference: <http://www.rxlist.com/atropine-drug/side-effects-interactions.htm>

217- Ecg with AFib pattern. A patient present with irregular cardiac palpitation some duration in the past for which he was taking a drug, lab values given demonstrating normal upper limit of aPTT, normal PT, normal INR, normal platelet, low hemoglobin, what is the mechanism of action of the drug?

- A. Anti-thrombin iii
- B. Decrease factor viii
- C. Inhibit platelets aggregation
- D. Decrease vitamin k dependent factors

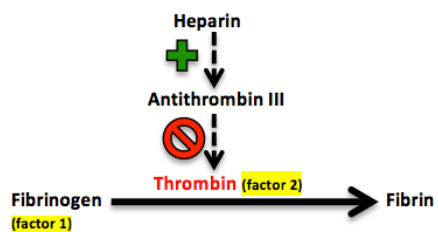
Answer: A

Explanation: Heparin cause aPTT prolongation while warfarin cause PT prolongation so the patient here took heparin as the aPTT in the normal upper limit.

heparin binds reversibly to antithrombin III (ATIII) and greatly accelerates the rate at which ATIII inactivates coagulation enzymes thrombin (factor IIa) and factor Xa. (aPTT) monitoring is required when using UH

Reference: <https://www.drugbank.ca/drugs/DB01109>

<https://www.uptodate.com/contents/image?imageKey=HEME/79969>



218-. Case presented with st elevations mi for 6 hours no neurological symptoms after CPR the patient died in autopsy you well find:

- A. Brain abscess
- B. Interventricular hemorrhage
- C. Red cells in the hippocampal area
- D. Necrosis in the area associated with midcerebral infarct

Answer: d?

219. (long scenario) man with chest pain and abnormal EKG. Which one of the following will be elevated?

- A. ESR.
- B. M2 Protein.
- C. CRP.
- D. Creatinine.

Answer: C

Explanation: Patients with raised C-reactive protein and a normal erythrocyte sedimentation rate usually have infection but some have other tissue damage (e.g. myocardial infarction or venous thromboembolism).

References: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4653962/>

220. What valve lesion you'll find in acute infective endocarditis?

- A. Mitral stenosis
- B. Mitral regurgitation
- C. Aortic stenosis
- D. Aortic regurgitation

Answer: b

smle ,2017

In a large observational cohort study, IE most commonly involved the mitral valve only (approximately 40% of patients), followed by the aortic valve only (36% of patients), followed by multivalvular disease. Recently, the most common predisposing lesions are mitral regurgitation, aortic valve disease (stenosis and regurgitation), and congenital heart disease.

References: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2726828/>

221- Pt came with cough, dyspnea, distended neck vein, peripheral edema & ascites. By examination there is bilateral rales. What is the underlying cause

- A. Right heart failure
- B. Left heart failure
- C. Aortic valve regurge others

Answer: should be congestive heart failure

Explanation:

Table 13. Signs and Symptoms of Left vs. Right Heart Failure

	Left Failure	Right Failure
Low Cardiac Output (Forward)	Fatigue Syncope Systemic hypotension Cool extremities Slow capillary refill Peripheral cyanosis Pulsus alternans Mitral regurgitation S3	Left failure symptoms if decreased RV output leads to LV underfilling Tricuspid regurgitation S3 (right-sided)
Venous Congestion (Backward)	Dyspnea, orthopnea, PND Cough Crackles	Peripheral edema Elevated JVP with abdominojugular reflux, and Kussmaul's sign Hepatomegaly Pulsatile liver

Reference: Toronto notes, C36

222- Trauma patient with hypotension, distended jugular veins, good bilateral equal air entry, diagnosis;

- A. Tension pneumothorax
- B. Hemothorax
- C. Cardiac tamponade

Answer: c

Explanation: Good bilateral air entry makes you avoid a & b. Also hypotension and distended jvp are directing to it also.

Reference: <http://emedicine.medscape.com/article/152083-clinical>

223- Aspirin side effect:

- A. Diarrhea
- B. Constipation
- C. Bleeding

Answer: c

Explanation: Aspirin Side Effects:

angioedema, Bronchospasm, CNS alteration, Dermatologic problems, GI pain, ulceration, bleeding, Hepatotoxicity, Hearing loss, Nausea, Platelet aggregation inhibition, Premature hemolysis, Pulmonary edema (salicylate-induced, noncardiogenic), Rash, Renal damage, Tinnitus, Urticaria, Vomiting

Reference: <http://reference.medscape.com/drug/zorprin-bayer-buffered-aspirin-343279#4>

224. Newborn is irritable and sweating, chest is clear, vitals was provided, hr 300 beat/min, what's your action:

- A. Cardiac dextroversion
- B. Vagal massage
- C. Digoxin

Answer: b

Explanation: In the infant with a narrow complex tachycardia who is not compromised, vagal maneuvers can be used. If vagal maneuvers fail, adenosine at an initial dose of 200 µg/kg can be given rapidly intravenously into a large vein.

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2672672/>

225- A patient with renal failure and mitral regurgitation, valve was 0.7 cm. Other findings in aortic valve? What is the proper management?

- A. Total valve replacement
- B. Valvoplasty
- C. Balloon

Answer:

Explanation: A diameter exceeding 7 mm indicates severe regurgitation.

The treatment of choice for most people with severe chronic MR is surgical repair or replacement of the mitral valve. However, in some cases, surgical treatment may be delayed or deferred due to the presence of other medical conditions that increase the risk of surgery.

Valve replacement is indicated when the heart starts to dilate. Do not wait for left ventricular end systolic diameter (LVESD) to become too large because the damage will be irreversible. When LVESD is above 40 mm or the ejection fraction drops below 60%, surgical valve repair or replacement is indicated. Valve repair means either operatively, or with a catheter placing a clip or sutures across the valve to tighten it up.

Review: <http://emedicine.medscape.com/article/155618-treatment#d6>

Reference: <https://www.123sonography.com/ebook/quantification-mitral-regurgitation>
<http://www.uptodate.com/contents/mitral-regurgitation-beyond-the-basics>

Master the board USMLE step 2 CK
smle ,2017

226- Athletic come for check-up all thing normal except xanthelasma on achllis tendon and cholesterol?

- A. Ldl receptor
- B. Apo II
- C. Apo c

Answer: a

Explanation: Familial hypercholesterolemia (FH) is an autosomal dominant disorder that causes severe elevations in total cholesterol and low-density lipoprotein cholesterol (LDLc). Xanthomas are noted commonly on the Achilles tendons and metacarpal phalangeal extensor tendons of the hands of patients with untreated FH.

Reference: <http://emedicine.medscape.com/article/121298-overview>

227-. Mi patient presented to er after resuscitation he developed coma and then died, what is the postmortem change you will find

- A. Inter ventricular hemorrhage
- B. Brown colored area supplied by middle meningeal artery

Answer: b

Reference: <https://annalsofintensivecare.springeropen.com/articles/10.1186/2110-5820-1-45>

228-. A patient with left bundle branch block will go for dental procedure, regarding endocarditis prophylaxis:

- A. Amoxicillin before procedure
- B. No need

Answer: b

Explanation: antibiotic prophylaxis is indicated for the following high-risk cardiac conditions: prosthetic cardiac valve, history of infective endocarditis, congenital heart disease, cardiac transplantation recipients with cardiac valvular disease.

Reference: <http://emedicine.medscape.com/article/1672902-overview#a2>

229. Digoxin antidote

- A. Lidocaine
- B. Immune fab

Answer: b

Explanation: Digoxin Immune Therapy. Digoxin immune Fab (Digibind) is an immunoglobulin fragment that binds with digoxin. It is currently considered first-line treatment for significant dysrhythmias from digitalis toxicity.

Reference: emedicine.medscape.com/article/154336-treatment

smle ,2017

230- Patient with acute rheumatic fever show acute cardiac symptoms, rx?

A. IV penicillin.

B. Im steroid.

Answer: I think B

Explanation: The primary goal of treating an ARF attack is to eradicate streptococcal organisms and bacterial antigens from the pharyngeal region. Penicillin is the drug of choice A single parenteral injection of benzathine benzylpenicillin.

However, management of the current infection will probably not affect the course of the current attack. Antimicrobial therapy does not alter the course, frequency, or severity of cardiac involvement.

Moderate to severe carditis is usually an indication for corticosteroids. It seems clear that corticosteroids are superior to salicylates in rapidly resolving acute manifestations.

In severe carditis, therapy may be initiated with intravenous methylprednisolone.

Reference: <http://emedicine.medscape.com/article/333103-treatment>

231. 50 years old patient with third reading of persistent hypertension wasn't started on medication yet, lab shows high na of 147 and low k of 3 other parameters were normal what's most likely the diagnosis?

A. Essential hypertension

B. Hyperaldosteronism

Answer: b

Explanation: Primary hyperaldosteronism may be asymptomatic, particularly in its early stages. When symptoms are present, they may be related to hypertension (if severe), hypokalemia, or both.

Reference: <http://emedicine.medscape.com/article/920713-clinical>

232. Patient with cad angio done for him showed left coronary artery 90% stenosis and the right is 40%, what is the management

A. Left coronary bypass

B. Bypass all vessel

C. Stent

answer: a

Explanation: Check the reference for the classification and indication for cabg done by the american college of cardiology (acc) and the american heart association (aha) reference:

<http://emedicine.medscape.com/article/1893992-overview#a3>

233 A patient with renal function test abnormalities. Tests show beads on string appearance. What is the diagnosis?

- A. Renal artery disease
- B. Fibromuscular dysplasia

Answer: B

The string of beads sign is the description typically given to the appearance of the renal artery in fibromuscular dysplasia (FMD)

Reference: <https://radiopaedia.org/articles/string-of-beads-sign-renal-artery-1>

234 A Patient had an MI and was treated for that, after that he developed chest pain that worsen with movement and taking deep breath. On examination there was distant heart sounds and pericardial rub. What is the most ECG changes associated with this condition?

- A. ST changes
- B. PR prolongation

Answer: A

Explanation: A case of pericarditis ECG: initially diffuse elevated ST segments \pm depressed and shorten PR segment, the elevation in the ST segment is concave upwards >> 2-5 d later ST isoelectric with T wave flattening and inversion.

Reference: Toronto Notes.

235-60 Year-old has only HTN the best drug for him?!!

- A. Diuretics
- B. CCB

Answer: A

Explanation: according to JNC 8 Guidelines thiazide is not better than ACEI, CCB and ARB

Key Points for Practice

- In the general population, pharmacologic treatment should be initiated when blood pressure is 150/90 mm Hg or higher in adults 60 years and older, or 140/90 mm Hg or higher in adults younger than 60 years.
- In patients with hypertension and diabetes, pharmacologic treatment should be initiated when blood pressure is 140/90 mm Hg or higher, regardless of age.
- Initial antihypertensive treatment should include a thiazide diuretic, calcium channel blocker, ACE inhibitor, or ARB in the general nonblack population or a thiazide diuretic or calcium channel blocker in the general black population.
- If the target blood pressure is not reached within one month after initiating therapy, the dosage of the initial medication should be increased, or a second medication should be added.

Reference: <http://www.aafp.org/afp/2014/1001/p503.html>

Master the board USMLE step 2 CK

236- Ecg showed wide complex tachycardia, jvp: a cannon wave, diagnosis?

A. Vt

Answer: a

Explanation: This patient has ventricular tachycardia based on the presence of a wide complex tachycardia and cannon "a" waves in the jugular veins. Cannon "a" waves are due to the unsynchronized contraction of the ventricles and the atria.

Reference: <http://www.mdedge.com/ecardiologynews/dsm/10717/cardiology/differential-diagnosis-wide-qrs-complex-tachycardias>

237- Mi patient has big thrombus in left coronary artery what is drug that cause thrombolytic action?

Explanation: Thrombolytic therapy is indicated in patients with evidence of st-segment elevation mi (STEMI) or presumably new left bundle-branch block (LBBB) presenting within 12 hours of the onset of symptoms if there are no contraindications to fibrinolysis.

Reference: <http://emedicine.medscape.com/article/811234-overview#a3>

238- Patient presented with chest pain was diagnosed with stem. What is the other finding you can detect on his ecg?

Answer: inverted t wave

Explanation: T inversion ≥ 0.1 mV in two contiguous leads with prominent R-wave or R/S ratio ≥ 1

Reference: https://en.ecgpedia.org/wiki/Myocardial_Infarction

239- A patient presented with inferior mi. Which artery is affected?

Answer: right coronary artery (RCA)

Explanation: This part of the heart muscle lies on the diaphragm and is supplied of blood by the right coronary artery (RCA) in 80% of patients. In the remaining 20% the inferior wall is supplied by the ramus circumflexus (RCX).

Reference: https://en.ecgpedia.org/wiki/Inferior_MI

240-. SE of nitroglycerin:

A. Throbbing headache

Answer: A

smle ,2017

Explanation: common side effects of nitroglycerin: Headache, Hypotension, Tachycardia, Dizziness, Lightheadedness, Blurred vision, Flushing, N/V, Nervousness, Xerostomia

Reference: <http://reference.medscape.com/drug/nitrostat-nitroquick-nitroglycerin-sublingual-342280#4>

241-. Child with episodic of cyanotic lip with cold extremities, what is the diagnostic investigation: echocardiography to prevent cyanosis in chd?

A. Prostaglandin e

Answer: A

Explanation: initial treatment of transposition of the great arteries consists of maintaining ductal patency with continuous intravenous (IV) prostaglandin E1 (PgE1) infusion

Echocardiographic images should be diagnostic of transposition of the great arteries by demonstrating the bifurcating pulmonary artery arising posteriorly from the left ventricle in the parasternal long-axis view.

Reference: <http://emedicine.medscape.com/article/900574-workup#c9>

242. Atrial septal defect changes on ecg:

Explanation: Right axis deviation, mild right ventricular hypertrophy and RBBB.

Reference: Toronto notes

243. Asd (atrial septal defect) Clinical features mcq.

Explanation: clinical features of ASD are:

- Mild systolic ejection murmur at pulmonary area secondary to increased pulmonary blood flow
- Fixed split s2 (important)
- Diastolic flow "rumble" murmur across tricuspid valve area secondary to increased blood flow
- In advanced disease, signs of rvf may be seen

Reference: Step up to medicine

244. Signs of chronic stable angina?

Explanation: Chest pain or substernal pressure sensation that lasts less than 10 to 15 minute, gradual in onset, brought on by exertion or emotion, relieved with rest or nitroglycerin, pain does not change with breathing nor with body position.

Reference: Step up to medicine

245-. Patient present with typical symptoms of angina relieve by using sublingual drug what is the mechanism of action of this drug?

Explanation: It has a direct relaxant effect on vascular smooth muscles, and inhibition of platelet aggregation is another effect that is probably of therapeutic value. Both the relaxing effect on vascular smooth muscle and the effect on platelets are considered to be due to a stimulation of soluble guanylate cyclase by nitric oxide derived from the organic nitrate ester molecule through metabolization catalyzed by enzymes such as glutathione S-transferase, cytochrome P-450, and possibly esterases. The cyclic GMP produced by the guanylate cyclase acts via cGMP-dependent protein kinase. Ultimately, through various processes, the protein kinase lowers intracellular calcium; an increased uptake to and a decreased release from intracellular stores seem to be particularly important.

Reference: <https://www.ncbi.nlm.nih.gov/pubmed/7873467>

246. Cause of delayed arterial radiofemoral pulse:

Answer: **coarctation of aorta**

Explanation: radio-femoral delay is an important bedside diagnostic clue in Coarctation of aorta in a young hypertensive.

Reference: <http://notes.medicosnotes.com/2016/06/what-is-cause-of-radoradial-and.html>

247- Most common cause of HTN in Saudi Arabia.

Answer: **essential htn. in pediatrics renal**

Explanation: Primary or essential hypertension accounts for 90-95% of adult cases, and a small percentage of patients (2-10%) have a secondary cause. This percentage from Medscape I couldn't find a Saudi study.

Reference: <http://emedicine.medscape.com/article/241381-overview#a4>

248- Lipid profile of a patient shows high level and patient is on simvastatin, what to add?

Explanation: read (<http://emedicine.medscape.com/article/126568-treatment#d8>)

200. Scenario of a patient with chest pain that relieved when lying down and increase when lying forward with chest x-ray show the heart (globular like a ball) what is the dx? (I think there is a mistake in the q)

A. **Pericardial effusion**

Answer: **a**

Explanation: Cardiovascular symptoms in pericardial effusion can include the following:

- Chest pain, pressure, discomfort - Characteristically, pericardial pain may be relieved by sitting up and leaning forward and is intensified by lying supine.
- Light-headedness, syncope
- Palpitations

Findings in chest radiography include an enlarged cardiac silhouette (so-called water-bottle heart) and a pericardial fat stripe.

Reference: <http://emedicine.medscape.com/article/157325-workup#c9>

249- Ecg showing ventricular tachycardia the patient is unstable what is the management?

Explanation: Unstable patients with monomorphic VT should be immediately treated with synchronized direct current (DC) cardioversion, usually at a starting energy dose of 100 J (monophasic; comparable biphasic recommendations are not currently available). Unstable polymorphic VT is treated with immediate defibrillation. The defibrillator may have difficulty recognizing the varying QRS complexes; therefore, synchronization of shocks may not occur.

Reference: <http://emedicine.medscape.com/article/159075-treatment>

250. Aspirin in high dose cause hyperthermia through which mechanism:

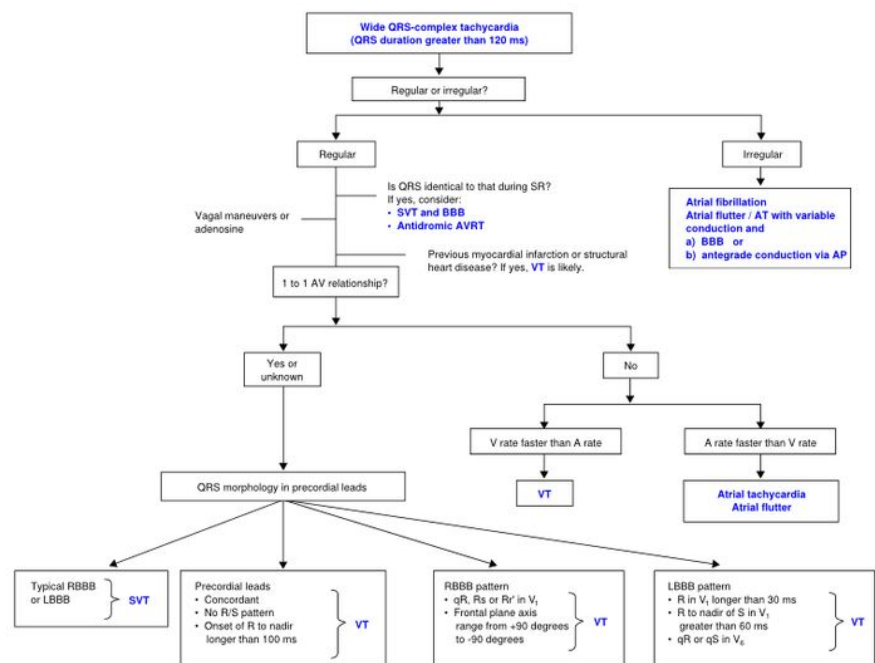
A. Aspirin and hyperthermia

Explanation: uncoupling of oxidative phosphorylation, leading to increased oxygen utilization and glucose demand, increased oxygen utilization and glucose demand, increased glyconeogenesis, and increased heat production

Reference: <https://www.ncbi.nlm.nih.gov/pubmed/364398>

251- Wide complex ECG

Answer:



Endocrinology

1. A female in her 20s, has DM and hypothyroidism, irregular menses No hx of immunodeficiency, no travel hx , present with recurrent itching & white adherent oral plaque and rash on her back., +ve mantoux test (PPD) , she was exposed to tb 4 years ago, immunoglobulin, WBC, RBCs all are normal; diagnosis;

- A. Chronic granulomatous disease
- B. Chronic mucocutaneous candidiasis
- C. DiGeorge syndrome
- D. Hyperglobulinemia (or hypo i don't remember)

Answer: B

Explanation: Chronic mucocutaneous candidiasis (CMCC) is a heterogeneous group of syndromes with common features including chronic noninvasive *Candida* infections of the skin, nails, and mucous membranes and associated autoimmune manifestations (most commonly endocrinopathies). It is caused by genetic faults in the immune system. The diagnosis of chronic mucocutaneous candidiasis (CMCC) is primarily based upon clinical features including chronic, noninvasive candidiasis of the skin and mucous membranes associated with autoimmune manifestations, most commonly endocrinopathies.

Reference: https://www.uptodate.com/contents/chronic-mucocutaneous-candidiasis?source=search_result&search=chronic%20mucocutaneous%20candidiasis&selectedTitle=1~28#H29999189

2. Pt with constipation increase weight, thinning of hair?

A- Hypothyroidism

Answer: A

Explanation: Hypothyroidism: Presents with weakness, fatigue, cold intolerance, constipation, weight gain, depression, hair loss, menstrual irregularities, myopathy, and hoarseness. Examination reveals dry, cold, puffy skin accompanied by edema, bradycardia, and delayed relaxation of deep tendon reflexes.

Reference: First Aid step 2 page: 93 Ninth edition.

3. Female presents with weight loss What clinical finding you will see?

A- buffalo hump

B- skin hyperpigmentations

C- cutaneous stria

Answer: B

Explanation: Weakness, fatigue, and anorexia with weight loss are common. Hyperpigmentation (due to ↑ ACTH secretion) is seen in Addison disease.

Reference: First Aid step 2 page: 106 Ninth edition.

4. In DKA which ketone is predominantly found in urine?

A- Acetone

smle ,2017

B-Acetoacetate

C-Beta-hydroxybutyrate

Answer: B

Explanation: Ketonuria is most commonly assessed by using commercially available urine reagent strips (Multistix 10SG Urine Reagent Strips; Bayer Corporation, Elkhart, Illinois, USA). This methodology relies on a nitroprusside reaction causing a color change as an indicator of the presence of ketones. Acetoacetic acid and acetone can be detected this way, but not BHA. Nitroprusside methodology has much higher affinity for AcAa than acetone and since acetone does not contribute to the acidosis, the assumption can be made that urine ketone bodies detected by the nitroprusside reaction are mainly AcAa.

Reference:

- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3058661/>
- http://fitsweb.uchc.edu/student/selectives/TimurGraham/Ketoacidosis_DKA.html
- <Http://patient.info/doctor/urine-dipstick-analysis>
- <http://bestpractice.bmj.com/best-practice/monograph/162/diagnosis/step-by-step.html>

5. Why DM decrease wound healing?

A-Decrease immunity

B-Increase bacteria due to increase glucose

C- Decrease phagocytosis

Answer: C

Explanation: Over 100 known physiologic factors contribute to wound healing deficiencies in individuals with diabetes. These include decreased or impaired growth factor production, angiogenic response, macrophage function, collagen accumulation, epidermal barrier function, quantity of granulation tissue, keratinocyte and fibroblast migration and proliferation, number of epidermal nerves, bone healing, and balance between the accumulation of ECM components and their remodeling by MMPs. Wound healing occurs as a cellular response to injury and involves activation of keratinocytes, fibroblasts, endothelial cells, macrophages, and platelets. Many growth factors and cytokines released by these cell types are needed to coordinate and maintain healing.

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1857239/>

6. young female came to your office complaining of swelling in front of her parotid gland. No tenderness, no secretion coming out, what is the most likely diagnosis?

a. Parotid CA

b. Sialadenitis

c. Mumps

d. L.N enlargement

Answer: A

Explanation: The most common presentation is a painless, asymptomatic mass; >80% of patients present because of a mass in the posterior cheek region. While Mumps is an illness caused by the mumps virus. It starts with Fever, Headache, Muscle aches, Tiredness and Loss of appetite.

After that, the salivary glands under the ears or jaw become swollen and tender. The swelling can be on one or both sides of the face. Symptoms last 7 to 10 days.

Signs and symptoms of sialadenitis may include fever, chills, and unilateral pain and swelling in the affected area. The affected gland may be firm and tender, with redness of the overlying skin.

Pus may drain through the gland into the mouth.

Reference:

- <http://emedicine.medscape.com/article/1289616-overview#a7>
smle ,2017

- <https://medlineplus.gov/mumps.html>
- <https://rarediseases.info.nih.gov/diseases/7638/sialadenitis>

7. Hypothyroidism pt on dose of thyroxine 75 ... Missed the dose 2 days because he does not have the drug, lab result show high TSH and normal t4 ... What dose should be taken?

- A. 25
- B. 50
- C. 75
- D. 100

Answer: c

Explanation: If you miss a dose of this medicine, take it as soon as possible. However, if it is almost time for your next dose, skip the missed dose and go back to your regular dosing schedule. Do not double doses.

Reference: <http://www.mayoclinic.org/drugs-supplements/levothyroxine-oral-route/proper-use/drg-20072133>

8. Female patient with high prolactin, what to exclude?

- A. Thyroid disease
- B. Pituitary tumors

Answer: B

Explanation: Elevated prolactin levels, most commonly due to a pituitary adenoma. Prolactinoma is the most common functioning pituitary tumor. Other causes include pituitary stalk compression from other masses (eg, craniopharyngioma, meningioma, nonsecreting pituitary tumor), drugs (eg, dopamine antagonists), renal failure, and cirrhosis.

Reference: FAU 2 page 103 9th edition.

9. Patient came with cough and she takes an anti-cholesterol medication (statins), she started it 3 weeks ago, what should the doctor monitor?

- A. Liver function test

Answer: A

Explanation: Until recently, guidelines have recommended that liver enzymes should be monitored before statin treatment and regularly during treatment. FDA in 2012 changed the recommendation regarding control of liver enzymes during statin therapy. The new recommendation says that hepatic function test should be performed before starting therapy and as clinically indicated thereafter, not as a routine monitoring.

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3751280/>

10. Pt k/c of DM with uncontrolled blood sugar... With figure shows high at the 6 am what to do?

- A. ↑ long acting night insulin
- B. ↑ short acting night insulin
- C. ↑ long acting morning insulin
- D. ↑ short acting morning insulin

Answer: A

Explanation:

Dawn phenomenon is the term given to an increase in blood sugar in the morning caused by the body's release of certain hormones. It is a relatively common phenomenon amongst diabetics.

Although often confused, Dawn Phenomenon is different from Chronic Somogyi Rebound, because it is not brought on by nocturnal hypoglycemia.

Dawn effect occurs when hormones (including cortisol, glucagon, epinephrine) are released by the body, causing the liver to release glucose.

The dawn effect therefore describes abnormally high early morning increases in blood glucose:

- Usually abnormally high blood glucose levels occur **between 8 and 10 hours** after going to sleep for people with diabetes

Researchers think that the release of the above-mentioned hormones may give rise to a brief period of insulin resistance which would also explain a rise in blood glucose levels.

Typically dawn phenomenon is treated by avoiding intake of carbohydrates at bedtime, adjusting how much insulin or medication is administered, switching to other medications or using an insulin pump.

Reference: <http://www.diabetes.co.uk/blood-glucose/dawn-phenomenon.html>

11. Single Small thyroid nodule, investigations revealed an Increase in iodine uptake, what is the best treatment?

- A. Conservative
- B. Antithyroid drug
- C. Iodine radiotherapy

Answer: Depends on the Scenario

Explanation: **Benign thyroid nodules** — Benign thyroid nodules usually develop as a result of overgrowth of normal thyroid tissue. Surgery is **not** usually recommended, and the thyroid nodule can be monitored over time. If the thyroid nodule grows, a repeat biopsy or surgery may be recommended. Some surgeons recommend excision of nodules over 4 cm.

Autonomous ("hot") thyroid nodules — Some thyroid nodules produce thyroid hormone, similar to the thyroid gland, but do not respond to the body's hormonal controls. These nodules are called autonomous thyroid nodules. They are almost always benign, but they can overproduce thyroid hormone, leading to hyperthyroidism. If you have an autonomous nodule and high levels of thyroid hormone, you will usually be advised to undergo surgery to remove the thyroid nodule, or undergo radioactive iodine treatment to destroy the nodule.

If you have an autonomous nodule and normal thyroid function or minimal hyperthyroidism, the appropriate treatment will depend on your age and other health factors.

- In young adults, autonomous nodules may be monitored over time.
- In older adults, radioactive iodine treatment or surgery may be recommended because high thyroid hormone levels pose a risk of an abnormal heart rhythm (atrial fibrillation) and bone loss (osteoporosis).

Reference: <https://www.uptodate.com/contents/thyroid-nodules-beyond-the-basics#H8>

12. Patient with pheochromocytoma and high catecholamine in urine Initial medical management

- A. ACEI
- B. aldosterone blocker
- C. Alpha antagonist.

Answer: C

Explanation: **MEDICAL PREPARATION FOR SURGERY** — Once a pheochromocytoma is diagnosed, all patients should undergo a resection of the pheochromocytoma following appropriate medical preparation.

Combined alpha and beta-adrenergic blockade — Combined alpha and beta-adrenergic blockade is one approach to control blood pressure and prevent intraoperative hypertensive crises.

smle ,2017

Alpha-adrenergic blockade — An alpha-adrenergic blocker is given 10 to 14 days preoperatively to normalize blood pressure and expand the contracted blood volume. A longer duration of preoperative alpha-adrenergic blockade is indicated in patients with recent myocardial infarction, catecholamine cardiomyopathy, refractory hypertension, and catecholamine-induced vasculitis. Phenoxybenzamine is the preferred drug for preoperative preparation to control blood pressure and arrhythmia in most centers in the United States. It is an irreversible, long-acting, nonspecific alpha-adrenergic blocking agent.

Beta-adrenergic blockade — After adequate alpha-adrenergic blockade has been achieved, beta-adrenergic blockade is initiated, which typically occurs two to three days preoperatively. The beta-adrenergic blocker should **never** be started first because blockade of vasodilatory peripheral beta-adrenergic receptors with unopposed alpha-adrenergic receptor stimulation can lead to a further elevation in blood pressure.

Reference: https://www.uptodate.com/contents/treatment-of-pheochromocytoma-in-adults?source=search_result&search=pheochromocytoma&selectedTitle=2~150#H2

13. K/c of DM pt on Glipizide want to go for elective surgery you want to control his blood sugar during the surgery what to add?

- A. Insulin **
- B. Metformin
- C. Sulfonylurea

Answer: A

Explanation: Type 2 diabetes treated with oral hypoglycemic agents/noninsulin injectables — Patients with type 2 diabetes who take oral hypoglycemic drugs or noninsulin injectables (eg, glucagon-like peptide-1 [GLP-1] analogs exenatide, liraglutide, albiglutide, dulaglutide) are advised to continue their usual routine of antidiabetic medications until the morning of surgery. On the morning of surgery, they should hold their oral hypoglycemic and noninsulin injectable drugs.

Most patients with good glycemic control (glycated hemoglobin [A1C] <7.0 percent [53 mmol/mol]) on oral or noninsulin injectable agents will not need insulin for short surgical procedures. Capillary “fingerstick” blood glucose should be monitored every two hours, using a blood glucose meter. For patients who develop hyperglycemia, supplemental short- or rapid-acting insulin may be administered subcutaneously (typically every six hours), based on frequently (every one to two hours) measured glucose levels which are often obtained on capillary “fingerstick” samples. In patients who are critically ill, are on vasopressor agents, or hypotensive, venous or arterial blood and laboratory testing should be used instead of fingerstick samples and a blood glucose meter.

Reference: <https://www.uptodate.com/contents/perioperative-management-of-blood-glucose-in-adults-with-diabetes-mellitus?Source=preview&search=%252525252fcontents%252525252fsearch&anchor=h20%252523h20#H9>

14. A male patient known case of HTN on ACEi but with poor control, which drug you'll add?

- A. Thiazide
- B. Furosemide
- C. Vasodilator

Answer: C (if they mean by vasodilators Calcium Channel Blocker)

Explanation: If blood pressure is not controlled by step 1 treatment, offer step 2 treatment with a CCB in combination with either an ACE inhibitor or an ARB, if a CCB is not suitable for step 2
smle ,2017

treatment, for example because of oedema or intolerance, or if there is evidence of heart failure or a high risk of heart failure, offer a thiazide-like diuretic.

Reference: <https://www.nice.org.uk/guidance/cg127/chapter/1-Guidance#choosing-antihypertensive-drug-treatment-2>

15. Cushing case which skin manifestation is associated with it

- A) Vitiligo
- B) Telangiectasia
- C) Acropathy
- D) Something Derma

Answer: B

Explanation:

Signs and symptoms appearing in the skin include:

Easy bruising (purpura) and purple striae of the skin over the abdomen, buttocks and thighs, Telangiectatic cheeks (broken capillaries), Fragile skin and poor wound healing, Acne and hirsutism (excessive hair growth in women on their faces, necks, chests, abdomens and thighs) Women may also show clitoral hypertrophy and male-pattern baldness

Reference: <Http://emedicine.medscape.com/article/2233083-clinical#b3>

16. A patient presented with high parathyroid hormone and high calcium what is the diagnosis?

- a. primary parathyroid
- b. secondary parathyroid

Answer: A

Explanation:

Lab results in 1° hyperparathyroidism reveal hypercalcemia, hypophosphatemia, and hypercalciuria. Intact PTH is inappropriately ↑ relative to total and ionized calcium

Reference: First Aid page 99 9th edition.

17. Case of DKA with metabolic acidosis. What is the early mechanism to restore blood pH?

- A. Excretion of CO₂ through lungs.
- B. Excretion of lactic acid through kidneys.

Answer: A

Explanation: The development of metabolic acidosis will normally generate a compensatory respiratory response. The reduction in the serum bicarbonate and pH caused by the metabolic acidosis results in hyperventilation and a reduction of the pCO₂. The respiratory compensation for metabolic acidosis generates a reproducible and relatively linear relationship between the arterial pCO₂ and bicarbonate concentration. This respiratory response to metabolic acidosis begins within the first 30 minutes and is complete by 12 to 24 hours.

Reference: https://www.uptodate.com/contents/approach-to-the-adult-with-metabolic-acidosis?source=search_result&search=metabolic%20acidosis&selectedTitle=1~150

18. Old man with DM, has redness in calf area, raised and painful, tender:
smle ,2017

a- cellulitis

b- diabetic neuropathy

Answer: A

Explanation: cellulitis is commonly used to indicate a nonnecrotizing inflammation of the skin and subcutaneous tissues, usually from acute infection. Cellulitis usually follows a breach in the skin, although a portal of entry may not be obvious; the breach may involve microscopic skin changes or invasive qualities of certain bacteria.

Signs and symptoms

Non-purulent cellulitis is associated with the 4 cardinal signs of infection, as follows:

- Erythema, Pain, Swelling and Warmth.

Treatment of cellulitis is as follows:

- Antibiotic regimens are effective in more than 90% of patients
- All but the smallest of abscesses require drainage for resolution, regardless of the pathogen
- Drainage only, without antibiotics, may suffice if the abscess is relatively isolated, with little surrounding tissue involvement

Reference: <http://emedicine.medscape.com/article/214222-overview>

19. 50 years old patient with third reading of persistent hypertension wasn't started on medication yet, lab shows high Na of 147 and low k of 3 other parameters were normal What's most likely the diagnosis?

a. Essential hypertension

b. primary Hyperadrenalism

c. Secondary hypertension

Answer: B

Explanation: In the case of primary hyperaldosteronism, there is high blood pressure in association with a low potassium level. The low potassium level is either found on routine lab testing or because of symptoms of muscular weakness or diabetes insipidus from the hypokalemia.

Reference: Master the board page 123.

<http://emedicine.medscape.com/article/127080-workup#c8>

20. old patient with poor control of DM1, complains of SOB and hemoptysis. x-ray show lung consolidation. culture show non-septate fungal hypha. what is the diagnosis?

A. Aspergillus

B. Candida

C. Zygomycetes

Answer: C

Explanation: Mucormycosis can manifest as a spectrum of diseases, depending on the portal of entry and the predisposing risk factors of the patient. The 5 major clinical forms include rhinocerebral mucormycosis, pulmonary mucormycosis, abdominopelvic and gastric (gastrointestinal) mucormycosis, primary cutaneous mucormycosis, and disseminated mucormycosis.

Most persons who develop mucormycosis are immunocompromised.

Diagnosis requires a high index of suspicion, a host with appropriate risk factors, and evidence of tissue invasion with the characteristic appearance of broad nonseptate hyphae with right-angle branches.

Reference: <http://emedicine.medscape.com/article/232465-workup>

21. Why is inulin used to measure GFR?

smle ,2017

A- Freely filtered by glomeruli

Answer: A

Insulin clearance is an accurate measure of the rate of filtration through the renal glomeruli, because inulin filters freely with water and is neither excreted nor reabsorbed through tubule walls. Inulin is not a normal constituent of plasma and must be infused continuously to maintain a steady plasma concentration and a steady rate of urinary excretion during the measurement. Inulin clearance in a normal adult person is about 120 mL/min.

Reference: <https://www.drugs.com/dict/inulin-clearance.html>

22. 20 yrs old girl her parent have dyslipidemia and she denies if have dyslipidemia lipid profile showing high triglyc,cholesterol,high LDL ,low HDL what is the best to check next ?

A. GH

B. TSH

C. FSH

D. ACTH

Answer: D

Explanation:

Lipid Profile

Subclinical Hypothyroidism is associated with increased levels of TC and LDL-C. In addition, some studies have shown that SH dyslipidemia may also be accompanied by increased TGs and decreased HDL-C levels.

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3109527/>

23. Best Type of carbohydrate for Diabetic pt & " Which type of Carbohydrates is better for diabetic patient":

A. Polysaccharides

Explanation: Polysaccharides, a type of carbohydrate that includes starch and cellulose, may benefit people with diabetes because they help retard absorption of glucose.

Reference: <http://www.sciencedaily.com/releases/2009/07/090728172604.htm>

24) patient for surgery known case of DM2 on glimepiride you will shift patient to which drug during and after surgery?

A- insulin

B- metformin

Answer: A

Explanation: Type 2 diabetes treated with oral hypoglycemic agents/noninsulin injectables — Patients with type 2 diabetes who take oral hypoglycemic drugs or noninsulin injectables (eg, glucagon-like peptide-1 [GLP-1] analogs exenatide, liraglutide, albiglutide, dulaglutide) are advised to continue their usual routine of antidiabetic medications until the morning of surgery. On the morning of surgery, they should hold their oral hypoglycemic and noninsulin injectable drugs.

Most patients with good glycemic control (glycated hemoglobin [A1C] <7.0 percent [53 mmol/mol]) on oral or noninsulin injectable agents will not need insulin for short surgical procedures. Capillary “fingerstick” blood glucose should be monitored every two hours, using a blood glucose meter. For patients who develop hyperglycemia, supplemental short- or rapid-acting insulin (table 1) may be administered subcutaneously (typically every six hours), based on frequently (every one to two hours) measured glucose levels which are often obtained on capillary “fingerstick” samples (table 2) (see 'Correction insulin' below). In patients who are critically ill, are on vasopressor agents, or hypotensive, venous or arterial blood and laboratory testing should be used instead of fingerstick samples and a blood glucose meter.

Reference: https://www.uptodate.com/contents/perioperative-management-of-blood-glucose-in-adults-with-diabetes-mellitus?source=search_result&search=perioperative-management-of-blood-glucose-in-adults-with-diabetes-%20mellitus&selectedTitle=1~150

25. Diabetic patient has history of weakness and dizziness. what anti-diabetes can cause it?

- A. Sulfonylurea (glipizide)
- B. Metformin
- C. Thiazolidinediones (rosiglitazone)
- D. Insulin

Answer: A

Explanation: Hypoglycemia is the most common side effect of sulfonylureas.

Reference: https://www.uptodate.com/contents/sulfonylureas-and-meglitinides-in-the-treatment-of-diabetes-mellitus?source=search_result&search=sulfonylureas-and-meglitinides-in-the-treatment-of-diabetes%20mellitus&selectedTitle=1~150

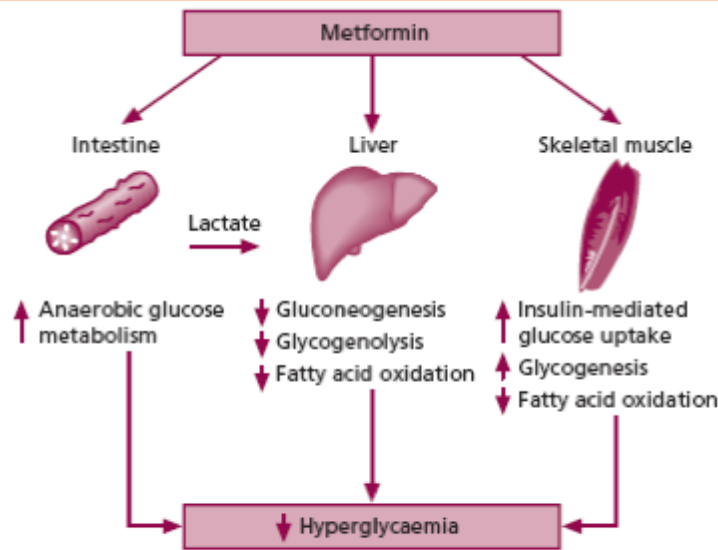
26. What is the mechanism of action of metformin on the cellular level?

The molecular mechanism of metformin? Pharmacodynamics of metformin, stimulation or inhibition of which enzyme? Metformin work in which enzymes? Effect of metformin on DM? Case about a diabetic who takes metformin which resulted in correction of ha1c question metformin lowers glucose by? <<< all forms of Qs

- A. decrease Muscle uptake of glucose
- B. increase Muscle gluconeogenesis
- C. Enhance muscle use of fatty acid oxidation

Answer: ??

Explanation: Metformin is also frequently described as an insulin sensitizer leading to reduction in insulin resistance and significant reduction of plasma fasting insulin level. The improvement in insulin sensitivity by metformin could be ascribed to its positive effects on insulin receptor expression and tyrosine kinase activity. Metformin may also exert its beneficial metabolic actions in part through the modulation of multiple components of the incretin axis. Maida *et al.* have indeed recently reported that metformin acutely increases plasma levels of glucagon-like peptide 1 (GLP-1) and induces islet incretin receptor gene expression through a mechanism that is dependent on peroxisome proliferator-activated receptor (PPAR)- α . However, a growing body of evidence from clinical studies and animal models suggests that the primary function of metformin is to decrease hepatic glucose production, mainly by inhibiting gluconeogenesis



Adapted with permission from Bailey CJ, Feher MD, Therapies for Diabetes, Sherborne Gibbs, Birmingham UK, 2004

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3398862/>

27. Most common cause of DKA in adult:

- A. Missing insulin
- B. Dietary
- C. Increase physical activity

Answer: A

Explanation: The most common scenarios for diabetic ketoacidosis (DKA) are underlying or concomitant infection (40%), missed or disrupted insulin treatments (25%), and newly diagnosed, previously unknown diabetes (15%). Other associated causes make up roughly 20% in the various scenarios. The most common precipitating factor is infection, followed by noncompliance with insulin therapy.

Reference: <http://emedicine.medscape.com/article/118361-overview#a5>
<http://www.aafp.org/afp/2005/0501/p1705.html#afp20050501p1705-t2>

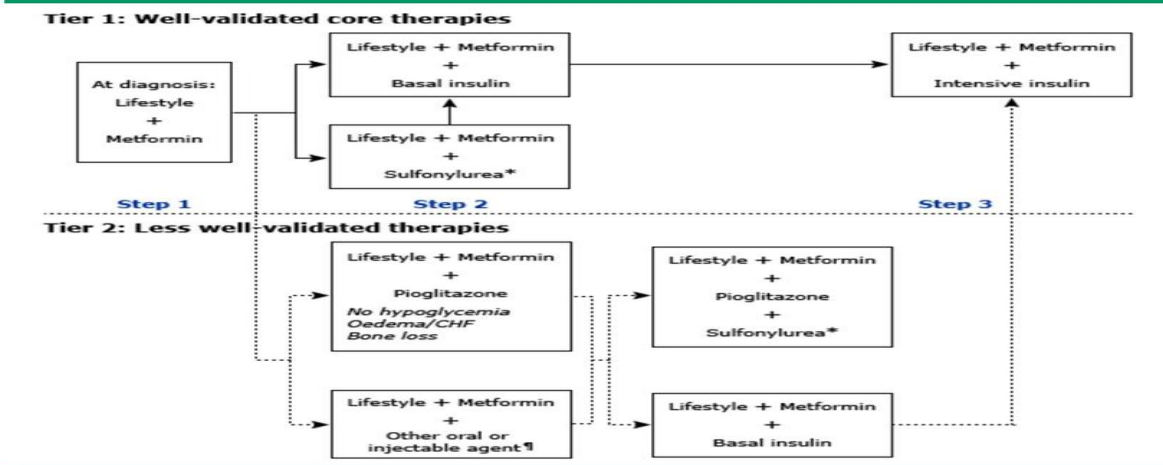
28. Diabetic patient who is allergic to sulfa drugs, on metformin but it's not controlled. What will you add to control his diabetes?

- A. chlorpropamide
- B. glyburide
- C. rosiglitazone

Answer: C

Explanation:

Management of type 2 diabetes



Algorithm for the metabolic management of type 2 diabetes; reinforce lifestyle interventions at every visit and check A1C every three months until A1C is <7% and then at least every six months. The interventions should be changed if A1C is $\geq 7\%$.

CHF: congestive heart failure; A1C: glycated hemoglobin; GLP-1: glucagon-like peptide-1; DPP-4: dipeptidyl peptidase-4; SGLT2: sodium-glucose co-transporter 2.

* Sulfonylureas other than glybenclamide (glyburide) or chlorpropamide.

Reference: https://www.uptodate.com/contents/initial-management-of-blood-glucose-in-adults-with-type-2-diabetes-mellitus?source=search_result&search=diabetes%20mellitus%20treatment&selectedTitle=1~150#H11

29. Obese patient recently diagnosed to have DM II. He is following a diabetic diet regimen and he exercises regularly. When he came to you in the next visit... His blood sugar was high and he gained 5 kgs... He was also complaining of thirst and hunger, what would you give him?

A. Metformin

Answer: A

Explanation: In the absence of specific contraindications, we suggest metformin as initial therapy in most patients with glycated hemoglobin (A1C) at or close to target. For most patients, we suggest initiating metformin at the time of diabetes diagnosis, along with consultation for lifestyle intervention.

Reference: https://www.uptodate.com/contents/initial-management-of-blood-glucose-in-adults-with-type-2-diabetes-mellitus?source=see_link#H6062746

30. What causes polyuria in DM?

A. Increase glucose in urine

B. Increase glucose in serum

C. Increase ketones in serum

Answer: A

Explanation: Polyuria due to a glucose-induced osmotic diuresis is common in patients with hyperglycemia. This diuresis usually abates when the plasma glucose level approaches its renal threshold.

Reference: <https://www.ncbi.nlm.nih.gov/pubmed/9398128>

31. Young patient has hypertension, high Na and low K. What is the treatment?

A. Spironolactone

Answer: A

Explanation: This patient has hyperaldosteronism.

Surgical resection for adrenal tumors (after correction of BP and potassium).

Treat bilateral hyperplasia with an aldosterone receptor antagonist (eplerenone preferred over spironolactone as has fewer side effects).

Reference: First Aid page 108 9th edition.

32. about pathophysiology of DM 1 I Don't remember the options?

Answer: Type 1 DM is the culmination of lymphocytic infiltration and destruction of insulin-secreting beta cells of the islets of Langerhans in the pancreas.

Reference: <http://emedicine.medscape.com/article/117739-overview#a3>

33. 70 years old female patient with osteoporosis what is the treatment?

A. ESTROGEN

B. BIOPHOSPHATE

Answer is B

Explanation: Initial therapy — For most postmenopausal women with osteoporosis, we suggest oral bisphosphonates as first-line therapy. We prefer oral bisphosphonates as initial therapy because of their efficacy, favorable cost, and the availability of long-term safety data.

Reference: https://www.uptodate.com/contents/overview-of-the-management-of-osteoporosis-in-postmenopausal-women?source=search_result&search=overview-of-the-management-of-osteoporosis-in-postmenopausal%20women&selectedTitle=1~150#H16851025

34. 52 years old woman recently diagnosed to have DM came with high ketones and hyperglycemia. She was treated for it but she developed DKA again. The doctor is confused whether she have type 1 or 2 DM. What test should be ordered?

a. Insulin

b. HbA1c

c. C-peptide

Answer: C

Explanation: Differentiating Type 1 and Type 2 diabetes an important clinical role of C-peptide is differentiating between Type 1 and Type 2 diabetes. Utility is greatest in long-standing diabetes as there may be a substantial overlap of C-peptide levels between Type 1 and Type 2 diabetes at the time of diagnosis.

Reference: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3748788/>

35. What hormone increases body cells sensitivity and response to insulin?

a. Leptin

b. Lipase

Answer: A

Explanation: Leptin and insulin directly regulate each other: leptin inhibits insulin; insulin stimulates leptin synthesis and secretion. Leptin also increases insulin sensitivity, not only by decreasing adiposity and lipotoxicity, but also insulin-independent action, both centrally and peripherally. Leptin also decreases hepatic production of glucose, contributing to its glucose-lowering effects.

Reference: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3602983/>

36. 50 years old woman with no issues except for HgA1c 7.3, LDL and triglyceride are high. What is the next test you want to order?

- a. TST
- b. LFT

Answer: B

Explanation: In diabetic patients with clinical CVD or over age 40 years, statin therapy should be added to lifestyle intervention regardless of baseline lipid levels.

Until recently, guidelines have recommended that liver enzymes should be monitored before statin treatment and regularly during treatment. FDA in 2012 changed the recommendation regarding control of liver enzymes during statin therapy. The new recommendation says that hepatic function test should be performed before starting therapy and as clinically indicated thereafter, not as a routine monitoring.

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3751280/>
https://www.uptodate.com/contents/overview-of-medical-care-in-adults-with-diabetes-mellitus?source=see_link#H15

37. What is the best anti-diabetic regime that resembles the normal physiology?

- a. Lispro&glargine
- b. NPH &glargine
- c. Lispro& NPH

Answer: A

Explanation:

Compared with NPH insulin + unmodified human insulin, the combination of insulin glargine with a rapid-acting insulin analogue as multiple-injection therapy for Type 1 diabetes improves overall glycemic control as assessed by HbA1c and 24-h plasma glucose monitoring to a clinically significant degree, together with a reduction in nocturnal hypoglycemia.

Single injection of insulin glargine leads to a smooth 24-hour time-action profile with no undesirable pronounced peaks of activity. In clinical trials, this profile has been associated with at least equivalent, if not better, glycemic control than other traditional basal insulins and a significantly lower rate of overall and nocturnal hypoglycemia

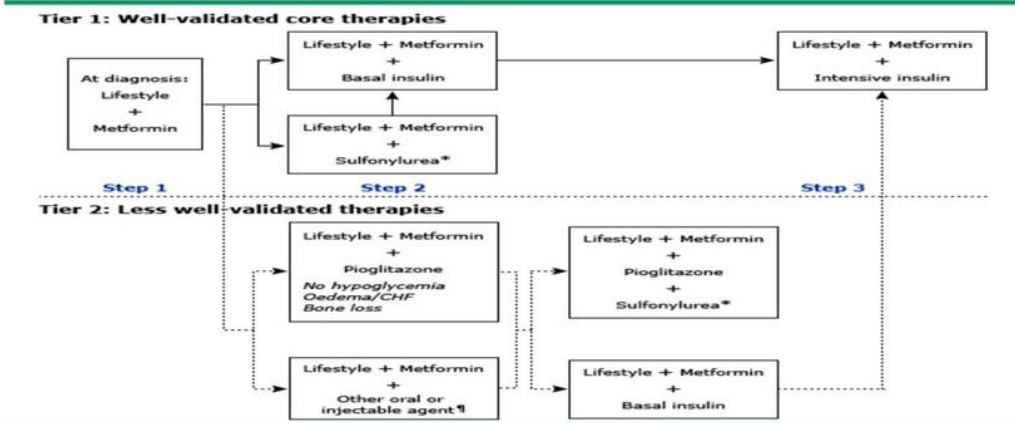
Reference:

<https://www.ncbi.nlm.nih.gov/pubmed/16492212>
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1993975/>

38. DM on metformin and gliclazide ... she is not well controlled ... which drug u will add?

- A- Acarbose
- B- pioglitazone

Management of type 2 diabetes



Algorithm for the metabolic management of type 2 diabetes; reinforce lifestyle interventions at every visit and check A1C every three months until A1C is <7% and then at least every six months. The interventions should be changed if A1C is $\geq 7\%$.

CHF: congestive heart failure; A1C: glycated hemoglobin; GLP-1: glucagon-like peptide-1; DPP-4: dipeptidyl peptidase-4; SGLT2: sodium-glucose co-transporter 2.

* Sulfonylureas other than glyburide (glyburide) or chlorpropamide.

Answer: B

Reference: https://www.uptodate.com/contents/initial-management-of-blood-glucose-in-adults-with-type-2-diabetes-mellitus?source=search_result&search=diabetes%20mellitus%20treatment&selectedTitle=1~150#H11

39. A patient with signs and symptoms of Cushing syndrome. What is the best next investigation?
- Brain MRI
 - Adrenal scan
 - Adrenal MRI

Answer: A

Explanation: Primary adrenal disease versus ACTH-secreting tumor — The first step in the evaluation is to determine whether the hypercortisolism is adrenocorticotrophic hormone (ACTH)-dependent (ie, due to a pituitary or nonpituitary ACTH-secreting tumor), or ACTH-independent (ie, due to an adrenal source) by measuring plasma ACTH. In patients with adrenocorticotrophic hormone (ACTH)-dependent Cushing's syndrome, the final stage of the diagnostic evaluation is to determine the source of ACTH secretion. The great majority of these patients have a pituitary corticotroph adenoma (Cushing's disease).

In adults, 80% of CS is due to ACTH-dependent causes and 20% due to adrenal causes. Since the majority of patients with ACTH-secreting tumors have a pituitary lesion (often very small), a MRI of the pituitary gland with gadolinium enhancement is always the initial approach.

References:

<http://www.ncbi.nlm.nih.gov/pubmed/18209870>

https://www.uptodate.com/contents/establishing-the-cause-of-cushings-syndrome?source=see_link

40. Patient known case of Diabetes Type 2 suffer from recurrent hypoglycemia. Which drug responsible? diabetic patient come with fatigue and drowsiness, which drug group responsible for that?

a. Sulphonylureas

Answer: A

Explanation: Hypoglycemia is the most common side effect of sulfonylureas.

Reference: https://www.uptodate.com/contents/sulfonylureas-and-meglitinides-in-the-treatment-of-diabetes-mellitus?source=search_result&search=sulfonylureas-and-meglitinides-in-the-treatment-of-diabetes%20mellitus&selectedTitle=1~150

Davidson's.

41. papillary thyroid ca mostly associated with which of the following?

A-Hürthle cell

Answer: ???

Explanation: Hürthle cell carcinoma of the thyroid gland is an unusual and relatively rare type of differentiated thyroid cancer. Hürthle cell cancer accounts for only about 3-10% of all differentiated thyroid cancers; therefore, few institutions have extensive experience with Hürthle cell neoplasms. According to the World Health Organization (WHO), these neoplasms are considered a variant of follicular carcinoma of the thyroid and are referred to as follicular carcinoma, oxyphilic type.

Papillary thyroid cancer histological finding:

The thyrocytes are large and show an abnormal nucleus and cytoplasm with several mitoses. In some cases, the thyrocytes may have so-called "Orphan Annie eyes," that is, large round cells with a dense nucleus and clear cytoplasm. Another typical feature of this cancer is the presence of psammoma bodies, probably the remnants of dead papillae.

Reference: <http://emedicine.medscape.com/article/282276-workup#c10>

<http://emedicine.medscape.com/article/279462-overview>

42. (long scenario) 55-year-old known diabetic patient came for checkup. What is the earliest effect of Diabetes Mellitus on the kidney?

A. Hydronephrosis with ↑ protein excretion.

B. Hydronephrosis with ↓ protein excretion.

C. Sclerosis with ↑ protein excretion.

D. Sclerosis with ↓ protein excretion.

Answer: C

Explanation: The key pathophysiologic event in diabetic nephropathy is basement membrane damage. With renal damage, there is progressive thickening of the basement membrane, pathologic change in mesangial and vascular cells, formation of AGEs, accumulation of polyols via the aldose reductase pathway, and activation of protein kinase C. Passage of macromolecules through the basement membrane may also activate inflammatory pathways that contribute to the damage secondarily.

The renal hemodynamic abnormality is similar in type 1 and type 2 diabetes. An early physiologic abnormality is glomerular hyperfiltration associated with intraglomerular hypertension. This is accompanied by the onset of microalbuminuria, the first practical evidence of renal involvement in diabetes.

Table 13. Stages of Diabetic Progressive Glomerulosclerosis

Stage 1	Stage 2	Stage 3	Stage 4
<ul style="list-style-type: none"> • ↑ GFR (120-150%) – compensatory hyperfiltration • ± slightly increased mesangial matrix 	<ul style="list-style-type: none"> • Detectable microalbuminuria (0-300 mg/24 h) • Albumin-Creatinine ratio (ACR) 2.0–20 mg/mmol in men (18-180 mg/d), • ACR 2.8-28 mg/mmol in women (25-250 mg/d) • ↑ mesangial matrix 	<ul style="list-style-type: none"> • Macroalbuminuria (>300 mg/24 h) • ACR in men >20 mg/mmol, (>180 mg/d) • ACR in women >28 mg/mmol (>250 mg/d) • Proteinuria (+ve urine dipstick) • Normal GFR • ↑↑↑ mesangial matrix 	<ul style="list-style-type: none"> • ↑ proteinuria (>500 mg/24 h) • ↓ GFR • <20% glomerular filtration surface area present • Sclerosed glomeruli

Reference: <http://journal.diabetes.org/clinicaldiabetes/v18n12000/Pg7.htm>

43. What is the difference between type I&II DM?

a. Endogenous insulin secretion

b. Weight

Answer: A

Explanation: Type 2 diabetes mellitus consists of array of dysfunctions characterized by hyperglycemia and resulting from the combination of resistance to insulin action, inadequate insulin secretion, and excessive or inappropriate glucagon secretion. While Type 1 diabetes is a chronic illness characterized by the body's inability to produce insulin due to the autoimmune destruction of the beta cells in the pancreas.

Reference:

<http://emedicine.medscape.com/article/117739-overview>

<http://emedicine.medscape.com/article/117853-overview>

Comparison of type 1 and 2 diabetes		
Feature	Type 1 diabetes	Type 2 diabetes
Onset	Sudden	Gradual
Age at onset	Any age (mostly young)	Mostly in adults
Body habitus	Thin or normal	Often obese
Ketoacidosis	Common	Rare
Autoantibodies	Usually present	Absent
Endogenous insulin	Low or absent	Normal, decreased or increased
Concordance in identical twins	50%	90%
Prevalence	Less prevalent	More prevalent - 90 to 95% of U.S. diabetics

an

44. Case of polyuria, polydipsia and weight loss. Na... What is the diagnosis? Incomplete

Question:

A. DI

Answer: A (Depends on the case ????)

Explanation: Diabetes Insipidus (DI) clinical features: Passage of large volumes of dilute urine, polydipsia, dehydration; hypernatremia can develop with lack of access to water or impaired thirst mechanism.

Reference: Toronto Notes Page E19 2016

45. pt with DKA he starts to breath rapidly to buffer his acidosis through

a- oxygen

b- carbon monoxide

c- carbon dioxide

d- nitrogen

Answer C

Explanation: The development of metabolic acidosis will normally generate a compensatory respiratory response. The reduction in the serum bicarbonate and pH caused by the metabolic acidosis results in hyperventilation and a reduction of the pCO₂.

Reference: https://www.uptodate.com/contents/approach-to-the-adult-with-metabolic-acidosis?source=search_result&search=metabolic%20acidosis&selectedTitle=1~150

46. Which of the following is considered to be beneficial in DM and hypertensive patients? Patient diabetic for years and was just dx as HTN, what to give? DM with high Blood pressure and deteriorating renal what to give?

a. ACEI

Answer: A

Explanation: in patients with diabetic nephropathy, angiotensin inhibitors (angiotensin-converting enzyme [ACE] inhibitors and angiotensin receptor blockers [ARBs]) may slow kidney disease progression more effectively than other antihypertensive drugs.

Reference: https://www.uptodate.com/contents/treatment-of-hypertension-in-patients-with-diabetes-mellitus?source=search_result&search=diabetes%20mellitus%20hypertension&selectedTitle=1~150#H16

47. Young adult having episodic palpitation and fear and tightness. Btw the attack she feel fatigue? What investigation ?

A- urine catecholamines test

Answer: A

Explanation: A tumor of chromaf n tissue that secretes catecholamines and is found either in the adrenal medulla or in extra-adrenal sites. Most commonly associated with MEN 2A and 2B. Presents with paroxysmal tachycardia, palpitations, chest pain, diaphoresis, hypertension, headache, tremor, and anxiety. It is important to obtain a family history in order to rule out genetic causes of pheochromocytoma (eg, MEN 2A/2B, von Hippel–Lindau disease, neuro bromatosis). Diagnosis CT and MRI are both sensitive for pheochromocytomas. A nuclear MIBG scan can localize extra-adrenal lesions and metastatic disease. Look for elevated plasma-free metanephrines (metanephrine and normeta-nephrine) or 24-hour urine metanephrines and catecholamines. Treatment Surgical resection. Preoperatively, use α -adrenergic blockade first (phenoxybenzamine) to control hypertension, followed by β -blockade to control tachycardia. Never give β -blockade first, as unopposed α -adrenergic stimulation can lead to severe hypertension.

Reference: First Aid step 2 page 107 9th edition.

48. DM type 1 which of these confirm dx?

a. acetone

Answer: A

Explanation: Urine ketones are not reliable for diagnosing or monitoring diabetic ketoacidosis (DKA), although they may be useful in screening to see whether a hyperglycemic individual may have some degree of ketonemia. The plasma acetone level—specifically, the beta-hydroxybutyrate level—is a more reliable indicator of DKA, along with measurement of plasma bicarbonate or arterial pH as clinically required. (See the Medscape Reference Laboratory Medicine article Ketones.)

Reference: <http://emedicine.medscape.com/article/117739-workup>

49. acetone + high glucose?
smle ,2017

A. DKA

B. hyperosmolar

Answer: A

Explanation: Diabetic ketoacidosis is typically characterized by hyperglycemia over 250 mg/dL, a bicarbonate level less than 18 mEq/L, and a pH less than 7.30, with ketonemia and ketonuria.

Reference: <http://emedicine.medscape.com/article/118361-workup>

50. case of hyperthyroidism clear but with bradycardia? Se female irritable + loss of wt+ bradycardia?

A. Hypothyroidism

B. Hyperthyroidism

C. Goiter

D. Neoplasm

Answer: ???

Explanation: Event monitor showed a sudden decrease in HR from 120 to 70 during exertion. Further questioning showed that all episodes were precipitated by turning his head to the right side. We suspected that the neck mass is compressing the carotid sinus and causing bradycardia.

Reference: <http://medcraveonline.com/JCCR/JCCR-02-00068.pdf>

51. Patient with fracture, constipation and abdominal pain, high serum CA:

A. Hyperparathyroidism

Answer: A

Explanation: Primary hyperparathyroidism often presents as an asymptomatic elevation in calcium levels found on routine blood testing. When there are symptoms, it can occasionally present with the signs of acute, severe hypercalcemia previously described.

More often, there are slower manifestations such as: • Osteoporosis • Nephrolithiasis and renal insufficiency • Muscle weakness, anorexia, nausea, vomiting, and abdominal pain • Peptic ulcer disease (calcium stimulates gastrin)

source: Master the boards USMLE step 2 CK page 117 2nd edition.

52. man want to lose weight have hx of DM he is on regular exercise & low-calorie diet but his weight not decreasing what will you advise him:

A. Intense exercise

B. Use medication to loss wt

C. Wt bearing exercise

D. Low calori

Answer: B

Explanation: Anti-obesity drugs can be useful adjuncts to diet and exercise for adults with obesity and a BMI greater than 30 kg/m², who have failed to achieve weight loss goals through diet and exercise alone. A trial of drug therapy is also warranted in patients with a BMI of 27 to 29.9 kg/m² with comorbidities

Reference: https://www.uptodate.com/contents/obesity-in-adults-drug-therapy?source=see_link

53. female DM on metformin and sulfonylurea can't tolerate them what you will do?

A. Insulin

B. Glitazone

smle ,2017

Answer: B

Antihyperglycemic Therapy for Type 2 Diabetes Mellitus						
Healthy eating, weight control, increased physical activity, and diabetes education						
Monotherapy	Metformin					
Effectiveness	High					
Hypoglycemia risk	Low					
Weight	Neutral/loss					
Adverse effects	Gastrointestinal/lactic acidosis					
Costs	Low					
↓						
If A1C target not achieved after three months of monotherapy, proceed to two-drug combination (order not meant to denote any specific preference; choice dependent on a variety of patient- and disease-specific factors):						
Dual therapy*	Metformin + sulfonylurea	Metformin + TZD	Metformin + DPP-4 inhibitor	Metformin + SGLT2 inhibitor	Metformin + GLP-1 receptor agonist	Metformin + insulin (basal)
Effectiveness	High	High	Intermediate	Intermediate	High	Highest
Hypoglycemia risk	Moderate	Low	Low	Low	Low	High
Weight	Gain	Gain	Neutral	Loss	Loss	Gain
Adverse effects	Hypoglycemia	Edema, fractures, heart failure	Rare	Dehydration, genitourinary	Gastrointestinal	Hypoglycemia
Costs	Low	Low	High	High	High	Variable
↓						
If A1C target not achieved after three months of dual therapy, proceed to three-drug combination (order not meant to denote any specific preference; choice dependent on a variety of patient- and disease-specific factors):						
Triple therapy	Metformin + sulfonylurea + TZD or DPP-4 inhibitor or SGLT2 inhibitor or GLP-1 receptor agonist or Insulin†	Metformin + TZD + Sulfonylurea or DPP-4 inhibitor or SGLT2 inhibitor or GLP-1 receptor agonist or Insulin†	Metformin + DPP-4 inhibitor + Sulfonylurea or TZD or SGLT2 inhibitor or Insulin†	Metformin + SGLT2 inhibitor + Sulfonylurea or TZD or DPP-4 inhibitor or Insulin†	Metformin + GLP-1 receptor agonist + Sulfonylurea or TZD or Insulin†	Metformin + insulin (basal) + TZD or DPP-4 inhibitor or SGLT2 inhibitor or GLP-1 receptor agonist
↓						
If A1C target not achieved after three months of triple therapy and patient (1) receiving oral combination, move to injectables; (2) receiving GLP-1 receptor agonist, add basal insulin; or (3) receiving an optimally titrated basal insulin, add GLP-1 receptor agonist or mealtime insulin. In refractory cases, consider adding TZD or an SGLT2 inhibitor:						
Combination injectable therapy‡	Metformin + basal insulin + mealtime insulin + GLP-1 receptor agonist					
*—Consider starting at this stage when A1C is ≥ 9%.						
†—Usually a basal insulin.						
‡—Consider starting at this stage when blood glucose is ≥ 300 to 350 mg per dL (16.7 to 19.4 mmol per L) and/or A1C is ≥ 10% to 12%, especially if symptomatic or catabolic features are present, in which case basal insulin plus mealtime insulin is the preferred initial regimen.						

Reference: <http://www.aafp.org/afp/2017/0101/p40.html>

54. A girl with type 1 DM diagnosed 3 years ago, she is 12 years did not show sign of puberty ... What should she repeat annually?

- A. growth hormone
- B. celiac testing
- C. ophthalmology exam
- D. kidney ultrasound

Answer: C

Explanation: Dilated ophthalmologic evaluation for retinopathy for children ≥10 years of age (or at onset of puberty, if earlier), once the youth has had diabetes for three to five years. This examination generally should be repeated annually; less frequent examinations may be acceptable if recommended by the child's eye care professional.

Reference: https://www.uptodate.com/contents/management-of-type-1-diabetes-mellitus-in-children-and-adolescents?source=search_result&search=diabetes%20mellitus%20TYPE%201&selectedTitle=2~150#H14093670

55.Q about. Cretinism? What you will give?

- A. Iodin
smle ,2017

B. Thyroxine

Answer: B

Explanation: The mainstay in the treatment of congenital hypothyroidism is early diagnosis and thyroid hormone replacement.

Reference: <http://emedicine.medscape.com/article/919758-treatment>

56. Pt with hyperthyroidism on treatment. c/o recurrent infections. What is the Drug?

A. Methimazole

Answer: A

Explanation: Methimazole can temporarily lower the number of white blood cells in your blood, which increases the chance of getting an infection

Reference: <http://www.mayoclinic.org/drugs-supplements/methimazole-oral-route/precautions/drg-20073004>

57. Q. HTN on treatment now has gout, what drug?

A. Hydroxy Thiazide

Answer: A

Explanation: Thiazide diuretics selectively enhance urate reabsorption by acting as a counter-ion for urate transport. First, the thiazide enters the proximal tubule cell from the peritubular capillary blood through the anion exchanger, OAT1, on the basolateral membrane. The diuretic is then released into the tubular fluid from the cell by the urate anion exchanger, OAT4, on the luminal membrane, driving reabsorption of urate. Thiazide diuretics also upregulate the sodium-hydrogen exchanger in the proximal tubule, thereby stimulating pH-dependent OAT4 activity. In addition, both thiazide and loop diuretics may inhibit MRP4 on the luminal membrane, reducing secretion of urate into the tubular fluid

Reference: <http://www.uptodate.com/contents/diuretic-induced-hyperuricemia-and-gout>

58. x-ray of lower back, investigation showed high ca+, what will u do:

A. Dexamethasone

B. Parathyroidectomy

Answer: B

Explanation: The initial goal of the laboratory evaluation is to differentiate parathyroid hormone (PTH)-mediated hypercalcemia (primary hyperparathyroidism and familial hyperparathyroid syndromes) from non-PTH mediated hypercalcemia (primarily malignancy, vitamin D intoxication, granulomatous disease). Thus, once hypercalcemia is confirmed, the next step is measurement of serum PTH.

Reference: <http://www.uptodate.com/contents/diagnostic-approach-to-hypercalcemia>

59. What is the preferable imaging to diagnose pituitary microadenoma?

A) Contrast with enhanced brain CT

B) Brain CT

C) Contrast with enhanced brain MRI

D) Unenhanced brain MRI

Answer: C

Explanation: MRI techniques in diagnosing pituitary lesions have witnessed a rapid evolution, ranging from noncontrast MRI in late 1980s to contrast-enhanced MRI in mid-1990s. Introduction
smle ,2017

of dynamic contrast-enhanced MRI has further refined this technique in diagnosing pituitary microadenomas.

Dynamic contrast MRI has been proven to be the best imaging tool in the evaluation of pituitary adenomas.

Reference: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3183511/>

60. A scenario of a patient with HTN came with headache and anxiety and have 3 previous visits of High blood pressure and treated for it then we need to stop because of the patient had a hypotension what you will do?

A. 24 urine metanephrines (pheochromocytoma)

B. TSH

C. ACTH

Answer: A

Explanation: Pheochromocytoma Presents with paroxysmal tachycardia, palpitations, chest pain, diaphoresis, hypertension, headache, tremor, and anxiety.

Reference: First Aid step 2 page 107 9th edition.

61. Diabetic and hypertensive, was given a drug then experienced cough, improved after changing the drug to hydrochlorothiazide what to add:

A. Atenolol

B. Amlodipine

C. Losartan

D. ACEI (I forgot the name)

Answer: C

Explanation: An ARB is particularly indicated in patients who do not tolerate ACE inhibitors (mostly because of cough).

Reference: https://www.uptodate.com/contents/choice-of-drug-therapy-in-primary-essential-hypertension?source=search_result&search=hypertension&selectedTitle=2~150#H18

62. Diabetic woman with hypothyroidism developed oral white plaque (thrush) for long time with recurrent rash Ppd test positive with old exposure What's the diagnosis:

A. Chronic mucocutaneous candida infection <disease associated with DM, hypothyroid

B. IgM deficiency Digeorge disease

C. Chronic granulomatous

Answer: A

Explanation: Chronic mucocutaneous candidiasis (CMCC) is a heterogeneous group of syndromes with common features including chronic noninvasive *Candida* infections of the skin, nails, and mucous membranes and associated autoimmune manifestations (most commonly endocrinopathies). It is caused by genetic faults in the immune system. The diagnosis of chronic mucocutaneous candidiasis (CMCC) is primarily based upon clinical features including chronic, noninvasive candidiasis of the skin and mucous membranes associated with autoimmune manifestations, most commonly endocrinopathies.

Reference: https://www.uptodate.com/contents/chronic-mucocutaneous-candidiasis?source=search_result&search=chronic%20mucocutaneous%20candidiasis&selectedTitle=1~28#H29999189

63. DKA patient if fluids corrected rapidly. What the complication?
smle ,2017

A. brain edema

Answer: A

Explanation: Cerebral edema is the leading cause of death in children presenting in diabetic ketoacidosis and occurs in 0.2 to 1% of cases. The osmolar gradient caused by the high blood glucose results in water shift from the intracellular fluid (ICF) to the extracellular fluid (ECF) space and contraction of cell volume. Correction with insulin and intravenous fluids can result in a rapid reduction in effective osmolarity, reversal of the fluid shift and the development of cerebral edema. The goals for treatment should be a combination of intravenous fluid and insulin that results in a gradual reduction of the effective osmolarity over a 36- to 48-hour period, thereby avoiding rapid expansion of the ICF compartment and brain swelling.

Reference: <http://www.ncbi.nlm.nih.gov/pubmed/12011666>

64. Old pt, diabetic dehydrated, lab high Na low k, high bicarbonate, ketones in urine, Dx?

A. metabolic syndrome

B. diabetic ketoacidosis

C. lactic acidosis

Answer: B

Typical laboratory characteristics of DKA and HHS*

	DKA			HHS
	Mild	Moderate	Severe	
Plasma glucose (mg/dL)	>250	>250	>250	>600
Plasma glucose (mmol/L)	>13.9	>13.9	>13.9	>33.3
Arterial pH	7.25 to 7.30	7.00 to 7.24	<7.00	>7.30
Serum bicarbonate (mEq/L)	15 to 18	10 to <15	<10	>18
Urine ketones [†]	Positive	Positive	Positive	Small
Serum ketones - Nitroprusside reaction	Positive	Positive	Positive	≤ Small
Serum ketones - Enzymatic assay of beta hydroxybutyrate (normal range <0.6 mmol/L) ^Δ	3 to 4 mmol/L	4 to 8 mmol/L	>8 mmol/L	<0.6 mmol/L
Effective serum osmolality (mOsm/kg) [◊]	Variable	Variable	Variable	>320
Anion gap [§]	>10	>12	>12	Variable
Alteration in sensoria or mental obtundation	Alert	Alert/drowsy	Stupor/coma	Stupor/coma

Reference: https://www.uptodate.com/contents/diabetic-ketoacidosis-and-hyperosmolar-hyperglycemic-state-in-adults-clinical-features-evaluation-and-diagnosis?source=search_result&search=DKA&selectedTitle=2~150#H10

65. What is the characteristic of Fragile X syndrome?

A. Dilated Pulmonary (I think he mean aortic root dilatation)

Answer: ???

Explanation: **Physical features** — The physical features of FXS in males vary depending upon age.

The classic physical manifestations are more obvious in adolescents:

- Long and narrow face with prominent forehead and chin (prognathism).
- Large ears.
- Testicular enlargement (volume >25 mL after puberty) with normal testicular function. Testicular enlargement is not seen in boys under eight years of age.

Physical manifestations are subtle in infants and young boys. Nonetheless, some craniofacial and connective tissue findings may be present from a young age. These include:

- Relative macrocephaly (head circumference >50th percentile for age and sex)
- Strabismus
- Pale blue irises
- Midface hypoplasia with sunken eyes
- Arched palate

smle ,2017

- Mitral valve prolapse (seemingly benign)
- Joint hyperlaxity (particularly of the thumbs, fingers, and wrists)
- Hypotonia
- Doughy skin over the dorsum of hands
- Flexible flat feet

Reference: https://www.uptodate.com/contents/fragile-x-syndrome-clinical-features-and-diagnosis-in-children-and-adolescents?source=search_result&search=fragile%20x&selectedTitle=1~48#H5

66. Female c/o clear fluid from nipple. Breast examination was normal. Brain MRI: pituitary mass. This mass secretes?

A. Prolactin

Answer: A

Explanation: Prolactinomas are the most common hormone-secreting pituitary tumors. Galactorrhea is observed in 30-80% of prolactinoma cases.

Reference: <http://emedicine.medscape.com/article/124634-clinical>

67. DM with high BP and deteriorating renal what to give?

A- ACEI (lisinopril)

Answer: A

Explanation: in patients with diabetic nephropathy, angiotensin inhibitors (angiotensin-converting enzyme [ACE] inhibitors and angiotensin receptor blockers [ARBs]) may slow kidney disease progression more effectively than other antihypertensive drugs.

Reference: https://www.uptodate.com/contents/treatment-of-hypertension-in-patients-with-diabetes-mellitus?source=search_result&search=diabetes%20mellitus%20hypertension&selectedTitle=1~150#H16

68. 42 years old female complaining of amenorrhea, night sweat and flushing for the last 6 months. What is the most likely diagnosis?

A. Hypothyroidism

B. Hyperprolactinemia

C. Congenital adrenal Hyperplasia

D. Pheochromocytoma

Answer: B

Explanation: A serum prolactin concentration greater than 100 ng/mL (100 mcg/L SI units) is typically associated with overt hypogonadism, subnormal estradiol secretion and its consequences, including amenorrhea, hot flashes, and vaginal dryness.

Reference: <https://www.uptodate.com/contents/clinical-manifestations-and-evaluation-of-hyperprolactinemia#H2>

69. Adult, collapse, high glucose, Ketone in urine, what's the diagnosis?

A. DKA

Answer: A

Explanation: Diabetic ketoacidosis is typically characterized by hyperglycemia over 250 mg/dL, a bicarbonate level less than 18 mEq/L, and a pH less than 7.30, with ketonemia and ketonuria.

Reference: <http://emedicine.medscape.com/article/118361-workup>

70. Case of congenital adrenal hyperplasia;

A. Give steroid

Answer: A

Explanation: Medical: Immediate fluid resuscitation and salt repletion. Administer cortisol to ↓ ACTH and adrenal androgens. Fludrocortisone is appropriate for severe 21-hydroxylase deficiency.

Reference: First Aid step 2 page 109 9th edition.

71. Military soldier wants to deceive his boss, got hypoglycemic symptoms, what did he use?

A. Insulin before exercise

B. Metformin before exercises

Answer: A

Explanation: Insulin has a number of effects on glucose metabolism, including:

- Inhibition of glycogenolysis and gluconeogenesis
- Increased glucose transport into fat and muscle
- Increased glycolysis in fat and muscle
- Stimulation of glycogen synthesis

While metformin Metformin decreases hepatic glucose production, decreases intestinal absorption of glucose, and improves insulin sensitivity by increasing peripheral glucose uptake and utilization.

Reference: <https://www.uptodate.com/contents/insulin-action>

https://www.accessdata.fda.gov/drugsatfda_docs/label/2006/021748s002lbl.pdf

72. Patient heard about the new anti-DM medication “Incretin” on T.V, asking about the mechanism of action of the new drug?

A. Inhibit liver gluconeogenesis

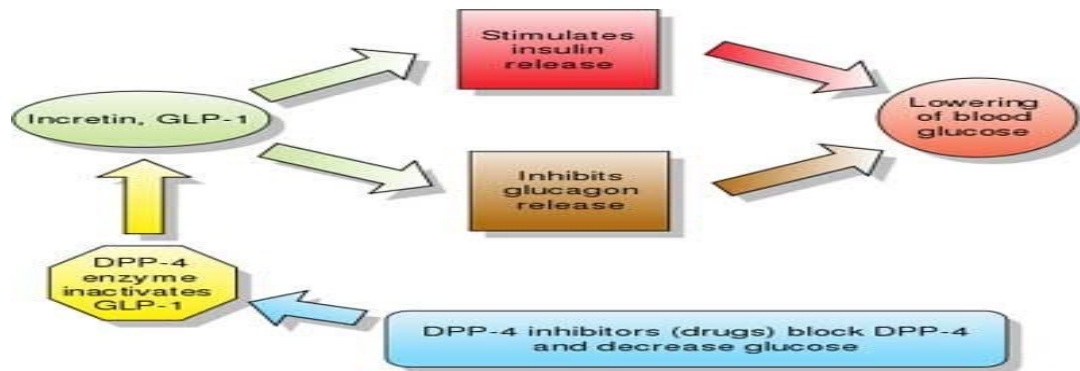
B. Increases the insulin secretion

C. Decreases insulin resistance

D. Decrease hepatic gluconeogenesis

Answer: B

Explanation: **GLP-1 RECEPTOR AGONISTS** — Synthetic glucagon-like peptide-1 (GLP-1) receptor agonists are resistant to degradation by the enzyme dipeptidyl peptidase-4 (DPP-4) and therefore have a longer half-life, facilitating clinical use. They bind to the GLP-1 receptor and stimulate glucose-dependent insulin release from the pancreatic islets as described above.



Reference: <https://www.uptodate.com/contents/glucagon-like-peptide-1-receptor-agonists-for-the-treatment-of-type-2-diabetes-mellitus#H2>

73. What type of insulin is used in DKA?

- A. Regular
- B. Glargine
- C. NPH

Answer: A

The current recommendation is to give low-dose (short-acting regular) insulin after the diagnosis of diabetic ketoacidosis has been confirmed by laboratory tests and fluid replacement has been initiated.

Reference: <http://www.aafp.org/afp/1999/0801/p455.html>

74. Well controlled DM, BP 3 readings 138/82, what to do next?

A- Nothing

Answer: A

Explanation: Since hypertension places diabetic patients at high risk for cardiovascular complications, all diabetic patients with persistent blood pressures above 140/90 mmHg should be started on antihypertensive drug therapy.

Reference: <https://www.uptodate.com/contents/treatment-of-hypertension-in-patients-with-diabetes-mellitus?source=see-link#H10>

75. Anti diabetic drug taken by ladies with PCOS:

A. Metformin

Answer: A

Explanation: If the patient develops type 2 diabetes mellitus, consider treatment with oral antihyperglycemic drugs, such as metformin. Metformin can also be considered in other women with PCOS who are insulin resistant and therefore at risk of developing cardiovascular disease, even women without type 2 diabetes.

Clinical trials have shown that metformin can effectively reduce androgen levels, improve insulin sensitivity, and facilitate weight loss in patients with PCOS as early as adolescence.

Insulin sensitizers (e.g., metformin alone or with clomiphene citrate) may be used for PCOS patient to reduce insulin resistance, control weight, and facilitate ovulation.

Reference: <http://emedicine.medscape.com/article/256806-treatment#d10>

Beckmann, Obstetrics and Gynecology

76. 46 y/o Obese male with no risk factors for diabetes and with normal BP and normal fasting glucose and normal HbA1c (I forget what the level, but for sure it wasn't in the prediabetic or diabetic range). When will the next screen be?

A. In 6 months

B. In 12 months

C. In 36 months or 3 years

Answer: C * If they mean screen for type 2 diabetes *

Explanation: **American Diabetes Association** — The American Diabetes Association (ADA) recommends testing at three-year intervals for diabetes or prediabetes in all adults with body mass index (BMI) ≥ 25 kg/m² (or ≥ 23 kg/m² in Asian Americans) and one or more additional risk factors for diabetes using either A1C, fasting plasma glucose, or two-hour OGTT. In individuals without risk factors, the ADA recommends that testing begin at age 45 years. If the screening test is positive, diabetes should be confirmed according to ADA criteria. If the screening test is negative, repeat testing every three years is reasonable.

Reference: <https://www.uptodate.com/contents/screening-for-type-2-diabetes-mellitus#H10>

77. Patient with Hba1c within pre-diabetic range. when to repeat the test?

A. 3months

B. 6 months

C. 1 year

Answer: C

Explanation: Monitoring patients with prediabetes to assess their glycemic status should include at least annual reassessment of FPG and/or an OGTT. For individuals in whom progression is suspected, annual measurements of FPG and A1C, with 2-hour OGTT, should be conducted

Reference: <http://outpatient.aace.com/prediabetes/screening-and-monitoring-prediabetes>

78. Diabetic with painful back swelling has multiple discharges:

A. Cellulitis

B. Lymphoid

C. Lymphadenitis Carbuncle

Answer: C

Explanation: A carbuncle is a cluster of boils that form a connected area of infection. Carbuncles often occur on the back of the neck, shoulders or thighs. Compared with single boils, carbuncles cause a deeper and more severe infection and are more likely to leave a scar.

Risk Factors for Carbuncles:

Older age, obesity, poor hygiene, and poor overall health are associated with carbuncles. Other risk factors for carbuncles include:

Chronic skin conditions, which damage the skin's protective barrier, Diabetes, Kidney Disease, liver disease, any condition or treatment that weakens the immune system

Reference: <http://www.mayoclinic.org/diseases-conditions/boils-and-carbuncles/symptoms-causes/dxc-20214768>

<http://www.webmd.com/skin-problems-and-treatments/guide/carbuncles-causes-treatments>

79. Known case of DM1, last insulin time not known, was playing football, lose his consciousness for minutes, what will u give him:

A. D5 with ...

B. ringer lactate with ..

C. subcutaneous insulin

smle ,2017

Answer: A

Explanation: The incidence of hypoglycemic episodes in patients with type 1 diabetes mellitus (DM1) is frequent. Hypoglycemia occur as a complication of therapy for diabetes

Treatment options for severe hypoglycemia include the following:

A subcutaneous or intramuscular injection of 0.5 to 1.0 mg of glucagon will usually lead to recovery of consciousness within approximately 15 minutes, although it may be followed by marked nausea or even vomiting.

Patients brought to the hospital can be treated more quickly by giving 25 g of 50 percent glucose (dextrose) intravenously (IV). A subsequent glucose infusion (or food, if patient is able to eat) is often needed, depending upon the cause of the hypoglycemia.

Reference: https://www.uptodate.com/contents/management-of-hypoglycemia-during-treatment-of-diabetes-mellitus?source=search_result&search=management-of-hypoglycemia-during-treatment-of-diabetes-mellitus&selectedTitle=1~150#H12

80. Patient presented with short stature, he has growth hormone deficiency as the lab shows low GH what else you would measure:

A. Somatomedin C

B. Glucose

C. Prolactin

Answer: A

Explanation: Patients with suspected GHD should be screened with radiographic measurement of bone age and insulin-like growth factor I (IGF-I) and serum levels of insulin-like growth factor binding protein-3 (IGFBP-3).

A somatomedin C test, also called an insulin-like growth factor-1 (or IGF-1) test, helps doctors evaluate whether a person is producing a normal amount of human growth hormone (hGH, or somatotropin). While hGH levels vary throughout the day depending on diet and activity levels, somatomedin C levels in the blood are more stable, making its measurement a fairly reliable indicator of how much hGH the pituitary gland is producing overall.

Reference: https://www.uptodate.com/contents/diagnosis-of-growth-hormone-deficiency-in-children?source=search_result&search=somatomedin%20c&selectedTitle=3~150#H14

81. A 30-year-old male, diabetic otherwise healthy with persistent one hour post prandial hyperglycemia after lunch and dinner:

A. Milk

B. Meat

C. Diet cola

D. Potato

Answer: D

Foods with a high glycemic index (greater than 70), such as cold cereals, bread, potatoes, rice, and snack chips, tend to raise blood glucose the fastest, with a significant peak occurring in 30–60 minutes. For these types of foods, it is best to bolus 15–20 minutes prior to eating. This will allow the insulin peak to coincide as closely as possible with the blood glucose peak.

Reference: <http://alsearsmd.com/glycemic-index/>

<http://www.health.harvard.edu/diseases-and-conditions/glycemic-index-and-glycemic-load-for-100-foods>

82. Patient presented with acne, upper body obesity and hypertension, what is the test to diagnose this patient?

smle ,2017

A. Anabolic stress test

B. Urine metanephrine

Answer: A ?

Explanation: Establishing the diagnosis of Cushing's syndrome, for patients with a low index of suspicion, we suggest initial testing with one of the following first-line tests: late-night salivary cortisol (two measurements), 24-hour urinary free cortisol (UFC) excretion (two measurements), or the overnight 1 mg dexamethasone suppression test (DST).

Reference: https://www.uptodate.com/contents/establishing-the-diagnosis-of-cushings-syndrome?source=search_result&search=cushing%20syndrome%20adult&selectedTitle=1~150#H425722354

Anabolic stress test = Adrenal Stress Testing

Adrenocortex Stress Profile is a powerful and precise noninvasive salivary hormone test that evaluates bioactive levels of the body's important stress hormones, cortisol and DHEA. This hormone test (stress test) serves as a critical tool for uncovering biochemical imbalances underlying anxiety, depression, chronic fatigue syndrome, obesity, dysglycemia, and a host of other clinical conditions. This hormone test examines 4 saliva samples over a 24-hour period for levels of cortisol and DHEA

Reference: <http://www.tfmhealth.com/adrenal-stress-testing.html>

83. Stones multiple, high Ca:

Answer: hyperparathyroidism

The most common cause of hypercalcemia is primary hyperparathyroidism (PTH). Most of the patients are asymptomatic. Other causes are: · Vitamin D intoxication · Sarcoidosis and other granulomatous diseases · Thiazide diuretics · Hyperthyroidism · Metastases to bone and multiple myeloma.

Presentation: Acute, symptomatic hypercalcemia presents with confusion, stupor, lethargy, and constipation.

Cardiovascular: Short QT syndrome and hypertension

Bone lesions: Osteoporosis

Renal: Nephrolithiasis, Diabetes insipidus and Renal insufficiency

Reference: Master The board page 116 2nd edition.

84. Breast cancer metastasis to the lung before mastectomy, patient developed depression, increased urination and thirst all the time. Lab provided low Na and low urine osmolality. What is the diagnosis?

A. Psych polydipsia

B. SIADH

C. Diabetes insipidus

Answer: A

Explanation: Patients present in the following ways. Water-seeking and drinking noted by clinical staff or other observers: those at risk include patients with mental illnesses, patients with developmental disorders, and anxious middle-aged women.

The diagnosis of PPD is one of exclusion.

Low-cost and high-yield tests include plasma and urine osmolality, and plasma and urine sodium.

Urinary sodium and osmolality are best measured by 24-hour urine collection. Typically, hyponatremia is hypotonic and euvolemic. Urinary osmolality is <100 mOsm/kg H₂O, and serum osmolality is also low (<280 mOsm/kg H₂O).

Reference: <https://online.epocrates.com/diseases/86531/Psychogenic-polydipsia/Diagnostic-Approach>

85. Diabetic controlled on medication developed (eye down and out) dropped upper eyelid limited movement of eye medially and up and down

A- Right oculomotor palsy

B- Right facial palsy

Answer: A

Explanation: unilateral third cranial nerve palsy (ie, oculomotor nerve palsy), the involved eye usually is deviated "down and out" (ie, infraducted and abducted), and there may be partial or complete ptosis. In addition, pupillary dilatation can cause anisocoria (greater in the light), symptomatic glare in bright light, and accommodation deficit that may cause blurred vision for near objects.

Reference: <http://emedicine.medscape.com/article/1198462-overview>

86. T score of -3.5?

A. Osteoporosis

Answer: A

Explanation: **Osteoporosis** — People with osteoporosis have a T-score of -2.5 or less. Larger numbers (eg, -3.2) indicate lower bone density because this is a negative number.

Reference: <https://www.uptodate.com/contents/bone-density-testing-beyond-the-basics>

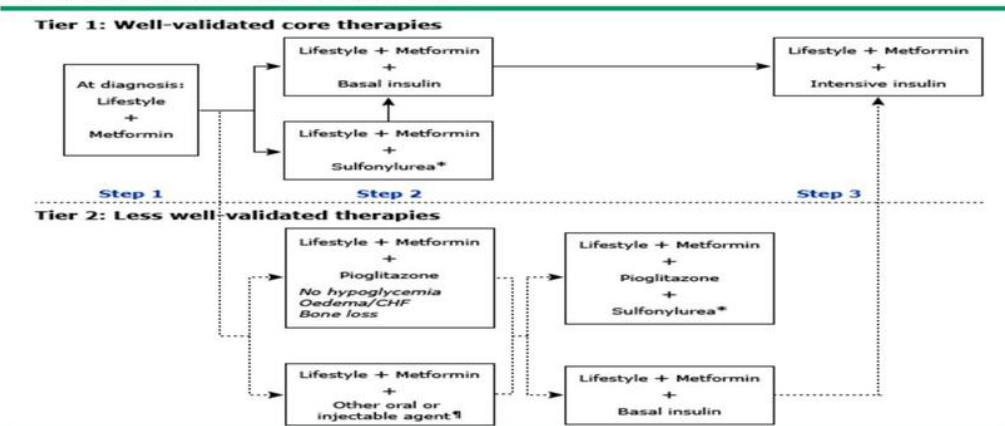
87. Diabetic patient on metformin and gliclazide not control what to add:

A. acarbose

B. Pioglitazone

Answer: B

Management of type 2 diabetes



Algorithm for the metabolic management of type 2 diabetes; reinforce lifestyle interventions at every visit and check A1C every three months until A1C is <7% and then at least every six months. The interventions should be changed if A1C is ≥7%.

CHF: congestive heart failure; A1C: glycated hemoglobin; GLP-1: glucagon-like peptide-1; DPP-4: dipeptidyl peptidase-4; SGLT2: sodium-glucose co-transporter 2.

* Sulfonylureas other than glyburide (glyburide) or chlorpropamide.

Reference: [https://www.uptodate.com/contents/initial-management-of-blood-glucose-in-adults-with-type-2-diabetes-](https://www.uptodate.com/contents/initial-management-of-blood-glucose-in-adults-with-type-2-diabetes-mellitus?source=search_result&search=diabetes%20mellitus%20treatment&selectedTitle=1~150#)

[mellitus?source=search_result&search=diabetes%20mellitus%20treatment&selectedTitle=1~150#H11](https://www.uptodate.com/contents/initial-management-of-blood-glucose-in-adults-with-type-2-diabetes-mellitus?source=search_result&search=diabetes%20mellitus%20treatment&selectedTitle=1~150#H11)

88. Patient has osteoporosis on ca and vit D But no improvement why?

smle ,2017

A. hypomagnesemia

Answer: a

Magnesium deficiency contributes to osteoporosis directly by acting on crystal formation and on bone cells and indirectly by impacting on the secretion and the activity of parathyroid hormone and by promoting low grade inflammation.

Mg deficiency associates with the reduction of the levels of PTH, the induction of end-organ resistance to PTH and the decrease of vitamin D. Interestingly, many osteoporotic post-menopausal women who are vitamin D deficient and have low PTH levels are also Mg deficient and Mg supplementation corrects these biochemical abnormalities.

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3775240/>
<http://www.mdpi.com/2072-6643/5/8/3022/html>

89. Melanocyte stimulating hormone released from?

A. Intermediate lobe of pituitary!

Answer: A

Explanation: Melanotropin (MSH) secreted from intermediate lobe of pituitary. Derived from oral ectoderm (Rathke pouch).

Reference: FA Step 1 page 313 2017.

90. Most common cause of secondary hypertension

a) Kidneys disease

b) Cons syndrome

Answer: A

Table 3. Most Common Causes of Secondary Hypertension by Age*

Age groups	Percentage of hypertension with an underlying cause	Most common etiologies†
Children (birth to 12 years)	70 to 85	Renal parenchymal disease Coarctation of the aorta
Adolescents (12 to 18 years)	10 to 15	Renal parenchymal disease Coarctation of the aorta
Young adults (19 to 39 years)	5	Thyroid dysfunction Fibromuscular dysplasia Renal parenchymal disease
Middle-aged adults (40 to 64 years)	8 to 12	Aldosteronism Thyroid dysfunction Obstructive sleep apnea Cushing syndrome
Older adults (65 years and older)	17	Pheochromocytoma Atherosclerotic renal artery stenosis Renal failure Hypothyroidism

*—Excluding dietary and drug causes and the risk factor of obesity.
†—Listed in approximate order of frequency within groups.
Information from references 2, 3, and 30 through 34.

Reference: <http://www.aafp.org/afp/2010/1215/p1471.html>

91. Pt with small lung ca and undergoing chemotherapy, developed ... (I don't remember), but lab values "low blood Na" and "low urine osmolality" the treatment is?

a) Desmopressin*

b) Nothing

Answer: vasopressin receptor antagonists

smle ,2017

Explanation: **Malignancies** — Ectopic production of ADH by a tumor is most often due to a small cell carcinoma of the lung.

The vasopressin receptor antagonists produce a selective water diuresis (aquaresis) without affecting sodium and potassium excretion. The ensuing loss of electrolyte-free water will tend to raise the serum sodium in patients with SIADH and may improve mental status in patients with a serum sodium under 130 meq/L. Thirst increases significantly with these agents, which may limit the rise in serum sodium.

Reference: https://www.uptodate.com/contents/treatment-of-hyponatremia-syndrome-of-inappropriate-antidiuretic-hormone-secretion-siadh-and-reset-osmostat?source=see_link#H11

92. 35 y/o pt diagnosed with DM, you advise him to do aerobic exercise. How much minutes per week?

- A. 120
- B. 180
- C. 150

Answer: C

Reference: <http://www.diabetes.org/food-and-fitness/fitness/types-of-activity/what-we-recommend.html>

93. Patient increase foot size 39 >> 41.5 and increase size of hand and joint which hormone?

- a) Thyroxine
- b) Prolactin
- c) ACTH
- d) Somatotropin hormone “known as Growth Hormone”

Answer: D

Explanation: Acromegaly: Elevated growth hormone (GH) levels in adults, most commonly due to a benign pituitary GH-secreting adenoma.

Presents with enlargement of the skull (frontal bossing, wide-spaced teeth), hands, and feet, coarsening of facial features, large tongue, and skin tags. Associated with an ↑ risk of carpal tunnel syndrome, obstructive sleep apnea, type 2 DM, heart disease (diastolic dysfunction), hypertension, colon cancer, and arthritis.

Reference: FAU2 page 101 9th edition.

94. pt Dx with DM1 which will confirm the Dx:

- A. DR3
- B. DR4
- C. DR7
- D. DR

Answer: A or B * both are right *

Explanation: According to best practice and medscape, both dr3/dr4 are considered as risk factors (approximately 95% of patients with type 1 DM have either hla-dr3 or hla-dr4) and are not used in diagnosing type 1 dm, but instead, insulin and c-peptide levels and immune markers (eg, glutamic acid decarboxylase [gad] autoantibodies) are used.

References: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3253030/>

<http://emedicine.medscape.com/article/117739-overview#showall>

<http://bestpractice.bmj.com/best-practice/monograph/25/diagnosis/tests.html#Medicine>

95. Hypoglycemia is more with
smle ,2017

A. Glyburide

B. Acarbose

Answer: A

Explanation: Hypoglycemia is the most common side effect of sulfonylureas. Hypoglycemia appears to be more common with long-acting sulfonylureas (such as chlorpropamide and glyburide). As an example, in a four-year retrospective study of 14,000 patients 65 years or older with type 2 diabetes treated with different sulfonylurea drugs, episodes of serious hypoglycemia were rare. The incidence was highest in those patients taking glyburide and lowest among those taking tolbutamide (19.9 versus 3.5 episodes per 1000 person-years, respectively). Other shorter-acting drugs, such as tolazamide and glipizide, were also associated with a lower incidence, while the incidence with chlorpropamide was similar to that with glyburide.

Reference: https://www.uptodate.com/contents/sulfonylureas-and-meglitinides-in-the-treatment-of-diabetes-mellitus?source=search_result&search=sulfonylureas-and-meglitinides-in-the-treatment-of-diabetes%20mellitus&selectedTitle=1~150

96. What's the Anion gap Na= 138/? >> choose the closest number to 20

A. 26

B. 34

C. 44

Explanation: The anion gap is the difference between primary measured cations (sodium Na^+ and potassium K^+) and the primary measured anions (chloride Cl^- and bicarbonate HCO_3^-) in serum. This test is most commonly performed in patients who present with altered mental status, unknown exposures, acute renal failure, and acute illnesses.

Reference: <http://emedicine.medscape.com/article/2087291-overview>

97. Rapid treatment of hyperthyroid

A. Beta blockers

Answer: A

Explanation: Symptomatic treatment: Propranolol (or metoprolol, atenolol) to manage adrenergic symptoms.

Reference: FAU 2 page 91 9th edition.

98. Patient with 3 reading of high BP did not start on meds yet. All labs are normal except for high K what is the most likely cause?

A. Essential hypertension

B. Hyperaldosteronism

C. Pheochromocytoma

D. don't remember but irrelevant

Answer: -

Explanation: Familial hyperkalemic hypertension (FHHT) syndrome also known as Gordon syndrome or pseudohypoaldosteronism type 2, is a rare inherited form of low-renin hypertension associated with hyperkalemia and hyperchloremic metabolic acidosis in patients with a normal GFR.

People with PHA2 have high blood pressure (hypertension) and high levels of potassium in their blood (hyperkalemia) despite having normal kidney function.

Reference: <http://jasn.asnjournals.org/content/17/1/208.full>
<https://ghr.nlm.nih.gov/condition/pseudohypoaldosteronism-type-2>

99. A man had cholecystectomy, now complaining of unilateral parotid swelling, he has hx of mumps, facial nerve intact, no decrease in salivation, Lab was show cloudy saliva?

- A. sarcoidosis granuloma
- B. sialadenitis
- C. parotid cancer
- D. mumps

Answer: B

Reference: <http://emedicine.medscape.com/article/882358-clinical>

100. DKA management?

- A- Fluids.
- B- Insulin infusion.

answer: A

Explanation: The initial priority in the treatment of diabetic ketoacidosis is the restoration of extracellular fluid volume through the intravenous administration of a normal saline (0.9 percent sodium chloride) solution. This step will restore intravascular volume, decrease counterregulatory hormones and lower the blood glucose level.² As a result, insulin sensitivity may be augmented. Managing diabetic ketoacidosis (DKA) in an intensive care unit during the first 24-48 hours always is advisable.

When treating patients with DKA, the following points must be considered and closely monitored: Correction of fluid loss with intravenous fluids, Correction of hyperglycemia with insulin, Correction of electrolyte disturbances, particularly potassium loss Correction of acid-base balance. Treatment of concurrent infection, if present.

Reference: <http://www.aafp.org/afp/1999/0801/p455.html>
<http://emedicine.medscape.com/article/118361-treatment>

101. patient with symptoms of hyperthyroidism and her T4 is high and low TSH ... pathophysiology?

Answer: TSH is low because of –ve feedback from increased level of circulating T3 and T4

Reference: Toronto Notes E21 2016

102. Bisphosphonate which drug make bone clast???

Explanation: The bisphosphonates inhibit osteoclastic bone resorption via a mechanism that differs from that of other antiresorptive agents. Bisphosphonates attach to hydroxyapatite binding sites on bony surfaces, especially surfaces undergoing active resorption. When osteoclasts begin to resorb bone that is impregnated with bisphosphonate, the bisphosphonate released during resorption impairs the ability of the osteoclasts to form the ruffled border, to adhere to the bony surface, and to produce the protons necessary for continued bone resorption. Bisphosphonates also reduce osteoclast activity by decreasing osteoclast progenitor development and recruitment and by promoting osteoclast apoptosis.

Reference: <https://www.uptodate.com/contents/pharmacology-of-bisphosphonates#H3>

103. In case of thyroid crisis what's the initial step

- A. Radioactive
- B. thyroid Iodine
- C. thyroid Propranolol

Answer: C

smle ,2017

Explanation: General Measures:

fluids, electrolytes, and vasopressor agents should be used as indicated
a cooling blanket and acetaminophen can be used to treat the pyrexia
propranolol or similar agents for β -adrenergic blockade is used, which additionally causes decreased peripheral conversion of T4 to T3
use with caution in CHF patients as it may worsen condition

Specific Measures:

PTU is the anti-thyroid drug of choice and is used in high doses.

Give iodide, which acutely inhibits the release of thyroid hormone, one hour after the first dose of PTU is given. Sodium iodide 1 g IV drip over 12h q12h OR Lugol's solution 2-3 drops q8h OR Potassium iodide (SSKI) 5 drops q8h.

dexamethasone 2-4 mg IV q6h for the first 24-48 hours lowers body temperature and inhibits peripheral conversion of T4 to T3.

Reference: Toronto Notes E26 2016

104. Diabetic and hypertensive male with erectile dysfunction ; doctor prescribed phosphodiesterase inhibitor, what he should avoid:

- A. steroid
- B. Abx
- C. Morphine
- D. Nitrat

Answer: D

Explanation: Studies also show that the PDE5 inhibitors are effective in specific patient populations, such as those with ED and stable cardiovascular disease, diabetes or clinical depression. According to the European licensed indications, all three treatments can be used in men with cardiovascular disease, provided these patients have been properly assessed and are not taking nitrates (whose concomitant use with PDE5 inhibitors is contraindicated).

Reference: http://www.medscape.com/viewarticle/542736_4

105. patient with symptoms of hypothyroidism and excessive thirst and urination brain MRI report contain a lot of details which finally suggest pituitary tumor? you put her on thyroxine what drug you will add:

- A. Insulin
- B. Vasopressin
- C. Somatostatin
- D. Analogues

Answer: B

Explanation: Diabetic insipidus There are many causes of central (pituitary) diabetes insipidus, including:

- Congenital absence of the gland
- Lesions that involve or destroy the pituitary stalk and/or posterior pituitary gland
 - Craniopharyngioma
 - Lymphocytic hypophysitis
 - Sarcoid
 - Germinoma
 - Rathke's cleft cyst
 - Tuberculosis
 - Other granulomatous diseases
 - Tumors of the posterior pituitary gland

smle ,2017

- Pituitary gangliocytoma
- Injury to the posterior pituitary gland or pituitary stalk following surgery to that area of the brain

Reference: <http://pituitary.ucla.edu/typesof-pituitary-adenomas>

106. Treatment of gestational DM is?

Answer: insulin

Medication: If diet and exercise aren't enough, you may need insulin injections to lower your blood sugar. Between 10 and 20 percent of women with gestational diabetes need insulin to reach their blood sugar goals.

1st line of treatment: Diet, exercise and glucose monitoring → if uncontrolled insulin therapy

Reference: <http://www.mayoclinic.org/diseases-conditions/gestational-diabetes/diagnosis-treatment/treatment/txc-20317193>

BMJ

106. What come with Turner syndrome?

A. Hypothyroid

B. DM

C. Addison's

Answer: A

Explanation: Turner syndrome is associated with an increased risk of autoimmune disorders, most importantly, hypothyroidism (Hashimoto's thyroiditis), celiac disease, and inflammatory bowel disease (IBD). Autoimmune hypothyroidism occurred in 37 percent of women with Turner syndrome.

Reference: <https://www.uptodate.com/contents/clinical-manifestations-and-diagnosis-of-turner-syndrome#H17>

107. Which antidiabetic medication cause weight gain?

A. Sulfonylurea

Answer: A

Explanation: Sulfonylureas lower blood glucose concentrations by about 20% and HbA_{1c} by 1 to 2%: they exert effects on HbA_{1c} similar to those of metformin, but their use entails a greater risk of hypoglycemia and of undesired weight gain, averaging approximately 2 kg.

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4548036/>

108. female patient treated for hyperlipidemia investigation shown increase in CPK? what is the cause?

A. atorvastatin

B. niacin

Answer: A

Explanation: myositis denotes muscle symptoms with elevated CK levels. Rhabdomyolysis indicates muscle symptoms with a CK elevation greater than 10 times the upper limit of normal associated with creatinine elevation. Myalgias are common with statin use. However, myositis and rhabdomyolysis are far less common, with rates of 5.0 and 1.6 per 100,000 patient-years, respectively; these rates appear to be similar with all statins, although well-designed comparative studies are lacking. The mechanism of statin induced muscle injury is uncertain.

Statins can cause creatine phosphokinase (CPK) levels to be mildly elevated; CPK is a muscle enzyme that can be measured in the bloodstream. Muscle pain, mild inflammation, and possible weakness are seen. This condition, though uncommon, can take a long time to resolve.

Reference: <http://www.aafp.org/afp/2011/0315/p711.html>

https://www.atrainceu.com/course-module/1552780-76_statins-controlling-cho-%20lesterolmodule-5

109. patient presents with bilateral exophthalmos and eyelid injection and intermittent ptosis, auscultation shows thyroid bruit, normal vital sign, there is some important information? retinal vein ...

B. hyperthyroidism

Answer: B *Graves' disease*

Explanation: Presents with weight loss, heat intolerance, anxiety, palpitations, ↑ bowel frequency, myopathy/proximal muscle weakness, insomnia, and menstrual abnormalities.

Examination reveals warm, moist skin, goiter, sinus tachycardia, or atrial fibrillation (AF), ne tremor, lid lag, and hyperactive reflexes. Exophthalmos (direct stimulation of orbital fibroblasts by antibodies), pre-tibial myxedema, and thyroid bruits are seen only in Graves' disease.

Reference: FAU 2 page 91 9th edition.

110. Patient missed his insulin injection. Most likely to be found in urine analysis?

A-

Ketones.

B- Proteins.

Answer : A

A urine test may be given as part of a routine checkup. A laboratory may test your urine for the presence of glucose and ketones in the urine. If either are present in the urine, it could mean that you are not producing enough insulin. Urine ketone testing is most often necessary in people with type 1 diabetes who have blood sugar levels over 300 mg/dl, who are sick, or who have symptoms of diabetic ketoacidosis, an acute complication of diabetes.

Reference:

<http://www.healthline.com/health/type-2-diabetes/urine-tests#Overview1>

111. Thyroid disease associated with papillary ca :

A. Hashimoto

B. Riedel thyroiditis

Answer: A

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2575056/>

112. Osteoporosis prevention..

Adequate calcium intake, proper vitamin D levels and specific exercises

<http://www.osteoporosis.org.au/prevention>

113. 61 y female known case of osteoarthritis, came for regular check up, not taking ca supplements nor high ca diet, She is a high risk of osteoporosis

What is the best initial thing before deciding the appropriate mx ?

a) DEXA SCAN

b) Oral ca, vit D, bisphosphonate

c) TSH, Ca, vit D

smle ,2017

d) Intranasal calcitonin, CA, vit Dr

Answer : A

Please check the picture below

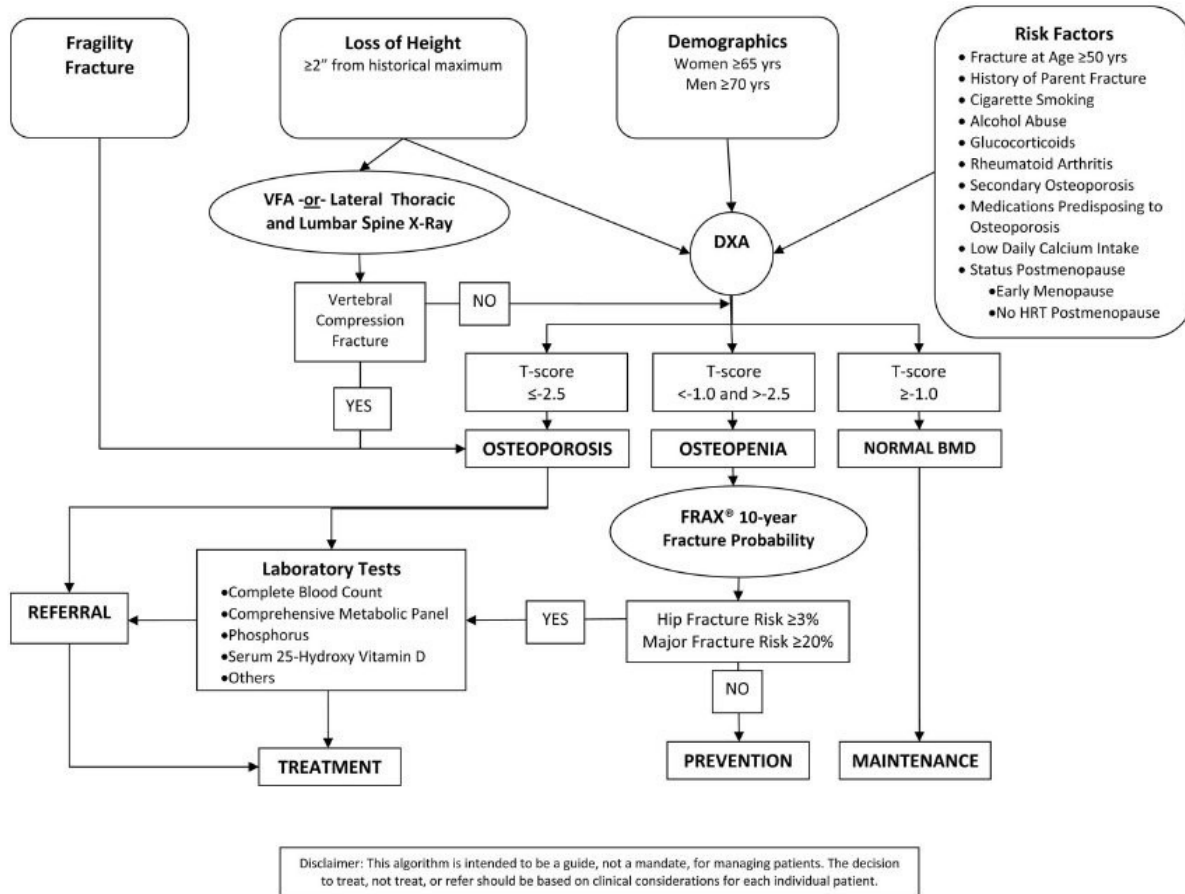


Fig. Osteoporosis Algorithm. VFA, Vertebral Fracture Assessment; DXA, dual energy x-ray absorptiometry test; HRT, hormone replacement therapy; FRAX®, World Health Organization Fracture Risk Assessment Tool; BMD, bone mineral density.

114. pregnant women has Gestational DM .. , What is her risk for future?

- A. DM type 2
- B. DM type 1

Answer : A

Reference: master the board P466

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4360417/>

115. High density bone in dexa With scheduled total hip replacement?

- A. osteoporosis
- B. osteomalacia
- C. osteoarthritis
- D. paget disease

Answer: D

Paget's disease is associated with high bone mineral density and high risk of fractures
Differential diagnosis of High bone mineral density on Dexa scans:

Paget disease of bone

malignancy: sclerotic skeletal metastases

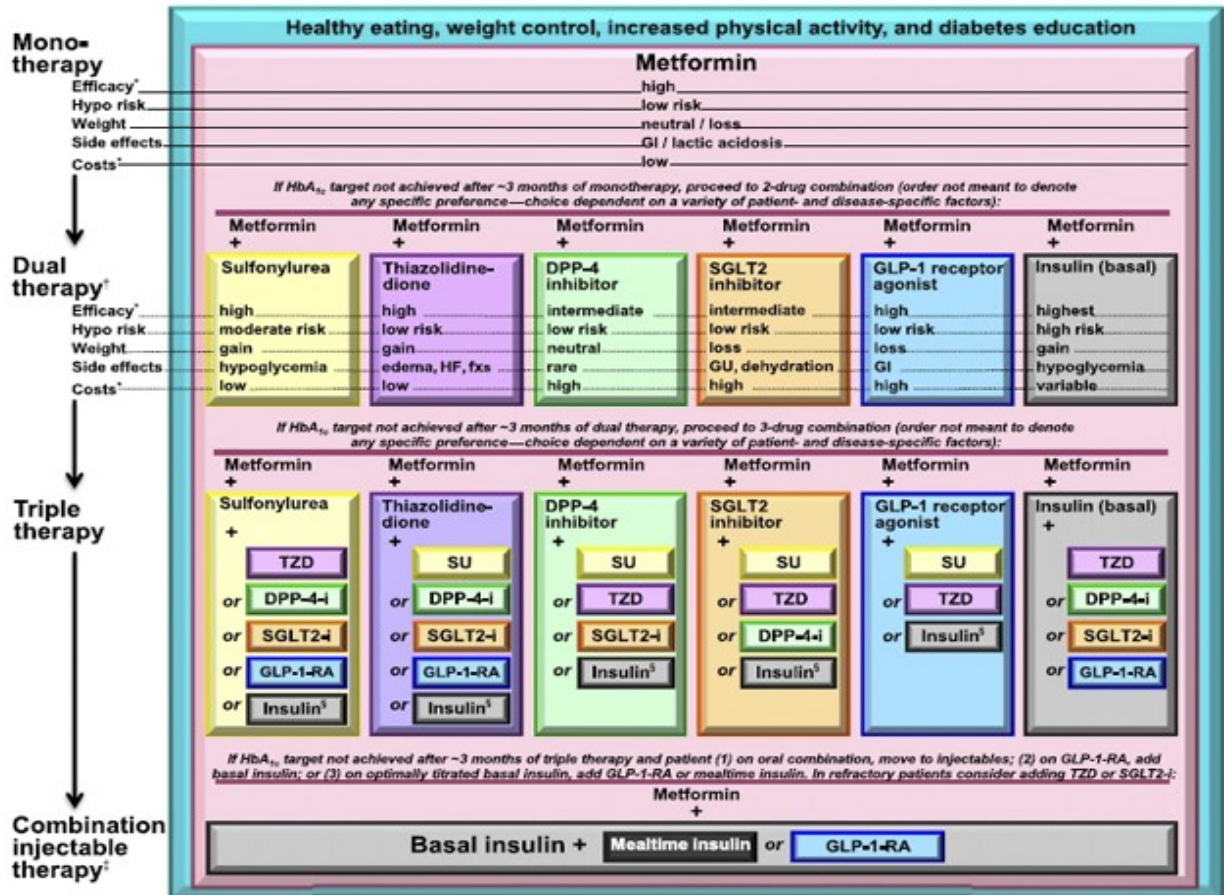
tuberous sclerosis

smle ,2017

SAPHO syndrome
<http://radiopaedia.org/articles/high-bone-mineral-density>

116. Diabetic on metformin+glib , uncontrolled

Answer: "No insulin in choices "



Medscape

Source: American Diabetes Association

117. A Lot of Q about the best type of insulin to give/side effects of each of them:
Know the anti-diabetic medications well.

118. there is q about hyperaldosteronism

Answer:

Primary Hyperaldosteronism (hyporeninemic):
Adrenal hyperplasia (idiopathic) or Conn's syndrome
HTN, hypokalemia, alkalosis ,hyponatremia secondary Hyperaldosteronism:
Reduced blood flow to JGA -> Increased renin secretion
Increased plasma renin

119. Lipid profile of a patient shows high level and patient is on simvastatin What to add?

Answer:

UpToDate: "Thus, in patients who do not achieve a particular LDL-C goal on statin therapy alone, we suggest not adding a non statin lipid-lowering medication for primary prevention. That is, the patient should be maintained on statin therapy as his/her only lipid-lowering medication." If the patient has high triglyceride level we can add a fibric acid derivative but with caution → increased risk of myositis if the patient has persistent high LDL we can add ezetimibe although it has no mortality benefit but it is an LDL lowering agent MTB

Table 14 Recommendations for the pharmacological treatment of hypercholesterolaemia

Recommendations	Class ^a	Level ^b	Ref ^c
Prescribe statin up to the highest recommended dose, or highest tolerable dose to reach the target level.	I	A	15, 16, 17
In the case of statin intolerance, bile acid sequestrants or nicotinic acid should be considered.	IIa	B	108, 120
A cholesterol absorption inhibitor; alone or in combination with bile acid sequestrants or nicotinic acid, may also be considered in the case of statin intolerance.	IIb	C	-
If target level is not reached, statin combination with a cholesterol absorption inhibitor or bile acid sequestrant or nicotinic acid may be considered.	IIb	C	-

^aClass of recommendation.

^bLevel of evidence.

^cReferences.

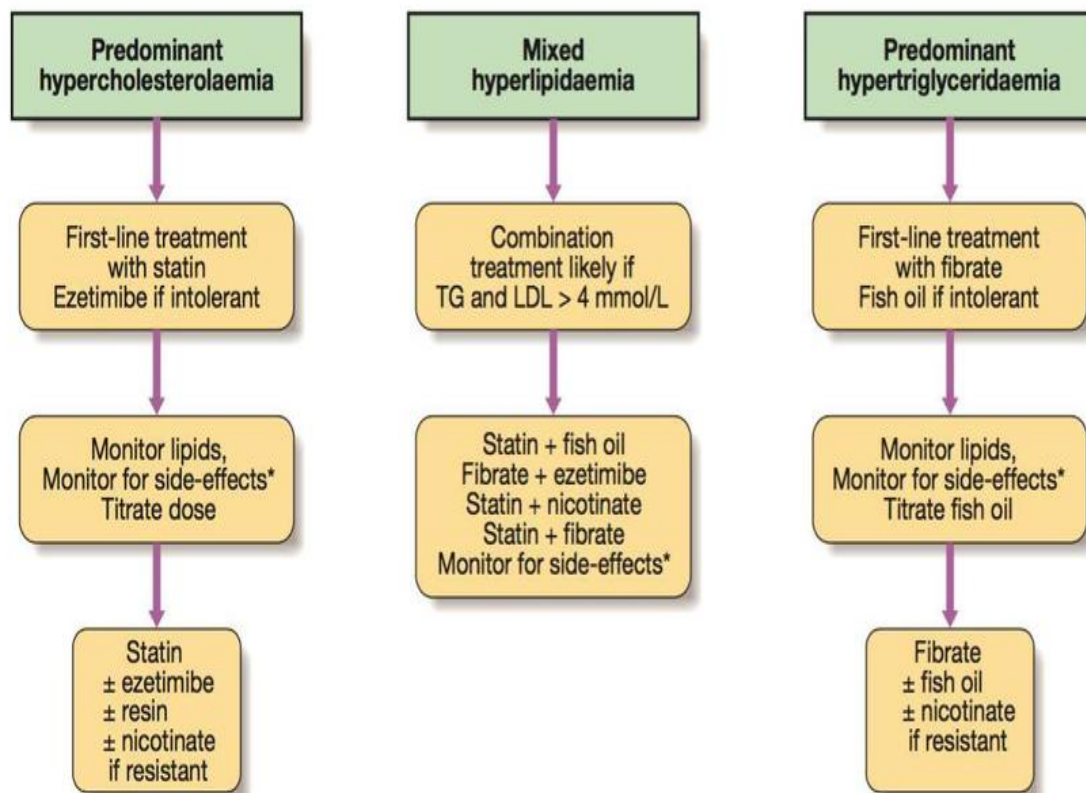


Fig. 16.16 Flow chart for the drug treatment of hyperlipidaemia. *Interrupt treatment if CK is more than 5–10 times the upper limit of normal, or if elevated with muscle symptoms, or if ALT is more than 2–3 times the upper limit. To convert TG in mmol/L to mg/dL, multiply by 88. To convert LDL-C in mmol/L to mg/dL, multiply by 38. (ALT = alanine aminotransferase; CK = creatine kinase)

120. Head trauma with low urine osmolality?

Diabetes insipidus (DI)

The most common etiologies of posttraumatic DI include severe closed head injury, frequently with basilar skull fractures; craniofacial trauma; thoracic injury; postcardiopulmonary arrest; and intraventricular hemorrhage in neonatal patients.

Characteristic features of DI include polyuria, low urine osmolality, high serum osmolality, normal serum glucose, and normal to elevated serum sodium. Urine output usually is greater than 90 mL/kg/d, with a specific gravity of less than 1.010 and an osmolality of 50–200 mOsm.

Reference: <http://emedicine.medscape.com/article/326123-clinical#b5>

121. Q about young boy present with Abd pain and vomiting??

DKA **

Answer: very short question can't decide but the answer depends on the clinical scenario,

Reference: <http://www.uptodate.com/contents/causes-of-acute-abdominal-pain-in-children-and-adolescents?>

please read here for more specific classification according to age:
<http://www.uptodate.com/contents/image?imageKey=EM/65488&topicKey=EM%2F6454&source=outline>
[link&search=%2Fcontents%2Fsearch&utmPopup=true](http://www.uptodate.com/contents/search&utmPopup=true)

122. Question about Addison disease: Answer:
Addison's disease is also known as primary adrenal insufficiency or hypoadrenalism

123. In addition to anti- HTN , what to advice ?
Restrict Na to 9mg ,Walking (such meters)

124. Diabetic patient on metformin and another drug but still blood sugar not controlled. He is allergic to sulfa, what to add?

Answer: Meglitinides

Meglitinides include repaglinide and nateglinide . They work to lower blood sugar levels, similar to the sulfonylureas, and might be recommended in people who are allergic to sulfa-based drugs. It is added as a second line medication.

The most commonly recommended second medicine is a short-acting sulfonylurea, such as glipizide. (See 'Sulfonylureas' below.)

- A thiazolidinedione, such as pioglitazone, is an alternative to sulfonylureas but only for people who are not at increased risk of heart failure or bone fracture.

(See 'Thiazolidinediones' below.)

- A glucagon-like peptide (GLP) agonist, which requires injections, is an option for patients who are overweight and who want to avoid developing low blood sugar. (See 'GLP agonists' below.)

- A meglitinide, such as repaglinide, is another option for people who cannot take a sulfonylurea because of kidney failure. (See 'Meglitinides' below.)

<http://www.uptodate.com/contents/diabetes-mellitus-type-2-treatment-beyond-the-basics>

125. Scenario about diabetic what is the Tx?
Metformin

126. Patient diagnosed DM and complained on medication but he complain of hypoglycemia more than 3 times Cause ,?

A. Honeymoon (it's the answer if type 1 DM case)

<http://www.diabetes.co.uk/blood-glucose/honeymoon-phase.html>

B. side effect of DM medication (sulfonylurea) if type 2 DM case.

127. primary hyperparathyroidism what will be the lab results
Calcium and PTH are both elevated

128. patient with metabolic acidosis with high anion gap (aspirin toxicity)?

Treat with activated charcoal and alkaline diuresis with extra KCl.

Consider hemodialysis if poisoning is severe.

HPT: 1° vs. 2° vs. 3°

Primary and tertiary are usually mixed

	Ca	PI	PTH	1,25-D
1° HPT	↑	↓	↑	↑
2° HPT	↓	↑ or ↓	↑↑	↓
3° HPT	↑	↑	↑↑	↓

Tertiary is someone who has autonomously secreting PTH glands.

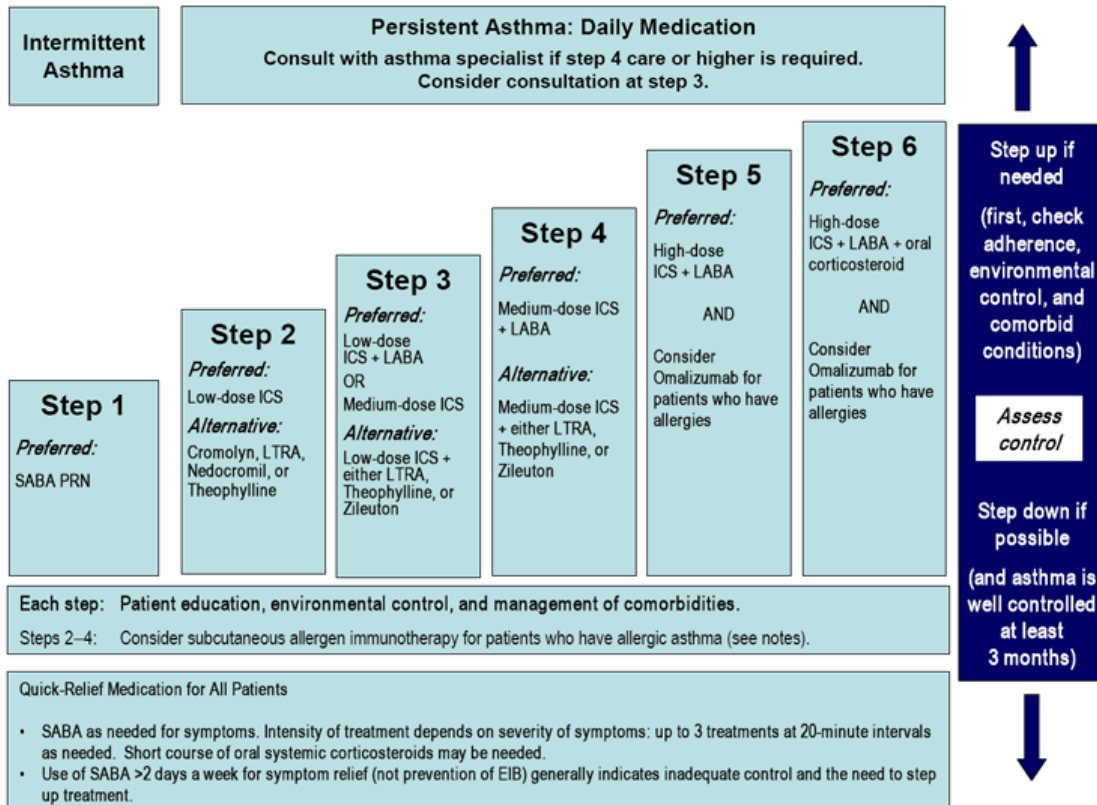
↑ means don't make 1,25-D because they've failed

PULMONOLOGY

Before you start, you have to know the classification of management of asthma by heart, please have a look to next two pictures:

TABLE 1: CLASSIFICATION OF ASTHMA SEVERITY											
Components of Severity		Classification of Severity (Youths Aged ≥ 12 Yr and Adults)									
		Intermittent	Persistent Mild	Persistent Moderate	Persistent Severe						
Impairment Normal FEV ₁ /FVC: 8-19 yr: 85% 20-39 yr: 80% 40-59 yr: 75% 60-80 yr: 70%	Symptoms	≤2 days/wk	>2 days/wk, but not daily	Daily	Throughout the day						
	Nighttime awakenings	≤2x/mo	3-4x/mo	>1x/wk, but not nightly	Often 7x/wk						
	Short-acting beta ₂ -agonist for symptom control (not prevention of EIB)	≤2 days/wk	>2 days/wk, but not >1x/day	Daily	Several times per day						
	Interference with normal activity	None	Minor limitation	Some limitation	Extreme limitation						
	Lung function	<ul style="list-style-type: none"> •Normal FEV₁ between exacerbations •FEV₁ >80% predicted •FEV₁/FVC normal 	<ul style="list-style-type: none"> •FEV₁ ≥80% predicted •FEV₁/FVC normal 	<ul style="list-style-type: none"> •FEV₁ >60% but <80% predicted •FEV₁/FVC reduced 5% 	<ul style="list-style-type: none"> •FEV₁ <60% predicted •FEV₁/FVC reduced >5% 						
Risk	Exacerbations requiring oral systemic corticosteroids	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center; border-bottom: 1px solid black;">0-1 yr</td> <td style="width: 50%; text-align: center; border-bottom: 1px solid black;">≥2/yr</td> </tr> <tr> <td colspan="2" style="text-align: center; border-bottom: 1px solid black;">Consider severity and interval since last exacerbation; frequency and severity may fluctuate over time in any severity category</td> </tr> <tr> <td colspan="2" style="text-align: center;">Relative annual risk of exacerbations may be related to FEV₁</td> </tr> </table>				0-1 yr	≥2/yr	Consider severity and interval since last exacerbation; frequency and severity may fluctuate over time in any severity category		Relative annual risk of exacerbations may be related to FEV ₁	
0-1 yr	≥2/yr										
Consider severity and interval since last exacerbation; frequency and severity may fluctuate over time in any severity category											
Relative annual risk of exacerbations may be related to FEV ₁											

FEV₁: forced expiratory volume in one second; FVC: forced vital capacity; EIB: exercise-induced bronchospasm.
 Source: Reference 2.



— **Key:** Alphabetical order is used when more than one treatment option is listed within either preferred or alternative therapy. EIB, exercise-induced bronchospasm; ICS, inhaled corticosteroid; LABA, long-acting inhaled beta₂-agonist; LTRA, leukotriene receptor antagonist; SABA, inhaled short-acting beta₂-agonist

Notes:

- The stepwise approach is meant to assist, not replace, the clinical decisionmaking required to meet individual patient needs.
- If alternative treatment is used and response is inadequate, discontinue it and use the preferred treatment before stepping up.
- Zileuton is a less desirable alternative due to limited studies as adjunctive therapy and the need to monitor liver function. Theophylline requires monitoring of serum concentration levels.
- In step 6, before oral systemic corticosteroids are introduced, a trial of high-dose ICS + LABA + either LTRA, theophylline, or zileuton may be considered, although this approach has not been studied in clinical trials.
- Step 1, 2, and 3 preferred therapies are based on Evidence A; step 3 alternative therapy is based on Evidence A for LTRA, Evidence B for theophylline, and Evidence D for zileuton. Step 4 preferred therapy is based on Evidence B, and alternative therapy is based on Evidence B for LTRA and theophylline and Evidence D for zileuton. Step 5 preferred therapy is based on Evidence B. Step 6 preferred therapy is based on (EPR—2 1997) and Evidence B for omalizumab.
- Immunotherapy for steps 2–4 is based on Evidence B for house-dust mites, animal danders, and pollens; evidence is weak or lacking for molds and cockroaches. Evidence is strongest for immunotherapy with single allergens. The role of allergy in asthma is greater in children than in adults.
- Clinicians who administer immunotherapy or omalizumab should be prepared and equipped to identify and treat anaphylaxis that may occur.

1. An asthmatic who needs daily short acting beta 2 inhalers, oral steroids and daily spirometry monitoring of PFTs. What is his asthma stage?

a. Mild intermittent

smle ,2017

- b.Mild persistent
- c.Moderate
- d.Severe

answer: D

Once the patient on oral steroid he/she classified as a severe asthma.

Reference: 1.http://www.med.umich.edu/1info/FHP/practiceguides/asthma/EPR-3_pocket_guide.pdf

2.Bilateral pneumonia treatment:

No enough information, no choices were provided. Please check this guideline for pneumonia management.

<http://emedicine.medscape.com/article/300157-treatment?pa=P%2B0fQd%2BKq5d2qvAdXgk31c7SA8tOdncz35FYJLDJXIZwHwTo9HGJnuGRqFyKi09UX8MwC0EECwzp432Skuf9qw%3D%3D#d1>

3.most common cause of chronic cough in adult?

- a –GERD
- b -postnasal drip
- c –asthma

answer : B

Reference: http://www.uptodate.com/contents/chronic-cough-in-adults-beyond-the-basics?source=outline_link&view=text&anchor=H3#H3

4.What is the most specific investigation for TB ?

- A.Sputum culture
- B.PPD

Answer : A

Explanation : The most sensitive and specific test. While on treatment, the patient should have sputum cultures performed at least monthly until 2 consecutive cultures are negative

Reference: <http://bestpractice.bmj.com/best-practice/monograph/165/diagnosis/tests.html>

5- lung cancer with keratin?

- A-Squamous cell carcinoma

Ans: A

Explanation: Squamous cell carcinoma associated with Cavitation; Cigarettes; hyperCalcemia (produces PTHrP). Keratin pearls and intercellular bridges.(First aid step one 2016 page 649)

Reference:. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3155291/>

6.most common cause of obstructive sleep apnea ?

- Obesity

ANS: A

Explanation: In adults, the most common cause of obstructive sleep apnea is excess weight and obesity, which is associated with soft tissue of the mouth and throat. During sleep, when throat and tongue muscles are more relaxed, this soft tissue can cause the airway to become blocked.

Reference: <http://www.mayoclinic.org/diseases-conditions/obstructive-sleep-apnea/symptoms-causes/dxc-20205871>

7. Repeated Q?

9. Pt have lesion in right upper lung look like calcium how to manage?

Answer:

Explanation: The first step in the evaluation of a pulmonary nodule is to look for a prior x-ray. Finding the same pulmonary nodule on an x-ray done years ago may save you from doing any further workup. If no prior x-ray is available, then consider whether this patient is high or low risk for lung cancer. In low-risk patients, <35 years of age and nonsmokers with calcified nodules, you may follow

the patient with chest x-rays or chest CT every 3 months for 2 years. Stop the follow-up if after

2 years there is no growth. High-risk patients >50 years of age with a smoking history and a nodule are likely to have bron-

chogenic cancer. The best diagnostic procedure is open-lung biopsy and removal of the nodule

at the same time.

Reference : <http://www.sciencedirect.com/science/article/pii/S0012369216013088?via%3Dihub>

Master the board step two CK third edition page177-178

10. Pt with barking cough and 38 temp which of the following symptoms is associated with this disease?

Answer: Croup

Explanation: Croup is a disease that causes a harsh, barking, dry cough that can sound similar to a seal barking. Children with croup have a swollen upper trachea, or windpipe; this is usually caused by a viral infection. The swelling, which is beneath the vocal cords, causes the barking cough

Reference: http://www.uptodate.com/contents/croup-clinical-features-evaluation-and-diagnosis?source=search_result&search=croup&selectedTitle=2%7E53
<http://emedicine.medscape.com/article/962972-clinical>

smle ,2017

11. Repeated Q

12. Asthma on montelukast and Bronchodilator has dry cough every day came to ICU, what to give for long term?

Answer: Every day consider sever, please go back to picture above and check the proper treatment.

13. cystic fibrosis mode of inheritance?

Answer: autosomal recessive (AR)

Reference: http://www.uptodate.com/contents/cystic-fibrosis-genetics-and-pathogenesis?source=search_result&search=cystic+fibrosis+mode+of+inheritance&selectedTitle=18%7E150

Master the board step two CK third edition page 158

14. A patient is coughing bloody frothy sputum. He has pulmonary edema, + hepatojugal reflux and lower limb edema. Capillary pressure is 3 times more than oncotic pressure. What is the type of edema ?

- A. Venous
- B. Arterial
- C. Interstitial
- D. Capillary

Answer: C

Cardiogenic pulmonary edema (CPE) is defined as pulmonary edema due to increased capillary hydrostatic pressure secondary to elevated pulmonary venous pressure. CPE reflects the accumulation of fluid with a low-protein content in the lung interstitium and alveoli as a result of cardiac dysfunction

Reference: <http://emedicine.medscape.com/article/157452-overview>

15. According to the new classification of lung cancer, which of the following is considered carcinoma in-situ?

- A. Adenocarcinoma less than 2 cm.
- B. Atypical hyperplasia

Answer: A

Adenocarcinoma in situ (AIS) with no invasive features is a localized, small (≤ 3 cm) adenocarcinoma with growth restricted to a non-invasive pattern and an absence of papillary or micropapillary patterns or intra-alveolar tumor cells.

Reference:

<https://radiopaedia.org/articles/adenocarcinoma-in-situ-minimally-invasive-adenocarcinoma-and-invasive-adenocarcinoma-of-lung>

16. A male patient who is a smoker, developed symptoms. Ca: High. CXR showed solitary nodule. What is the most likely diagnosis?

smle ,2017

- A. Squamous Cell Carcinoma SCC
- B. Adenocarcinoma

Answer: A

Explanation: High Ca +smoker = SCC

Reference: <http://www.cancerresearchuk.org/about-cancer/coping-with-cancer/coping-physically/calci-um/high-calcium-in-people-with-cancer>

17. Asymptomatic Patient. Chest X ray shows a unilateral calcified nodule on the upper zone of his lung?

- A. Adenoma
- B. Granuloma
- C. Hamartoma
- D. SCC

Answer: B

Table 32. CXR Characteristics of Benign vs. Malignant Solitary Nodule

Parameters	Benign	Malignant
Size	<3 cm, round, regular	>3 cm, irregular, spiculated
Margins	Smooth margin	Ill-defined or notched margin
Features	Calcified pattern: central, "popcorn" pattern if hamartoma, usually no cavitation; if cavitating, wall is smooth and thin, no other lung pathology	Usually not calcified; if calcified, pattern is eccentric, no satellite lesions, cavitation with thick wall, may have pleural effusions, lymphadenopathy
Doubling Time	Doubles in <1 mo or >2 yr	Doubles in >1 mo or <2 yr

The most common cause of nodule calcification is granuloma formation, usually in the response to healed infection.

Reference: <http://radiopaedia.org/articles/calcified-pulmonary-nodules>

Granuloma is account 25% and 15% of all benign causes, respectively. Active granulomatous infections include tuberculosis, coccidioidomycosis, histoplasmosis, cryptococcus, and aspergillosis. Hamartomas comprise an additional 15% of benign lesions

Reference: <http://www.clevelandclinicmeded.com/medicalpubs/diseasemanagement/hematology-oncology/pulmonary-nodules/>

18. Patient with shoulder pain and pleurisy. Which part of the pleura causes radiation of the pain to shoulder:

- a. Visceral
- b. Mediastinal
- c. Costal
- d. Anterio

Answer: B

Explanation:

●Visceral pleura: insensitive to pain due to autonomic innervation.

Parietal pleura:

- Costal and peripheral parts of diaphragmatic pleura are referred along intercostal nerves to thoracic and abdominal wall.
- Mediastinal and central diaphragmatic pleural pain referred to root of neck and over shoulder (Dermatomes C3-C5).

Reference: <http://www.healthhype.com/what-is-pleuritis-or-pleurisy-pleura-inflammation-pleuritic-pain.html>

19. Most common cause of excessive sleepiness in the daytime is?

- A. Narcolepsy
- B. Obstructive Sleep Apnea (OSA)

Answer: B

The most common causes of excessive daytime sleepiness are sleep deprivation, obstructive sleep apnea, and sedating medications.

Reference: <http://www.uptodate.com/contents/approach-to-the-patient-with-excessive-daytime-sleepiness>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3506799/>

20. case of pneumonia, what ur finding on the auscultation?

- A. dispred crackles
- B. bronchial breath sound
- C. absence of vesicular breath sound

Answer: B

In lobar pneumonia: Bronchial breath sound+crackles

<https://www.ncbi.nlm.nih.gov/pubmed/12149800>

21. A patient with lung cancer. Lab results: low PTH and High Calcium. What is the reason?

a. PTH related peptide for lung ca

Answer: A

Reference: <https://www.ncbi.nlm.nih.gov/pubmed/25743561>

22. Patient with bronchiectasis. What else beside medical treatment can benefit this patient?

a. Chest physiotherapy , vaccination , corticosteroid

Answer: A

Reference: Master the board step two CK third edition page 157

23. Best drug to decrease bronchial secretion in COPD?

a. Ipratropium

Answer: A

Reference: Master the board step two CK third edition page 154

24. A patient with chronic retrosternal pain, cough and metallic taste in mouth. What is the most likely diagnosis?

a. GERD

Answer: A

“heartburn” (pyrosis) and acid regurgitation (together are 80% sensitive and specific for reflux) ± sour regurgitation, water brash, sensation of a lump in the throat (bolus sensation) and frequent belching.

Reference: Master the board step two CK third edition page 269

25. Most common cause of acute bronchiolitis:

- A. RSV
- B. Adeno
- C. Parainfluenza

Answer: A

Reference: <http://emedicine.medscape.com/article/961963-overview>

26. Repeated Q

29. A patient developed rhinorrhea and itching immediately after moving into new apartment. There were mold spores in the apartment

Answer: allergic Rhinitis

Explanation: Allergic rhinitis is commonly known as hay fever. Common symptoms include sneezing, stuffy nose, itchy nose, watery eyes, and a sore, scratchy throat. Possible triggers include grass, mold, pollen, dust mites, cockroaches, cigarette smoke, and perfume

Reference: <http://emedicine.medscape.com/article/134825-overview>

30. Rhinorrhea, cough and conjunctivitis etiology?

- A- Rhinovirus
- B- Adenovirus

Answer: B

The most common cause of rhinorrhea and sinusitis is Rhinovirus. But since there is also conjunctivitis, then Adenovirus is more appropriate.

Reference: <http://emedicine.medscape.com/article/302460-clinical>

<http://emedicine.medscape.com/article/211738-clinical>

31. In which lobe does lobar pneumonia become?

- 1. Right mid
- 2. Right upper
- 3. Right lower
- 4. Left upper answer: Right lobe of lower lung

Answer: C

Feature	Lobar pneumonia	Bronchopneumonia
Exudate	Fibrinous or fibrino-purulent	Serous, purulent, haemorrhagic, fibrinous, putrid, mixed
Affected lung volume	1 lobe (right lower is most common), 2 lobes, 3 lobes	Acini, lobuli, segment(s)
Prevalent patients age	<ul style="list-style-type: none"> • Young adults, adults • Always primary 	<ul style="list-style-type: none"> • All ages • Usually secondary (primary in infants and elderly patients)
Staging	4 stages	No

Reference:

https://www.bsmu.by/downloads/kafedri/k_pat_anatom/2014-2/lung.pdf

32. Organism causing pneumonia after intubation in ICU ?

Answer:

-Pseudomonas, S. aureus

(from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4056625/>)

33. What of the following decrease the recurrence of asthma of the following?

- a. Salbutamol
- b. Aminophylline
- c. Ipratropium
- d. Montelukast

Answer D

Explanation: These medications block the action of chemicals called leukotrienes, which occur in white blood cells and may cause inflammation and narrowing of the airways. Leukotriene modifiers cannot stop symptoms during an asthma attack. They only are used to prevent an asthma attack from occurring. Leukotriene modifiers seem to be more effective in people with aspirin-sensitive asthma (a type of asthma triggered by an allergic reaction to aspirin or other nonsteroidal anti-inflammatory medications)

http://www.hopkinsmedicine.org/healthlibrary/conditions/allergy_and_asthma/treatment_for_asthma_85,P00005/

34. Which of the following decrease the inflammation in asthma?

A-leukotriene

long term Daily use of low-dose inhaled corticosteroids or nonsteroidal agents such as cromolyn and nedocromil (antiinflammatory treatment), leukotriene antagonists, montelukast.

Ref: <https://www.ncbi.nlm.nih.gov/pubmed/22210376>

smle ,2017

35.hemosiderin deposition in macrophage in lung in:

a-CMV

b-Pneumocystisjiroveci

c-Chronic lung infection

Answer B

Explanation : Pneumocystisjiroveci β -glucan rich cell wall isolate (PCBG) stimulates the release of macrophage inflammatory protein-2 (MIP-2) from isolated AECs through a lactosylceramide-dependent mechanism.

<https://www.ncbi.nlm.nih.gov/pubmed/1446490>

36.Pt had URTI ,2 weeks later developed orthopnea , severe pulmonary edema

-What is the dx .

A.Infective endocarditis

B.acute pericarditis

C.acute myocarditis

D.acute bronchitis

Answer C

Patients with myocarditis have a clinical history of acute decompensation of heart failure, (e.g. tachycardia, gallop, mitral regurgitation, edema).

In viral myocarditis, patients may present with a history of recent (within 1-2 wk) flu like syndrome of fevers, arthralgias, and malaise or pharyngitis, tonsillitis, or upper respiratory tract infection.

Reference: <http://emedicine.medscape.com/article/156330-clinical#b1>

37.Pt healthy pt with no symptoms x ray is normal ,has negative hx of tuberculin test now has positive test ..?

A.Reassure

B.give rifampicin and izo

C.give isoniazid for 6 months

answer :C

The pt has latent TB ,so the treatment will be:

- * 6 month or 9-month isoniazid daily,
- * 3-month rifapentine plus isoniazid weekly,
- * 3- or 4-month isoniazid plus rifampicin daily,
- * 3- or 4-month rifampicin alone daily.

Reference:

<http://www.who.int/tb/challenges/ltbi/en/>

38.patient have cough and sob x-Ray show consolidation in right upper lob what treatment?

Answer: Antituberculosisdrugs.TB may be found in any part of the lung, but upper lobe involvement is most common.

Reference: <http://emedicine.medscape.com/article/230802-workup#c12>

39. patient with asthma exacerbation, Which drug will decrease the mucous secretion more than bronchodilation :

- A-oral steroids
- B- ipratropium
- C- leukotriene

Answer B

Reference: Master the board third edition page 151

40. A middle-aged man presents with a cough and fever lasting several weeks. Posteroanterior chest radiograph shows a prominent paratracheal area on the right, lymphadenopathy, a cavitary opacity in the right upper lobe, and a focal consolidation in the middle lung zone on the right. CXR shown below. What is the dx?

- A-COPD
- B-BA
- C-Pneumonia
- D-TB



Answer: D

41. patient with “pertussis” best swab

- A-Nasal swab
- B-Nasopharyngeal
- C- Tracheal

Answer B

The culture specimen should be obtained by using deep nasopharyngeal aspiration or by holding a flexible swab (Dacron or calcium alginate) in the patient posterior nasopharynx for 15-30 seconds or until a cough is produced.

<http://emedicine.medscape.com/article/967268-workup#c9>

42. lung found some material in the macrophage i can't remember biopsy of the material)

- a. PCP) pneumocystis carinii
- b. CMV
- c. Bacterial

depend on the content

43. pt present with symptoms of bronchiectasis what is the best advice?

- A. stop smoking

Answer: A

<http://emedicine.medscape.com/article/296961-treatment?src=refgatesrc1#d8>

44. Smoker + hemoptysis what to do (not specified first or best)?

smle ,2017

- A.Chest x-ray
- B.Chest CT
- C.Ppd
- D.Coagulation profile

Answer: A

he is symptomatic, we do x-ray for any Patient with respiratory symptoms

Toronto notes

45.Pt with diarrhea and cxr showing bilateral infiltrates(pneumonia). Which organism responsible

A.Legionella

Answer:A

Reference: Master the board step two CK third edition page 161

46.Q about. TB. Numbness

A.Pyridoxine

Explanation: Isonizid cause peripheral neuropathy, to prevent it give pyridoxine (Vitamin B6)

Reference:

<http://emedicine.medscape.com/article/124947-overview#a4>

47.scenario about horner syndrome asking about the site of tumor:

Answer: on the lung apical.

Pancoast tumor (tumor in the apex of the lung, Most Pancoast tumors are squamous cell carcinomas (SCCs) or adenocarcinomas) malignant neoplasm of the superior sulcus of the lung (lung cancer) leads to destructive lesions of the thoracic inlet and involvement of the brachial plexus and cervical sympathetic nerves

<http://emedicine.medscape.com/article/1220091-overview#a4>

48.asthmatic pt on inhaled corticosteroids , asthma becomes more sever what should you add :

A. LABA

Answer: A

The stepwise management of asthma(step 3 Inhaled corticosteroids and long-acting in- haled β_2 agonist)

49.Patient with ventilator associated pneumonia. Culture showed lactose non-ferment- ing, gram negative motile bacilli producing greenish colony and oxidase positive what is the organism:

A.E. coli

B.Pseudomonas

C.Klebsiella

D.Proteus

Answer B

<https://www.microbiologyinpictures.com/pseudomonas-aeruginosa.html>

50. PPD was +ve, to prevent false +ve, what to do?!

- A. Repeat it
- B. Do X-ray
- C. Do Mantoux test

Answer B

Explanation: chest radiograph may be used to rule out the possibility of pulmonary TB in a person who has had a positive reaction to a TST or TB blood test and no symptoms of disease

<https://www.cdc.gov/tb/topic/testing/diagnosingtbi.htm>

51. X-ray of the lung showed opacification with air fluid level? What is the most likely diagnosis?

Opacification with air fluid level << abscess

<http://radiopaedia.org/articles/lung-abscess>

52. Elderly, asthmatic, what is the best induction

- A. Propofol
- B. ketamine

Answer : A#

propofol is considered to be the agent of choice for induction of anesthesia in asthmatics.

<http://www.ncbi.nlm.nih.gov/m/pubmed/11050961>

53. long scenario about patient presented dry cough after being diagnosed with HTN what is the cause:

- A. furosemide
- B. ACEI

answer : B

● The most common side effect is a mild dry cough due to their effect on bradykinin. (Captopril, Enalapril, Lisinopril)

Kumar & Clark's Eighth Edition, page 782

54. non small cell lung cancer has 4 risk factors which are stage of the disease, condition of the patient and male sex

Not clear, please check the stage of non small cell lung from here:

<http://www.cancer.ca/en/cancer-information/cancer-type/lung/staging/?region=on>

57. In emphysema alpha one antitrypsin which part is affected:

- A. Interstitial
- B. Centroacinar

smle, 2017

- C. Peripheral
- D. Pananciner

Answer: D

<http://emedicine.medscape.com/article/298283-overview#a4>

58.pt develop cough during exercise , which medication want to give her before exercise .
Short-acting inhaled beta2-agonists (bronchodilators)

Explanation: preferred asthma medications are short-acting beta-2 agonists such as albuterol.
Taken 10 minutes before exercise.

Another asthma treatment that may be useful when taken before exercise is inhaled cromolyn sodium, such as Intal or Tilade,15 to 20 minutes before exercise.

Ref: <http://www.webmd.com/asthma/guide/exercise-induced-asthma#1>

59.A 55 yo man with history of chronic cough associated with production of daily mucopurulent sputum production came with hemoptysis, foul smelling sputum, and fever. Examination revealed crackles and rhonchi. What is the most likely diagnosis?

A-bronchiectasis

B-Tb

C-Asthma

Answer:A

Toronto Notes 2016 page1258, master the bored page 156

60.Old patient with small cell lung cancer treated by chemotherapy on examination there is crepitation on the lung no LL swelling lab result showed hyponatremia what is your advice ?

A- IV furosemide

B- Fluid restriction

C- Desmopressin

The answer is B

Explanation : This patient most likely has paraneoplastic syndrome (SIADH). Treat it with Restrictionof fluid intake as first-line treatment.

Reference: <http://emedicine.medscape.com/article/246650-treatment>

61.Which one of these lung cancers is associated with anti epithelial cell receptor thera- py ?

A-Adenocarcinoma

B-Squamous Cell Carcinoma

C- Small Cell Carcinoma

Answer: A

Explanation :Adenocarcinoma activating mutations include KRAS, EGFR , and ALK. (first aid step 1, 2016 page 649) . and the The Epidermal Growth Factor Receptor (EGFR) family, including EGFR, HER2, HER3, and HER4, is implicated in the development and progression of cancer, and is expressed in many human epithelial malignancies, including Non-Small Cell Lung Cance. Several molecules were synthesized to inhibit the extracellular domain of EGFR, such as cetuximab.

<https://www.ncbi.nlm.nih.gov/pubmed/18393776>

62.64.Old woman has HTN it's not controlled even with multi drugs .. She sleeps afternoon alot and feels fatigue most of the time , What is the cause of her resistance HTN ?

a)Obstructive sleep apnea

Answer: A

Toronto Notes 2016page1045

63.Skin manifestation associated with cystic fibrosis:

A- seborrheic dermatitis

B dermatitisherpetiformis

answer: cutaneous findings in CF are thought to be caused by a combination of zinc, protein, and EFA deficiencies. Zinc def is associated with **acrodermatitis enteropathica** (Coalescing erythematous plaques with overlying desquamation involving the buttocks, genitourinary region, and proximal extremities)

Ref: <http://jamanetwork.com/journals/jamadermatology/fullarticle/209551>

64.what is the original of embryonal alveolar?

A.saccule

Answer ; A

<http://www.ncbi.nlm.nih.gov/m/pubmed/19175284/>

65.Patient brought to ER comatose with cherry red skin ?

A.co posing

Answer A

Explanation: poisoning causes hypoxia, cell damage, and death. ... The classical signs of carbon monoxide poisoning — described as cherry-red lips, peripheral cyanosis, and retinal haemorrhages

http://cursoenarm.net/UPTODATE/contents/mobipreview.htm?27/29/28112?source=related_link#H66

66.asthmatic controlled on albuterol PRN, now she got pregnant, and she started to have daily symptoms & night ?

smle ,2017

A. Inhaled steroid + LABA

Pregnant women manage asthma the same way nonpregnant women do. refer to image above for management of asthma

Reference: <http://www.webmd.com/asthma/tc/asthma-during-pregnancy-topic-overview#1>

67. patient presented to the ER with cough hemoptysis night sweats and malaise. what is most appropriate initial step in the management?

A. isolation in negative pressureroom

B. start anti TB

C. give OPD appointment after 2 weeks

Answer: A

Explanation :TB infection control measures should be based on a careful assessment of risk for transmission of TB in the facility or setting. The goals of effective TB infection control programs are to

- Detect TB disease early and promptly;
- Isolate those who have or are suspected of having TB disease (airborne precautions); and
- Treat people who have or who are suspected of having TB disease.

<https://www.cdc.gov/tb/education/corecurr/pdf/chapter7.pdf>

68. COPD patient was on oral steroid and there was improvement 17% in breathing, which medication will you put him on :

A. theophylline

B. amitriptyline inhaler or oral

answer :

Prednisolone 30 mg daily should be given for 2 weeks, with measurements of lung function before and after the treatment period. If there is objective evidence of a substantial degree of improvement in airflow limitation (FEV1 increase >15%), prednisolone should be discontinued and replaced by inhaled corticosteroids (beclometasone 40 µg twice daily in the first instance, adjusted according to response).

[Kumar & Clark's Eighth Edition, page 816](#)

69. An elderly pt presented to ER due to decreased level of consciousness lethargy

Pco2 20 mmhg

K 2

Ph 7.2 I can't remember the rest of the labs and choices What does she have?

A. high anion gap metabolic acidosis with primary respiratory alkalosis

answer: A

[Toronto Notes 2016, page 710, 1252](#)

smle, 2017

70.pt with chest infection was treated with oral AB For 4 weeks later came complain from right lung effusion what dx?

- a)Parapneumonic effusion empyema
- b)TB
- c)Lung ca

Answer:A

Explanation:pus in pleural space or an effusion with organisms seen on a Gram stain or culture (e.g. pleural fluid is grossly purulent)

- positive culture is not required for diagnosis Etiology
- contiguous spread from lung infection (most commonly anaerobes) or infection through chest wall (e.g. trauma, surgery)

Reference: Kumar &Clark'sEighthEdition ,page 837

71. Repeated Q

72.what you'll seen on physical examination of pt with croup ??

A- presence of inspiratory sounds

B- presence of expiratory wheeze

Answer: A but in severe both of them

The physical presentation of croup has wide variation. Most children have no more than a "croupy" cough and hoarse cry. Some may have stridor only upon activity or agitation, whereas others have audible stridor at rest and clinical evidence of respiratory distress. Paradoxically, a severely affected child may have , stridor secondary to a greater degree of airway obstruction. The child with croup typically does not appear toxic.

The child's symptoms can range from minimal inspiratory stridor to severe respiratory failure secondary to airway obstruction.[14] In mild cases, respiratory sounds at rest are normal; however, mild expiratory wheezing may be heard. Children with more severe cases have inspiratory and expiratory stridor at rest with visible supra sternal, intercostal, and subcostal retractions. Air entry may be poor. Lethargy and agitation are due to marked respiratory difficulty and, hence, hypoxia and increasing hypercarbia. Respiratory arrest may occur suddenly during an episode of severe coughing.

<http://emedicine.medscape.com/article/962972-clinical#b33>

73.Case of asthma, cough every week, he took neublazer Steroid , what next step agement ?

A.add long acting B agonist

B.ibrapritm

Answer: A

add long acting B agonist

The stepwise management of asthma(step 3 Inhaled corticosteroids and long-acting inhaled β 2 agonist)

74. Repeated Q?

75.12yo bilateral lower lung infiltration what is the management?

A. Ciprofloxacin

smle ,2017

- B. Azithromycin
- C. Penicillin

Answer: B

most likely pneumonia checks this link for the management:

<http://emedicine.medscape.com/article/300157-treatment?pa=P%2B0fQd%2BKq5d2qvAdXgk31c7SA8tOdncz35FYJLDJXIZwHwTo9HGJnuGRqFyKi09UX8MwC0EECwzp432Skuf9qw%3D%3D#d1>

76. Repeated Q

77. Repeated Q

78. Pt presented with pneumonia symptoms for 2 weeks i think the gram stain negative :

A. mycoplasma pneumonia

No enough information

79. Repeated Q

80. typical history of pneumonia. x ray was done lower lobe consolidation was found culture shows gram positive cocci arranged in clusters. catalase and coagulase positive. what is the most appropriate AB for this infection?

A. oxacillin

B. penicillin G

C. amoxicillin

Answer:

Explanation: Gram stain indicate the organism is Staph aureus. Treatment: use susceptibilities to help guide final choice. Linezolid may have better PK/PD data in lung compared to vancomycin; study shows better initial clinical success than vancomycin, but similar 60d mortality[11].

Vancomycin 15mg/kg IV q12h

Linezolid 600mg IV/PO q12h

Clindamycin 600mg IV or 300-450mg PO q8h

Telavancin 10 mg/kg IV q24h

Reference:

https://www.hopkinsguides.com/hopkins/view/Johns_Hopkins_ABX_Guide/540518/all/Staphylococcus_aureus

81. Status asthmaticus on drug inhibit cholinesterase what is the drug?

A. Ipratropium

Ref:

<https://www.drugs.com/drug-class/anticholinergics-antispasmodics.html>

smle ,2017

82. COPD developed, DM, developed Acute closure glaucoma; which treatment.

Not clear treatment for what problem, COPD, GLUCOMA or DM ?

83. asthmatic with 3/week of frequency on short acting and last severe attack was 3 months ago
What the appropriate management ?

A. short

B. Long

C. ipratropium

D. Dexamethasone

This is the option not missing any info dexamethasone

RT answer (add ICS) but b/c it is not from choices so we choose D

84. positive PPD skin test for adult man without any sign of TB infection what you will be do ?

Answer: Chest X ray if negative INH for 9 m

Explanation A chest radiograph should be ordered as part of a medical evaluation for a person who has a positive PPD or IGRA result. help differentiate between LTBI and pulmonary TB disease

Reference:

<https://www.cdc.gov/tb/publications/ltbi/diagnosis.htm>

85. Repeated Q

86. boy referral due to having recurrent chest infections & has brother die at 6yrs as same chest infection, his sister normal, all immunoglobulins low, T-cell function good:

A. X-LINKED agammaglobulinemia

Answer: A

Explanation: recurrent infection+ only male affected+ low immunoglobulins

Reference: <http://emedicine.medscape.com/article/1947912-overview>

87. Repeated Q

88. patient with positive PPD, never was +ve before what is next step if no x-ray findings?

A. isoniazid and rifampin 6 months

B. rifampin 3 months

Age and medical history of the patient not provide, please check guideline

<https://www.cdc.gov/tb/topic/treatment/ltbi.htm>

89. if there is no iso then rifampin adult patient came to ER can't talk agonic what are you going to do ?

A. look for object in his mouth

B. give him oxygen

Not clear

90. After delivery shortness of breath at night. What findings in the x-Ray support diagnosis?

A) Increase in mediastinal width.

B) Increase shadowing

C) Cardiothoracic increase.

smle, 2017

Answer: C

Most likely patient got PE after delivery, Cardiomegaly is the most common chest radiographic abnormality associated with acute pulmonary embolism

Reference : <https://www.ncbi.nlm.nih.gov/pubmed/10893356>

91. Patient with hemoptysis, at first it was blood tinged then it appeared bright red blood what should the next investigation be?

A) Chest x-ray

B-PPD

Answer: A

he is symptomatic, we do x-ray for any Patient with respiratory symptoms

Ref: Toronto notes

92. patient present with upper limb edema, intercostal vein engorgement, lesion in right lung, compression in which side :

A. Ant mediastinum

B. Post mediastinum

C. Rt hilum

D. Medium mediastinum

Answer : A

Explanation: sign and symptoms indicate diagnosis of SVC. Thymoma usually present as SVC syndrome – Thymus gland is a part of anterior mediastinum.

Reference:

<http://eradiology.bidmc.harvard.edu/LearningLab/respiratory/Ketlogetswe.pdf>

93. 3 years old with a father known to have pulmonary TB his PPD 10mm what does he have ?

A. Strong +ve

B. Weak positive

Answer : A

Explanation: Family history of TB + age less than 3, consider a strong +ve

Reference:

<https://www.cdc.gov/tb/publications/factsheets/testing/skintesting.htm>

94. Repeated Q

95. Pt with chronic interstitial lung disease in biopsy see small non necrotizing granuloma in alveolar membrane Dx ?

A. TB

B. ARTHROSIS

C. Hypersensitivity pneumonitis

Answer : C

Explanation: Triad of findings: chronic interstitial inflammation, chronic bronchiolitis and small non-necrotizing granulomas. Between involved areas, there is usually normal lung parenchyma.

<http://surpathcriteria.stanford.edu/lung/hypersensitivity-pneumonitis-extrinsic-allergic-alveolitis/>

96. Obstructive sleep apnea . what is the Most effective treatment ?

smle ,2017

A.BMI less than 30

B.Cpap

Answer : B

Explanation : Treatment depends in part on the severity of the sleep-disordered breathing (SDB). People with mild apnea have a wider variety of options, while people with moderate-to-severe apnea should be treated with nasal continuous positive airway pressure (CPAP).

Cpap shows to reduce CVS risk and CVS related deaths in Pt with OSA

Reference: <http://emedicine.medscape.com/article/295807-treatment>

97.Female came from 18 hours flight and she feel leg pain what you will take ?

A.Warfarrin

B.LMWH

C.unfractionated heparin and warafarin

answer: C

Heparin and warfarin are two types of anticoagulants that are used to treat DVT. Heparin is usually prescribed first because it works immediately to prevent further clotting. After this initial treatment, you may also need to take warfarin to prevent another blood clot forming

reference: <http://www.nhs.uk/Conditions/Deep-vein-thrombosis/Pages/Treatment.aspx>

98.Prostate cancer patient with recurrent DVT , Best prophylaxis is ;

A.LMWH

B.Unfractionated heparin

C.LMWH short term therapy followed by warafarin

Answer : A

Reference: <https://www.med.umich.edu/clinical/images/VTE-Risk-Assessment.pdf>

99.Repeated Q

100.Female non smoker with nodule by CT found calcium and fat , what is the most likely diagnosis?

A.Hamartoma

B.Mystheoma

C.No adeno

Answer : A

Explanation: Pulmonary hamartomas are benign neoplasms composed of cartilage, connective tissue, muscle, fat, and bone. It is one of the most common benign tumours of the lung, and accounts for ~8% of all lung neoplasms and 6% of solitary pulmonary nodules

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3543598/>

101.Smoker with hilar mass what suspect

A.Lymph node

B.Squamous cell Ca

C.Adenocarcinoma

Answer: B

Explanation: smoking is a risk factor for small cell carcinoma and squamous cell carcinoma.

smle ,2017

Reference: First aid step one 2016 page

103.4 week black pt had mycoplasma pneumonia , what will be very high in LP ?

A.Protein

B.Wbc

C.Glucose

Answer : A

Explanation: elevated Mycoplasma pneumoniae IgM and IgG titers

Reference: <http://www.mayomedicallaboratories.com/test-catalog/Clinical+and+Interpretive/90055>

104.Low ph, bicarb , co2 ?

A.Compensated metabolic acidosis Answer : non compensated

No enough information

105.Broncial cancer mets to sympathetic plexus what the sign ?

A.Ptosis dilated pupil

Answer : A

compression on sympathetic plexus cause Horner's syndrome .(ptosis , anhidrosis . Miosis)

Rheumatology

1. Blue sclera + multiple fractures?

Answer: osteogenesis imperfecta

Osteogenesis imperfecta is one of the most common skeletal dysplasias. It is a generalized disease of connective tissue that may manifest itself with one or more of the following findings:

1. Blue sclerae
2. Triangular facies
3. Macrocephaly
4. Hearing loss
5. Defective dentition
6. Barrel chest
7. Scoliosis
8. Limb deformities
9. Fractures
10. Joint laxity
11. Growth retardation

<http://emedicine.medscape.com/article/1256726-overview>

2. Patient with symptoms of gout, which medication will help?

Answer: inhibit the xanthine oxidase (allopurinol)

The management in acute attack is NSAID if there is no contraindication give colchicine, corticosteroid they are a reasonable option when NSAIDs, COX-2 inhibitors, and colchicine are contraindicated. "Avoid allopurinol in acute cases"

If chronic case give allopurinol to reduce uric acid level below 360 micromol/L (6 mg/dL) to prevent supersaturation and crystal formation. **Allopurinol** is a purine analog; it is a structural isomer of hypoxanthine (a naturally occurring purine in the body) and is an inhibitor of the enzyme xanthine oxidase.

<https://en.wikipedia.org/wiki/Allopurinol>

3. Treatment of chronic pain?

Answer: Physiotherapy, NSAIDs, Acetaminophen, Antidepressants, Anticonvulsants, Muscle relaxant and Opioids

REFERENCE: <https://www.asra.com/page/46/treatment-options-for-chronic-pain>
smle, 2017

4. 60 year-old female with distal phalangeal joint swelling and shoulder pain and knee pain, x-ray showed narrow joint space and osteophytes?

- A. Rheumatoid arthritis
- B. Osteoarthritis

REFERENCE: Toronto notes

5. Giant cell arteritis sequelae?

- A- Complete loss of vision
- B- Destructive arthritis

If left untreated may lead to permanent visual loss

REFERENCE: Kaplan Internal Medicine

6. Passive and active joint restriction in all directions of ROM is caused by what?

- A. Frozen shoulder
- B. Glenohumeral synovitis

Restriction in internal rotation suggests an impingement syndrome due to rotator cuff tendinitis, Inability to perform active abduction suggests a rotator cuff tear or a frozen shoulder
<http://emedicine.medscape.com/article/328253-clinical>

Global painful restriction of the shoulder of unknown aetiology is suggestive of adhesive capsulitis. The term 'frozen shoulder' applies to such restriction with underlying shoulder or rotator cuff pathology.

<http://www.arthritis.co.za/the%20clinical%20examination%20technique.html>

7. Patient complaining of hip pain after long periods of using the hip it keeps him awake at night and have prolonged hours of stiffness in the morning?

- A. osteoporosis
- B. osteoarthritis

OA-related pain is usually associated with activities, with pain in weight-bearing joints being associated with weight-bearing activities. Pain at rest or at night is unusual, except in advanced OA.

Even though morning stiffness is not specific to RA, >1 hour of morning stiffness is considered a sign of inflammatory disease.

Reference: <http://bestpractice.bmj.com/best-practice/monograph/192/diagnosis/history-and-examination.html>

smle ,2017

8. Treatment of osteoporosis?

bisphosphonate

<https://en.wikipedia.org/wiki/Bisphosphonate>

9. Case of rheumatic fever, what is the treatment?

Answer: Penicillin and high dose of aspirin

REFERENCE:

Confirmed rheumatic fever

- penicillin is the first-line choice for secondary prophylaxis, Macrolides, cephalosporins, or clindamycin may be used in patients with true allergies. for arthritis

Aspirin and NSAIDs usually have a dramatic effect on the arthritis and fever of rheumatic fever, and if unresponsive after 2 to 3 days then the diagnosis should be reconsidered.

**But if the patient has monoarthritis and is suspected to have acute rheumatic fever, but does not meet

the criteria for diagnosis, the patient should withhold from salicylate therapy or NSAID treatment so that the appearance of migratory polyarthritis (a major manifestation) is not masked

Reference: <http://bestpractice.bmj.com/best-practice/monograph/404/treatment/step-by-step.html>

10. Young boy with pain in his knee, aspiration of fluid reveals yellowish and turbid appearance, Diagnosis?

Septic arthritis

Table 8. Synovial Fluid Analysis

Parameter	Normal	Non-Inflammatory	Inflammatory	Infectious	Hemorrhagic
Color	Pale yellow	Pale yellow	Pale yellow	Yellow to white	Red/brown
Clarity	Clear	Clear	Opaque	Opaque	Sanguinous
Viscosity	High (due to hyaluronic acid)	High	Low	Low or paradoxically high if purulent	Variable
WBC/mm³	<200	<2000	>2000	Higher cell counts (particularly >50,000) suggestive	Variable
% PMN	<25%	<25%	>25%	>75%	Variable
Culture/ Gram Stain	–	–	–	Usually positive	–
Examples		Trauma OA Neuropathy Hypertrophic – arthropathy	Seropositives Seronegatives Crystal arthropathies	<i>S. aureus</i> Gram negative GC → difficult to culture	Trauma Hemophilia

11. Lytic femur lesion & osteoporosis skull?**Paget disease**

Paget disease of the bone is a common, chronic bone disorder characterised by excessive abnormal bone remodelling. It frequently affects the pelvis, spine, skull and proximal long bones and has characteristic radiographic features.

The early phase features osteolytic (lucent) region which is later followed by coarsened trabeculae and bony enlargement.

Skull osteoporosis circumscripta: large, well-defined lytic lesion

<http://radiopaedia.org/articles/paget-disease-of-bone-2>

12. Patient took her anti osteoporosis drug then had a severe retrosternal pain?**Answer: bisphosphonate.**

Oral bisphosphonates can cause upset stomach and inflammation and erosions of the esophagus, which is the main problem of oral N-containing preparations.

https://en.wikipedia.org/wiki/Bisphosphonate#Adverse_effects

13. Unilateral knee swelling and pain, knee tap labs: cloudy yellow color, mucoid, WBC - pmn 15 (normal less than 200), lymphocytes 80%, what is the diagnosis?

A. Gout not sure

B. Septic arthritis

C. Rheumatoid Arthritis

smle ,2017

**D. Osteo
arthritis**

Table 8. Synovial Fluid Analysis

Parameter	Normal	Non-Inflammatory	Inflammatory	Infectious	Hemorrhagic
Color	Pale yellow	Pale yellow	Pale yellow	Yellow to white	Red/brown
Clarity	Clear	Clear	Opaque	Opaque	Sanguinous
Viscosity	High (due to hyaluronic acid)	High	Low	Low or paradoxically high if purulent	Variable
WBC/mm ³	<200	<2000	>2000	Higher cell counts (particularly >50,000) suggestive	Variable
% PMN	<25%	<25%	>25%	>75%	Variable
Culture/ Gram Stain	–	–	–	Usually positive	–
Examples		Trauma OA Neuropathy Hypertrophic – arthropathy	Seropositives Seronegatives Crystal arthropathies	<i>S. aureus</i> Gram negative GC → difficult to culture	Trauma Hemophilia

Reference: Toronto notes.

14. How would you manage aggressive RA?

- A. Methotrexat
- B. Cyclosporin

If the patient has severe disease (e.g., pleuritis, interstitial lung disease, pericarditis, inflammatory eye disease) with poor prognostic factors such as RF positivity and/or anti-cyclic citrullinated peptide (anti-CCP) antibodies, and radiographic evidence of bony erosions at presentation, a more aggressive approach to initial therapy may be needed in the form of plus a biological agent (TNF-alpha inhibitor or abatacept). **(unknown source)**

DMARDs are the Standard of care and should be started as soon as possible
 § Methotrexate is the gold standard and is first-line unless contraindicated

Biologics

§ indicated if inadequate response to DMARDs

§ can be combined with DMARD therapy

§ options: infliximab, etanercept, adalimumab, abatacept, rituximab, tocilizumab

Toronto Notes

15. When diagnosing patient with SLE, what's most important?

- A. Age
- B. sex
- C. jo

smle ,2017

int
affecti
on

REFERENCE: <http://www.rheumtutor.com/2012-slicc-sle-criteria/>

16. Behcet disease is more common in?

- A. Children
- B. young men
- C. old women
- D. equal in men & women

The sex prevalence varies by country. In the **Middle East, Behçet disease is more common among males**, with male-to-female ratios of 3.8:1 (Israel), 5.3:1 (Egypt), and 3.4:1 (Turkey). In Germany, Japan, and Brazil, the disease is slightly more common in females. In the United States, Behçet disease is more common in females (5:1 female-to-male ratio). [16, 21]

Males are more likely to develop severe presentations of Behçet disease.

Behçet disease is most common in persons aged 20-40 years.

<http://emedicine.medscape.com/article/329099-overview#a7>

17. Which one of these is specific and found in SLE?

- A. cystoid bodies on fundoscopy
- B. anti RNP
- C. severe Raynaud

Answer: Among the choices, Anti-RNP is the most specific. However, it is not specific to SLE, but mixed connective tissue diseases with SLE overlap. Anti-dsDNA and anti-Sm are specific (95-99%)

Table 3. Autoantibody Tests for SLE

Test	Description
ANA	Screening test; sensitivity 95%; not diagnostic without clinical features
Anti-dsDNA	High specificity; sensitivity only 70%; level is variable based on disease activity
Anti-Sm	Most specific antibody for SLE; only 30–40% sensitivity
Anti-SSA (Ro) or Anti-SSB (La)	Present in 15% of patients with SLE and other connective-tissue diseases such as Sjögren syndrome ; associated with neonatal lupus
Anti-ribosomal P	Uncommon antibodies that may correlate with risk for CNS disease, including increased hazards of psychosis in a large inception cohort, although the exact role in clinical diagnosis is debated ^[90]
Anti-RNP	Included with anti-Sm, SSA, and SSB in the ENA profile; may indicate mixed connective-tissue disease with overlap SLE, scleroderma , and myositis
Anticardiolipin	IgG/IgM variants measured with ELISA are among the antiphospholipid antibodies used to screen for antiphospholipid antibody syndrome and pertinent in SLE diagnosis
Lupus anticoagulant	Multiple tests (eg, direct Russell viper venom test) to screen for inhibitors in the clotting cascade in antiphospholipid antibody syndrome
Direct Coombs test	Coombs test—positive anemia to denote antibodies on RBCs
Anti-histone	Drug-induced lupus ANA antibodies are often of this type (eg, with procainamide or hydralazine; p-ANCA—positive in minocycline-induced drug-induced lupus)

ANA = antinuclear antibody; CNS = central nervous system; ds-DNA = double-stranded DNA; ELISA = enzyme-linked immunoassay; ENA = extractable nuclear antigen; Ig = immunoglobulin; p-ANCA = perinuclear antineutrophil cytoplasmic antibody; RBCs = red blood cells; RNP = ribonucleic protein; SLE =

Reference: medscape

18. Something about prognosis of SLE?

- A. Sex
- B. Arthritis
- C. Nephritis

<http://bestpractice.bmj.com/best-practice/monograph/103/follow-up/prognosis.html>

19. Polymyalgia rheumatica. Aid Dx?

- A. proximal muscle weaknesses
- B. proximal muscle tenderness

Characterized by pain and stiffness of the proximal extremities (girdle area), closely related to GCA (15% of patients with PMR develop GCA), no muscle weakness.

Reference : toronto

20. Long history of big toe pain with –ve birefringent crystals, what is the management?

- A. Colchicine

smle ,2017

B. Allopurinol

C. NSAID

Answer: NSAID or colchicine treatment for acute attack, Allopurinol treatment for chronic disease. The question says: long history = chronic.

REFERENCE: <http://emedicine.medscape.com/article/329958-treatment#d8>

21. Female patient with skin thickening over the forearm, with Raynaud's phenomenon. [CASE OF SCLERODERMA] Which of the following would help you the most?

A. Anti Scleroderma - SCL 70 [100% in Dermatology]

B. Anti Centromere

C.

SSA

D. SS

B

Answer:

A if it's diffuse

B if it's limited Limited systemic sclerosis (CREST)

CREST Syndrome: Calcinosis: calcium deposits on skin. Raynaud's phenomenon. Esophageal dysfunction: acid reflux. Sclerodactyly: tightening of skin on digits. Telangiectasia: superficial dilated blood vessels.

REFERENCE: Toronto notes

22. Female with arthritis and butterfly rash on the face. ANA is positive. What other marker you would order?

A. Anti Double stranded DNA

B. Anti Centromere

C. SS-A

SS-B Answer: this is a picture of SLE. Refer to the table in q17.

23. Treatment for rheumatoid arthritis uses (something about macrophages and TNF and IL) What can recur in patients using the treatment?

A. inflammatory bowel disease

B. TB

C. gram -ve pneumonia

D. rheumatoid

Complications of anti-TNF drug: Reactivation of TB. Always screen TB by PPD test prior anti-TNF Infection.

Reference: master the board

24. Hypertensive PT. with acute gout what to give?

- A. NSAID
- B. Allopurinol
- C. Colchicine
- D. Intra Articular steroid

In patient with comorbid condition cannot use NSAID or colchicine (in this case, high BP affects the kidney, and these two drugs affect the kidney as well) use intra articular steroid injection! There are important contraindications to NSAIDs, including Cardiovascular disease, particularly heart failure or hypertension that is difficult to control.

http://www.uptodate.com/contents/treatment-of-acute-gout?source=search_result&search=gout+treatment&selectedTitle=1%7E150

25. Major Jones criteria of acute rheumatic fever?

Table 1 Summary of the 2015 Jones criteria¹⁷

Jones criteria for the diagnosis of ARF

	Low-risk population ARF incidence ≤ 2 per 100 000 school-aged children or all-age RHD prevalence of ≤ 1 per 1000 population year	Moderate/high-risk population Children not clearly from a low-risk population
Major criteria		
Carditis	Clinical and/or subclinical*	Clinical and/or subclinical*
Arthritis	Polyarthritis	Monoarthritis, polyarthritis and/or polyarthralgia
	Chorea	Chorea
	Erythema marginatum	Erythema marginatum
	Subcutaneous nodules	Subcutaneous nodules
Minor criteria		
Carditis	Prolonged PR interval†	Prolonged PR interval†
Arthralgia	Polyarthralgia	Monoarthralgia
Fever	$\geq 38.5^{\circ}\text{C}$	$\geq 38^{\circ}\text{C}$
Markers of inflammation	Peak ESR ≥ 60 mm in 1 h and/or CRP ≥ 3.0 mg/dL	Peak ESR ≥ 30 mm in 1 h and/or CRP ≥ 3.0 mg/dL

Changes compared with the 1992 revision⁷ are highlighted in bold.

*Subclinical carditis: Seen only on echocardiography without auscultatory findings.

†Accounting for age variability and only if carditis NOT counted as a major criteria.

ARF, acute rheumatic fever; CRP, C reactive protein; ESR, erythrocyte sedimentation rate; RHD, rheumatic heart disease.

<http://emedicine.medscape.com/article/236582-clinical>

26. Patient with recurrent oral and genital ulcers and arthritis when the pt took some type of IM vaccine, he developed sterile abscess at the site of injection. What is the most likely smle ,2017

Dx?

Behcet disease.

Leukocytoclastic vasculitis, multi-system disorder presenting with ocular involvement (uveitis), recurrent oral and genital ulceration, venous thrombosis, skin and joint involvement, more common in Mediterranean and Asia, average age 30s, M>F

Toronto Notes

27. Wheal with erythematous base itching, lymph node enlargement, periorbital swelling, hepato splenomegaly?

- A. Rheumatic arthritis
- B. Angioedema
- C. Cholinergic urticarial (not sure)
- D. itching more with urticaria

Angioedema: deeper swelling of the skin involving subcutaneous tissues; often involves the eyes, lips, and tongue

Toronto

28. Osteoporosis prevention?

biphosphate + vit.D + ca

If premenopausal; vit.D + ca If postmenopausal; biphosphate + vit.D + ca

Answered by rheumatologist

<http://bestpractice.bmj.com/best-practice/monograph/85/treatment/details.html>

29. Hx of septic arthritis management?

- A. Aspiration and Abx
- B. IV Abx

A is correct if he meant IV Abx

IV antibiotics, empiric therapy (based on age and risk factors), adjust following joint aspirate C&S results. For small joints: needle aspiration, serial if necessary until sterile • for major joints such a knee, hip, or shoulder: urgent decompression and surgical drainage

Toronto Notes

30. Polymyalgia rheumatica, what supports your dx?

- C. muscle pain
- D. muscle stiffness
- E. Others

REFERENCE: <http://emedicine.medscape.com/article/330815-overview>

The q is repeated but he mentioned here stiffness rather than weakness. Polymyalgia rheumatica is always not related to weakness.

smle ,2017

But for stiffness Vs pain, stiffness has more points in the criteria

Table 31. PMR Classification Criteria Scoring Algorithm*

	Points without U/S (0-6)	Points with Abnormal U/S** *(0-8)
Morning stiffness duration >45 min	2	2
Hip pain or limited ROM	1	1
Absence of RF or ACPA	2	2
Absence of other joint involvement	1	1
At least one shoulder with subdeltoid and/or biceps tenosynovitis and/or glenohumeral synovitis (either posterior or axillary) and at least one hip with synovitis and/or trochanteric bursitis on U/S	N/A	1
Both shoulders with subdeltoid bursitis, biceps tenosynovitis, or glenohumeral synovitis on U/S	N/A	1

*Required criteria: age ≥50 yr, bilateral shoulder aching, and abnormal ESR/CRP

**A score of 4 or more is categorized as PMR in the algorithm without U/S and a score of 5 or more is categorized as PMR in the algorithm with U/S

**Optional U/S criteria

Ann Rheum Dis 2012;71:484-492

(Toronto Notes)

32. Patient is diagnosed with rheumatoid arthritis and is on aspirin he developed symptoms of heartburn which is relieved for a little while with antacids what will you give him?

A. Misoprostol

B. H2 blocker

A full-dose misoprostol (200 µg four times daily) reduces the risk of NSAID-induced ulcer complications by 40% omeprazole was superior to ranitidine and misoprostol

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3891010/>

33. Pt with HTN came with uric acid 200 you prescribe antihypertensive drug for him, after 1 week the uric acid is 400. What is the drug?

Thiazide diuretics

Stop thiazide, aspirin and niacin in pt with gout and shift him to ARB (losartan) instead of thiazide. **(No source)**

Thiazides reduce the clearance of uric acid since they compete for the same transporter, and therefore raise the levels of uric acid in the blood. Hence they are prescribed with caution in patients with gout or hyperuricemia. Thiazides cause loss of blood potassium, while conserving blood calcium. <https://en.wikipedia.org/wiki/Thiazide>

34. Patient known case of behcet disease, came with arthritis resistant to steroid, what to do?

Cholacine

Arthritis — The non-deforming arthritis characteristic of Behçet's syndrome is seldom the determinant of the level of therapy. When present, joint symptoms are usually accompanied by other manifestations of disease that dictate the intensity of treatment.

- **Colchicine** – The results of a controlled trial suggest that colchicine is effective for the arthritis of Behçet's syndrome.

- Nonsteroidal antiinflammatory drugs – Residual joint complaints may respond to nonsteroidal anti-inflammatory drugs (NSAIDs). There is no consensus among experts about a preferred NSAID for this indication.

- Glucocorticoids – Joint complaints not controlled by colchicine may require low-dose glucocorticoids, with continuous efforts to maintain the minimally effective dose. Prednisone (10 mg/day) is an appropriate starting dose for the arthritis of Behçet's syndrome, but if continuous therapy is required 5 mg/day should be the target dose, as this dose balances well the efficacy and long-term side effects of glucocorticoids.

- Azathioprine - A randomized demonstrated benefit from azathioprine in patients with arthritis . The primary use is as a glucocorticoid-sparing agent.

- Methotrexate is sometimes utilized for arthritis in the dose and fashion used in rheumatoid arthritis, but has not been well-studied.

https://www.uptodate.com/contents/treatment-of-behcets-syndrome?source=search_re-sult&search=behcet+disease+adult&selectedTitle=2~94#H17

35. A 61 year-old female known case of osteoarthritis, came for regular check-up, not taking Ca supplements nor high Ca diet, she is a high risk of osteoporosis. What is the best initial thing before deciding the appropriate mx?

- A. DECAD Scan
- B. oral ca, vit.D, bisphosphonate
- C. TSH, Ca, vit.D
- D. Intranasal calcitonin, CA,

Workup consists of appropriate laboratory studies to establish baseline values and to look for potential secondary causes of osteoporosis, along with measurement of bone mineral density (BMD) to assess bone loss and estimate the risk of fracture. Bone biopsy may be indicated in specific situations.

<http://emedicine.medscape.com/article/330598-workup>

36. Case of arthritis in first metatarsal joint, dx? (symptoms of gout)

- A. gout
 - B. RA
 - C. osteoarthri
- tis

37. Patient presented with knee swelling and pain they did x ray and aspiration and found negative birefringence needle like what are you going to discharge the patient with?

- A. Allopurinol
- B. NSAID
- D

This is a picture of acute gout, the best initial rx is NSAID
Explained in a previous Question.

Another source:

Acute gout: Initial attack usually involves one joint of the lower extremity. Sudden onset of exquisite pain. Most often affects the big toe—the first metatarsophalangeal joint (podagra). Other common joints affected are ankles and knees.
smle ,2017

As it resolves, the patient may have desquamation

Re: step-up to medicine

38. Characteristics of Ehlers Danlos syndrome (without telling the dx) then asked about Mode of inheritance?

- A. X linked
- B. AD
- C. AR
- D. Mitochondrial

Answer: both B & C are correct

Ehlers-Danlos syndrome is a heterogeneous group of inherited connective-tissue disorders characterized by joint hypermobility, cutaneous fragility, and hyperextensibility. Clinical recognition of the types of Ehlers-Danlos syndrome is important. Most types are autosomal dominant, and some are autosomal recessive.

Table 1. Types of Ehlers Danlos Syndrome

Type	EDS Form	Clinical Features
I	Gravis	EDS classic features
II	Mitis	Mild expression of classic EDS features
III	Hypermobile	Marked joint laxity
IV	Vascular	Severe life-threatening vascular hemorrhage
V	X-linked	Features similar to type II (different inheritance)
VI	Ocular / scoliosis	Significant eye problems
VII	Arthrochalasis	Joint hyperlaxity and congenital dislocations (see discussion)
VIII	Periodontal	Dental problems and classic EDS features

40. Scenario of SLE (Rash type), case of?
SLE

41. Question about latent SLE?

Patients often present with a constellation of disease features suggestive of systemic lupus erythematosus (SLE) but do not fulfil the classification criteria for SLE . In the past, these patients have been described as having latent lupus

Re: Medscape

smle ,2017

42. Headache when combing hair, tender vessel on temporal area, sudden loss of vision "clouding" in one eye what next action?

A. oral prednisolone for 3 months

B. immediate cortisone eye

drops

REFERENCE: <http://emedicine.medscape.com/article/332483-treatment>

This is a picture of temporal arteritis

If there is no eye involvement give prednisolone orally

In case of visual and CNS manifestations give methylprednisolone pulse therapy for 3 days .

Re: <http://bestpractice.bmj.com/best-practice/monograph/177/treatment/details.html>

43. Old man with joint pain worsens on movement. X-ray of wrist shows narrow joints in small joints. What's the dx?

A. Osteoarthritis

B. Rheumatoid

arthritis

<http://www.webmd.com/rheumatoid-arthritis/tc/comparing-rheumatoid-arthritis-and-osteoarthritis-topic-overview>

44. Typical symptoms of RA, what's the dx?

RA

45. What is the single most important thing for the prognosis of SLE?

A. renal involvement

B. arthritis

C. WBCs

(Repeated Q)

The major causes of death in the first few years of illness are active disease (eg, central nervous system [CNS] and renal disease)

smle ,2017

Prognostic factors — Poor prognostic factors for survival in SLE include

- Renal disease (especially diffuse proliferative glomerulonephritis)
- Hypertension
- Male sex
- Young age
- Older age at presentation
- Low socioeconomic status
- Black race, which may primarily reflect low socioeconomic status
- Presence of antiphospholipid antibodies
- Antiphospholipid antibody syndrome
- High overall disease activity

https://www.uptodate.com/contents/overview-of-the-management-and-prognosis-of-systemic-lupus-erythematosus-in-adults?source=search_result&search=sle&selectedTitle=2~150#H32

46. Pt complains of pain swelling of big toe what's the Dx?

Gout

47. Patient come with back pain when awake from sleep he had stiffness for almost 30 minutes and it's resolved he take paracetamol or other thing in examination there is paraspinal muscle stiffness When you did a spine CT you found mild lumbar stenosis what your management?

- A. epidural steroid injection
- B. physiotherapy
- C. ibuprofen
- D. bed rest

NSAIDs are the primary medicines used to manage long-term symptoms of lumbar spinal stenosis, 2nd line is epidural steroid injection. Physiotherapy consider adjunct.

Ref: <http://bestpractice.bmj.com/best-practice/monograph/191/treatment/details.html>

48. Treatment of gestational diabetes?

- A. Insulin
- B. metformin
- C. glipizide

This q should be in obstetric&gynecology section despite the answer is right

49. Behcet's disease?

- A. Vasculitis
- B. Ulcer
- C. Test

50. Temporal arteritis pt. "clear scenario" this pt. is in higher risk of: CAD, Blindness, brain tumor or other option I forgot?

Blindness

smle ,2017

Symptoms of temporal arteritis

-Constitutional symptoms — Systemic symptoms associated with GCA are frequent and include fever, fatigue, and weight loss.

-Headache — Also common in the presentation of GCA is headache, which occurs in more than two-thirds of patients. Classically, headaches due to GCA are located over the temples, but they can also be frontal or occipital or generalized.

-Jaw claudication

-Transient visual loss (amaurosis fugax): early manifestation of GCA

-Permanent vision loss: Unquestionably the most feared complication of GCA remains that of permanent loss of vision, which commonly is painless and sudden, may be partial or complete, and may be unilateral or bilateral.

Reference :https://www.uptodate.com/contents/clinical-manifestations-of-giant-cell-temporal-arteritis?source=search_result&search=giant+cell+arteritis&selectedTitle=3~98

51. Patient present with Hip and shoulder pain, ESR high (polymyalgia rheumatica case) in addition to symptom what else can be?

Proximal muscle tenseness.

TORONTO:

Signs and Symptoms • constitutional symptoms prominent (fever, weight loss, malaise) • pain and stiffness of symmetrical proximal muscles (neck, shoulder and hip girdles, thighs) • gel phenomenon (stiffness after prolonged inactivity) • physical exam reveals tender muscles, but no weakness or atrophy.

52. Osteoporotic Patient on medication that work by ATP-analogue?

Etidronate

Non-nitrogen containing bisphosphonates (such as etidronate) are metabolized into non-functioning ATP analogues which cause eventual osteoclast apoptosis.

Reference: <http://www.orthobullets.com/basic-science/9058/bisphosphonates>

53. SLE patient and she is vegetarian, complaining of fatigue & tiredness, what u will find?

A. Low iron low TIBC (total iron binding capacity)

B. low iron high TIBC

C. high iron high TIBC

D. high iron low TIBC

A picture of iron
deficiency anemia.

smle ,2017

Low serum iron and ferritin levels with an elevated TIBC are diagnostic of iron deficiency.

<http://emedicine.medscape.com/article/202333-workup#c9>

54. Pt developed gout what is the cause?

A. Thiazide

B. HTN

C. CHF

Both A and B may cause gout .. Depends on the scenario

REFERENCE: <http://www.medscape.com/viewarticle/757006>

55. Risk factors for overproduction of uric acid and gout include?

Primary gout is related to **underexcretion** or **overproduction** of uric acid, often associated with a mix of:

- dietary excesses

- alcohol overuse

- metabolic syndrome.

Secondary gout is related to medications or conditions that cause hyperuricemia, such as the following:

- **Myeloproliferative diseases or their treatment**

- **Therapeutic regimens that produce hyperuricemia**

- Renal failure

- Renal tubular disorders

- Lead poisoning

- Hyperproliferative skin disorders

- Enzymatic defects (eg, deficient hypoxanthine-guanine phosphoribosyl transferase, glycogen storage diseases)

<http://emedicine.medscape.com/article/329958-overview#a2>

A purine-rich diet is a common but minor cause of hyperuricemia. Diet alone generally is not sufficient to cause hyperuricemia. Purine content of foods varies. Foods high in the purines adenine and hypoxanthine may be more potent in exacerbating hyperuricemia.

https://en.wikipedia.org/wiki/Hyperuricemia#cite_note-7

56. In gout what substance would be high?

A. PRPP

B. xanthine

There are at least three different inherited defects that lead to early development of severe hyperuricemia and gout: glucose-6-phosphatase (gene symbol: G6PT) deficiency; severe and

smle ,2017

partial hypoxanthineguanine phosphoribosyltransferase (HGPRT, gene symbol: HPRT) deficiency; and elevated 5'-phosphoribosyl-1'-pyrophosphate synthetase (PRPP synthetase) activity.

<http://themedicalbiochemistrypage.org/gout.php>

57. Wheal with erythematous base itching lymph node enlargement periorbital swelling hepatosplenomegaly? (Repeated)

- A. Rheumatic arthritis
- B. Angioedema
- C. Cholinergic urticarial (not sure)
- D. itching more with urticarial

58. Treatment of acute gout?

Indomethacin

TORONTO:

Treatment of acute gout

- NSAIDs: high dose, then taper as symptoms improve (e.g. Indomethacin)
- corticosteroids: IA, oral, or intra-muscular (if renal, cardiovascular, or GI disease and/or if NSAIDs contraindicated or failed)
- colchicine within first 12 h but effectiveness limited by narrow therapeutic

59. Old man with joint pain worsens on movement. X-ray of wrist shows narrow joints in small joints. What's the dx? (Repeated. Find Reference above.)

- A. Osteoarthritis
- B. Rheumatoid arthritis

60. Unilateral knee pain, swelling, middle age I think Joint aspirate. Wbc: nl Neut : 80% Did not mention crystals? (Repeated. Find reference above.)

- A. RA
- B. Gout
- C. septic arthritis
- D. Pseudogout?

61. Patient irritated and has weakness in lower and upper extremities, what is the cause?

- A. deficiency vit.D

B. deficiency vit.A

C. deficiency B1

D. deficiency B3

Vitamin B1 def symptoms: Depression, irritability, poor concentration, memory problems, confusion, numbness and tingling in the hands and feet, loss of appetite, muscle weakness, sleep disturbances, fatigue, abdominal and chest pains, shortness of breath, rapid pulse, ankle swelling

<https://www.liverdoctor.com/vitamin-and-mineral-deficiency/>

62. 70 year old female patient with osteoporosis, what is the treatment?

A. estrogen

B. bisphosphonates

Initial therapy for most postmenopausal women with osteoporosis, we suggest oral bisphosphonates as first-line therapy

Re: uptodate

63. Rheumatoid arthritis with the loss of bones in joint? What is the cause?

A. substance released by synovial cell

B. synovial fluid pressure

C. Something prostaglandin?

“The synovial lining becomes hyperplastic, with infiltration of the sublining with mononuclear cells including T-cells, B cells, macrophages, and plasma cells. This formation of locally invasive synovial tissue is characteristic and it is involved in causing the erosions seen in RA. Cytokines affect all phases of the inflammatory process and tumour necrosis factor (TNF) and interleukin 1 seem to be the most abundant in the joint.”

Ref: bmj

64. Adult with right toe tenderness for 1 week and he have ear pain also (investigation included). What is the best treatment for him? (Repeated)

A. Cortisone

B. NSAIDs

C. Allopurinol

(For acute attack. Allopurinol can be given after attack resolution)

Treatment of acute gout attack does not differ substantially in patients with or without clinically apparent tophi, although the presence of tophi is an indication further initiation of long-term urate-lowering therapy after attack resolution to prevent or reverse chronic gouty arthropathy)

<http://emedicine.medscape.com/article/329958-treatment#showall>

<http://www.uptodate.com/contents/treatment-of-acute-gout>

65. A patient with right knee osteoarthritis, presented with swelling of the right knee. On

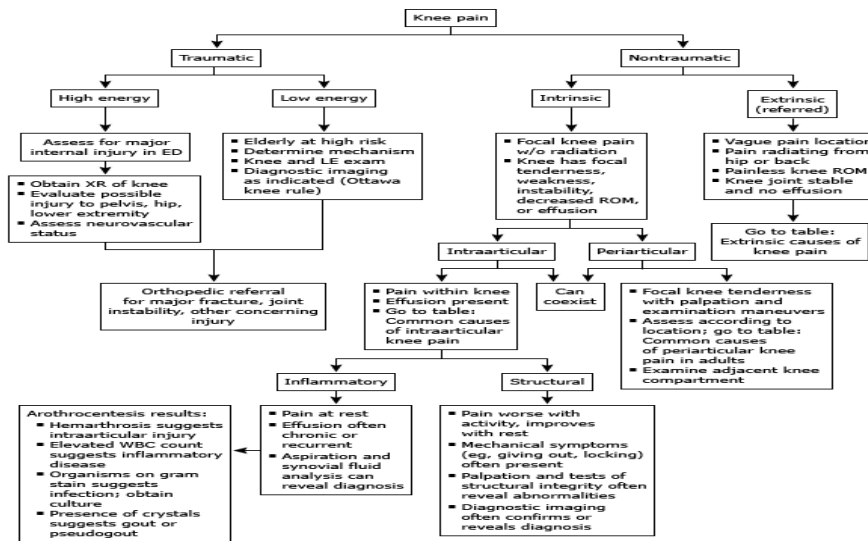
smle ,2017

examination the right knee is swelled with no change in temperature. What will you do?

- A. Aspiration of the knee fluid
- B. Bilateral Knee X-Ray and Ibuprofen

Because there is no change in temperature. It's normal for osteophyte to cause swelling of the knee in OA.

<http://emedicine.medscape.com/article/330815-clinical>



66. What is the treatment of temporal arteritis?

- A. oral steroid
- B. topical steroid

The universally accepted treatment of giant cell arteritis (GCA) is high-dose corticosteroid therapy. The major justification for the use of corticosteroids is the impending danger of blindness in untreated patients. Few studies exist regarding dosing protocols for corticosteroids in GCA. It is generally agreed that most patients with suspected GCA should be started on oral therapy, with a temporal artery biopsy performed within 1 week

<http://emedicine.medscape.com/article/332483-treatment>

67. Raynaud phenomena. Which antibody will be positive?

Anti-SCL-70

IF THE CASE WAS A SCENARIO OF CREST (Calcinosis, Raynaud, Esophageal dysmotility, Sclerodactyly, Telangiectasia), Anti-centromere antibodies are extremely specific for CREST syndrome.

smle ,2017

BUT it could be diffuse:

Anti-Scl-70 (anti-topoisomerase I) antibody is associated with diffuse scleroderma, early internal organ involvement, and a worse prognosis.

Ref: master the board & bmj

+ <http://emedicine.medscape.com/article/1064663-workup>

68. Characteristic finding in Behçet disease?

(Repeated)

Leukocytoclastic vasculitis, multi-system disorder presenting with ocular involvement (uveitis), recurrent oral and genital ulceration, venous thrombosis, skin and joint involvement, more common in Mediter- ranean and Asia, average age 30s, M>F.

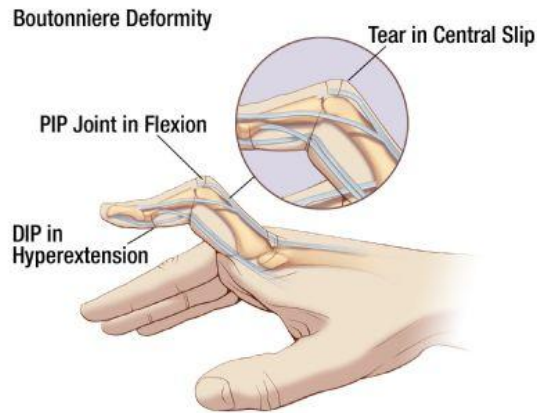
REFERENCE: Toronto Notes

69. A patient with symmetrical joint involvement, complaining of morning stiffness that is relieved with movement, MCP and PIP are involved as well. What is the diagnosis?

RA (see
references
above)

70. Boutonniere deformity?

Flexion of PIP joint & hyperextension of DIP



71. A patient presented with hip and shoulder pain. ESR: high (Polymyalgia Rheumatica case). In addition to these symptoms, what else can be there in the history?

- A. Proximal muscle weakness
- B. Proximal muscle pain

Table 31. PMR Classification Criteria Scoring Algorithm*

	Points without U/S (0-6)	Points with Abnormal U/S** *(0-8)
Morning stiffness duration >45 min	2	2
Hip pain or limited ROM	1	1
Absence of RF or ACPA	2	2
Absence of other joint involvement	1	1
At least one shoulder with subdeltoid and/or biceps tenosynovitis and/or glenohumeral synovitis (either posterior or axillary) and at least one hip with synovitis and/or trochanteric bursitis on U/S	N/A	1
Both shoulders with subdeltoid bursitis, biceps tenosynovitis, or glenohumeral synovitis on U/S	N/A	1

*Required criteria: age \geq 50 yr, bilateral shoulder aching, and abnormal ESR/CRP

**A score of 4 or more is categorized as PMR in the algorithm without U/S and a score of 5 or more is categorized as PMR in the algorithm with U/S

**Optional U/S criteria

Ann Rheum Dis 2012;71:484-492

72. 60 year old man with a fractured thoracic vertebra. T Score = -2.6. What is the diagnosis?

- A. Osteoporosis
- B. Established osteoporosis
- C. Osteopenia

I don't understand the difference between choice A and B.

The T score is related to DEXA scan results.

Lower scores (more negative) mean lower bone density: A T-score of -2.5 or lower qualifies as osteoporosis. A T-score of -1.0 to -2.5 signifies osteopenia, meaning below-normal bone density without full osteoporosis.

<http://www.webmd.com/osteoporosis/features/tests#1>

73. 37 year old presented with back pain. On examination there was tenderness when palpating para-spinal muscles, neurovascular exam was normal. What is the treatment?

Physiotherapy

<http://emedicine.medscape.com/article/95444-treatment>

74. Patient with gout. What drug should be avoided?

- A. thiazide
- B. furosemide
- C. ACEI

Hyperuricemia is a relatively common finding in patients treated with a loop or thiazide diuretic and may over a period of time, lead to gouty arthritis.

Furosemide can elevate uric acid levels as well.

REFERENCE: UpToDate.

75. A patient with signs and symptoms of renal and respiratory involvement. What is the diagnosis?

- A. Glomerulonephritis
- B. Wegener's granulomatosis

Incomplete question, but you should to keep one thing in your mind if they mentioned there is a history of sinusitis the diagnosis will be 100% Wagner's

REFERENCE: Master the boards

76. About a patient who presented with gout. Inhibition of which enzyme will treat this disease?

- A. PRPP synthase
- B. Adenosine deaminase
- C. Xanthine oxidase
- D. orotate
phosphoribosyltransferase

The enzyme xanthine oxidase catalyses the oxidation of hypoxanthine to xanthine and then to uric acid, which plays a crucial role in gout. That's why we give Xanthine Oxidase inhibitors such as Allopurinol

REFERENCE: Pubmed

77. A patient with SLE with rash on her cheeks, etc. What will you advise her?

smle ,2017

Avoid sun exposure as much as she can

REFERENCE: Medscape

78. Patient with arthritis and rash on the face. ANA is positive. What should you do next?

Anti-DNA

TORONTO:

Investigations • blood work: ANA (sensitivity 98%, but poor specificity >> used as a screening test, ANA titres are not useful to follow disease course) • **anti-dsDNA and anti-Sm are specific (95-99%)** • anti-dsDNA titer and serum complement (C3, C4) are useful to monitor treatment response in patients who are clinically and serologically concordant *f* anti-dsDNA increases and C3 and C4 decrease with disease activity • antiphospholipid Ab (anti-cardiolipin Ab and SLE anticoagulant), may cause increased risk of clotting and increased aPTT)

79. Patient is concerned about osteoporosis as her mother had it, what you will do?

A. give vit.D, calcium

B. give estrogen

postmenopausal

http://www.medscape.com/viewarticle/736932_6

80. Repeated

81. Case of juvenile rheumatic arthritis.

Answer: Oligoarticular juvenile idiopathic arthritis (JIA)

It is usually responsive to intra-articular glucocorticoids. Methotrexate and other immunosuppressive drugs are recommended for children with disease that extends to involve five or more joints or require repeat injections. Biologic agents are typically reserved for patients with uveitis and are also used in some patients with extended oligoarticular JIA.

REFERENCE: Uptodate

2010 ACR/EULAR Classification Criteria for RA

JOINT DISTRIBUTION (0-5)	
1 large joint	0
2-10 large joints	1
1-3 small joints (large joints not counted)	2
4-10 small joints (large joints not counted)	3
>10 joints (at least one small joint)	5

SEROLOGY (0-3)	
Negative RF <u>AND</u> negative ACPA	0
Low positive RF <u>OR</u> low positive ACPA	2
High positive RF <u>OR</u> high positive ACPA	3

SYMPTOM DURATION (0-1)	
<6 weeks	0
≥6 weeks	1

ACUTE PHASE REACTANTS (0-1)	
Normal CRP <u>AND</u> normal ESR	0
Abnormal CRP <u>OR</u> abnormal ESR	1

≥6 = definite RA

What if the score is <6?

Patient might fulfill the criteria...

→ **Prospectively** over time (cumulatively)

→ **Retrospectively** if data on all four domains have been adequately recorded in the past

82. Case of rheumatoid arthritis

Ref: ACR American college of rheumatology

83. Adolescent male with swollen parotid and salivary gland with dry eye and dry mouth, labs HLA, ANA and RF are positive which of the following is appropriate treatment?

- A. Physostigmine
- B. Artificial eye and saliva drops

Treatment for Sjögren syndrome is largely based on symptoms

REFERENCE: Medscape

84. Pyrophosphate crystal?

PSEUDOGOUT

In many patients, a sample of joint fluid is obtained in order to determine whether calcium pyrophosphate dihydrate (CPP) crystals are present to diagnose pseudogout.

REFERENCE: uptodate

85. Chronic Gout? (Repeated. See references in the previous questions)

Allopurinol

~~86. About antiphospholipid from~~

~~common REFERENCE: First aid USMLE~~

~~step 1~~

87. Acute management of gout? (Repeated. See references in the previous questions)

NSAID

88. Which of the following is the most specific for Rheumatoid arthritis?

A. HLA-DR4.

B. Rheumatoid factor.

C. CRP.

D. Anti-cyclic citrullinated peptide. (Anti-CCP)

TORONTO:

- RF sensitivity ~80% but non-specific; may not be present at onset of symptoms.
- anti-CCP: sensitivity ~80% but more specific; may precede onset of symptoms

89. Elderly female complaining of depression, bilateral shoulder and hip pain. Normal blood workup.

A. polymyalgia rheumatica

B. fibromyalgia

Fibromyalgia is a syndrome that consists of the following signs and symptoms [1] :

- Persistent (≥ 3 mo) widespread pain (pain/tenderness on both sides of the body, above and below the waist, and includes the axial spine [usually the paraspinus, scapular, and trapezius muscles])
- Stiffness
- Fatigue; disrupted and unrefreshing sleep
- Cognitive difficulties
- Multiple other unexplained symptoms, anxiety and/or depression, and functional impairment of activities of daily living (ADLs)

<http://emedicine.medscape.com/article/329838-overview>

Fibromyalgia vs. Polymyalgia Rheumatica		
CHARACTERISTIC	FIBROMYALGIA	POLYMYALGIA RHEUMATICA
Age and sex	Middle-aged women (30–50 years of age).	Women > 50 years of age.
Location	Various.	Shoulder and pelvic girdle.
ESR	Normal.	Markedly ↑ (> 100 mm/hr).
Muscle biopsy	Normal.	Normal.
Classic findings	Anxiety, stress, point tenderness, ⊖ workup.	Temporal arteritis; response to steroids.
Treatment	Antidepressants, NSAIDs, rest.	Low-dose prednisone.

90. Unwanted effect in an osteoporosis case, which medication was the cause?

Answer: ? >> q is not clear

Warfarin and steroids can cause osteoporosis

SE of bisphosphonates:

- A high temperature (fever) and flu like symptoms – more common with bisphosphonates given by drip.
- Low calcium levels.
- Bone and joint pain.
- Constipation or diarrhoea.
- Tiredness.
- Feeling sick.
- Damage to kidneys – you will have tests to check this

Ref: www.webmd.com/osteoporosis/bisphosphonates-for-osteoporosis

91. pt. with recurrent oral and genital ulcers and arthritis when the pt taken some type of IM vac- cine develop sterile abscess at the site of injection. What is the most likely Dx ?

a. Behcet disease

Answer: A

(Behçet disease is characterized by a triple-symptom complex of recurrent Oral aphthous ul-cers "painful", genital ulcers, and uveitis.

Ref: Medscape

Diagnosis: No characteristic lab abnormality

Treatment of Behçet : Steroid and to wean pt off steroid use : azathioprine, cyclophosphamide,chochicine, thalidomide

Ref: Master the boards p.218

92. The first initial treatment of osteoarthritis in middle aged patient is?
- Intra articular steroids
 - Oral steroids
 - Stairs exercise
 - Muscle strengthening

Answer: D

REFERENCE: <http://www.aafp.org/afp/2000/0315/p1795.html>

93. Pt does not complain of anything, has sudden knee swelling, What is the best thing to do?
- A. Aspirate

Answer:A

94. Pt with 1st metatarsal joint pain, redness and erythema, High temperatures, What is the cause?

- Staph aureus
- NA monourate crystal
- Ca pyrophosphate crystal

Answer: (B)

Gout and pseudogout are the 2 most common crystal-induced arthropathies. gout is caused by monosodium urate monohydrate crystals; pseudogout is caused by calcium pyrophosphate crystals and is more accurately termed calcium pyrophosphate disease.

Arthritis in other sites – In gout, the” instep” , ankle, wrist, finger joints, and knee; in pseudogout, large joints (eg, the knee, wrist, elbow, or ankle)

REFERENCE: [medscape](#)

95. Low back pain in the morning that resolves in 30 minutes, two cases, what to do?

- A. Physiotherapy to strengthen muscles

Answer: A

Guidelines for Nonradicular Low Back Pain:

Overall, the new guidelines emphasize conservative treatment. First-line therapy should incorporate nondrug therapies. Nonsteroidal anti-inflammatories (NSAIDs) or muscle relaxants should be considered when nondrug therapy fails. The guidelines strongly discourage the use of opioids.

Ref: [Medscape](#)

96. It is a case of arthritis?

Osteoarthritis Hand Cartilage loss with narrowing of interphalangeal joints B: Bouchard nodes (osteophytes proximal interphalangeal joints)

H: Heberden nodes (osteophytes distal interphalangeal joints)

Treatment of OA:

- weight loss and moderate exercise
- Acetaminophen: best initial analgesic
- NSAID: if not controlled with acetaminophen
- Capsaicin cream
- Intraarticular steroid: if other medical therapy fail to control the pain
- Hyalronan injection in joint
- Joint replacement: if sever disease

Ref: [Master the board p.190](#)

smle ,2017

97. A patient came to you complaining of morning stiffness of the PIP and DIP that decreases and goes away with activity. On x-ray you observed a bone growth. What is the name of that growth?

A. Heberden node

Answer: ? (depends on the X-ray given)

Osteoarthritis Hand Cartilage loss with narrowing of interphalangeal joints B: Bouchard nodes (osteophytes proximal interphalangeal joints) H: Heberden nodes (osteophytes distal interphalangeal joints)

98. symmetric joint pain and swelling worse at morning, Dx?

A. rheumatoid arthritis

Answer: A

REFERENCE: <http://www.webmd.com/rheumatoid-arthritis/guide/diagnosing-ra>

99. Repeted

100. patient with OA which type of exercise is the best?

A. high repetition and ...

B. low repetition and ...

answer: ? I think B cuz it is mechanical so relieved by rest

(The sports with major risk are those that involve repetitive, high intensity, high impact forces through the affected joints, especially where there is a high associated risk of injury.)

Ref: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2667877/>

“Isokinetic knee torque can increase more following higher RX intensities (higher resistance loads, fewer repetitions) than low RX intensities (low resistance for high repetition number)”

Ref: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3635671/>

101. Which of the following is a primary cause of osteoporosis?

A. Age

Answer: A

Primary type 1: most common in postmenopausal women, due to decline in estrogen, worsens with age

Primary type 2: occurs after age 7, seen in females and males at 2:1 ratio, Possibly due to zinc deficiency

REFERENCE: Toronto Notes

102. old lady with osteoarthritis and risk for osteoporosis, what you will give her?

A. calcium, TSH, dihydroxy vit.D

B. bisphosphonate, vit.D, calcium

Answer: B

bisphosphonate only if T score less than -2.5

Ref: Master the Boards

The first line of prevention for osteoporosis is lifestyle changes, while pharmaceutical agents are the

first line of treatment for osteoporosis. Smoking cessation, avoiding excess alcohol, weight-bearing exercise, and improved dietary habits are helpful in preserving bone mass. It is recommended that calcium intake should be 1000 mg/day for premenopausal women and 1500 mg/day for

smle ,2017

postmenopausal women. Vitamin D supplementation increases bone density in patients with an established deficiency

Ref: [Blueprint family med.](#)

103. 70 year old smoker woman with low vit-D and osteoporosis. Which of the following has the highest risk for osteoporosis?

- A. Smoking
- B. Age
- C. Vit.

Answer: B

These risk factors can be grouped into several different categories: (1) genetic: Caucasian or Asian ethnicity, small stature, and a family history of osteoporosis; (2) lifestyle: tobacco, alcohol, and caffeine consumption, lack of physical activity; (3) nutritional: low calcium and vitamin D intake; and (4) other risk factors such as older age and postmenopausal state.

Ref: [blueprint family med](#)

“The reduction of estrogen levels in women at menopause is one of the strongest risk factors for developing osteoporosis.”

Ref: <http://www.mayoclinic.org/diseases-conditions/osteoporosis/symptoms-causes/dxc-20207860>

104. Repeated

105. Repeated

106. Repeated

107. 2 questions have the same idea with the same options about polymyalgia rheumatica (they mention that ESR was high):

- A. PMR

Answer: A

“polymyalgia rheumatic : occur in those over the age of 50 with pain and stiffness in shoulder and pelvic muscles + high ESR + normochromic normocytic anemia + NORMAL CPK and aldolase levels. Treated with low dose STEROID”

Ref: [Master the boards p.214](#)

108. Most common cause of itching?

- A. eczema
- B. bile salt can't recall the rest

Answer: A

“Pruritus, or itch, is most commonly associated with a primary skin disorder such as xerosis, atopic dermatitis, urticaria, psoriasis, arthropod assault, mastocytosis, dermatitis herpetiformis, or pemphigoid”

Ref: <http://emedicine.medscape.com/article/1098029-overview>

109. Repeated

110 Repeated

111. Repeated

112. well circumscribed lesion on erythematous base, arthritis?

Rheumatological disease Subacute cutaneous lupus erythematosus can present in an annular form on sun exposed surfaces or in a papulosquamous form Subacute cutaneous lupus erythematosus, smle ,2017

Annular erythematous plaques have central clearing, often mimicking annular psoriasis when associated with scales.

REFERENCE: <http://www.aafp.org/afp/2001/0715/p289.html>

113. Repeated

114. Patient presented with bilateral shoulder and hip stiffness and pain, what is Dx?

A. polymyalgia rheumatica

B. OA

Answer: A

“polymyalgia rheumatic is described in Q107”

115. Patient presented with numbness of index finger when he use the scissors, What is Dx?

A. OA

B. Dycyptus

Answer: ?

It is sign of neuropathy due to compression of the nerve

Could be carpal tunnel syndrome

Ref: <http://emedicine.medscape.com/article/1242387-overview>

116. Question about latent SLE:

Latent lupus = undifferentiated connective tissue disease = mixed connective tissue disease (Wikipedia)

Patients with undifferentiated connective-tissue disease (UCTD) may present with various symptoms. The most common symptoms at presentation include Raynaud phenomenon (48%-59%); arthralgia (37%-81%); arthritis (22%-71%); mucocutaneous symptoms such as photosensitivity, malar rash, alopecia, and oral ulcerations (23%-52%); fever (15%-23%); sicca symptoms (12%-42%); and CNS symptoms (8.5%).

The proposed classification criteria for UCTD [10] include any sign or symptom that may be included in the classification criteria of SLE, MCTD, SSc, PM/DM, RA, and SS.

Anti-U1-RNP and Anti-Ro/SSA antibodies represent the antinuclear specificities most frequently detected in UCTD.

Ref: <http://emedicine.medscape.com/article/334482-overview>

117. Repeated

118. Question about Henoch schonlein purpura:

A. IgA Vasculitis

Answer: A

Henoch-Schönlein Purpura:

- seen more commonly in children
- purpura on buttocks and legs, abdominal pain, arthralgia, and fever
- glomeruli show varying degrees of mesangial hypercellularity
- IgA and C3 staining of mesangium
- Most often clinical diagnosis, however Biopsy is the most accurate test (shows leukocytoclastic vasculitis) – IgA levels are not reliable for the diagnosis.
- usually benign, self-limiting course, 10% progress to CKD , use steroid for sever abdominal pain or progressive renal failure.

Ref: Toronto and Master the Boards p.214

Gastroenterology

1. Which disease involves antibiotic in treatment regimen?

- a. Crohn
- b. Ulcerative colitis
- c. Celiac
- d. Whipple

Answer:

Whipple disease is a systemic disease most likely caused by a gram-positive bacterium, *Tropheryma whippelii*.

Whipple disease present with:

- Arthalgias
- Ocular findings
- Neurologic abnormalities (Dementia, Seizures)
- Fever
- Lymphadenopathy

Antibiotics are the mainstay of treatment. Ceftriaxone followed by TMP/SMZ

Reference: <http://emedicine.medscape.com/article/183350-treatment>
and master the board p.284

2. Patient had Splenectomy, what vaccine he should take ?

Answer: pneumococcal vaccination

The predominant organisms responsible for overwhelming sepsis in splenectomized patients are pneumococci (50%), meningococci, and H influenzae.

Newer guidelines, particularly those from Great Britain,[3] have emphasized use of conjugated pneumococcal and meningococcal C vaccine, in addition to the conjugated Hib vaccine

According to this guideline, the polyvalent pneumococcal vaccine should be given either 2 weeks before or 2 weeks after splenectomy, and repeated in 5 years.

Ref: <http://www.medscape.com/viewarticle/474926>

4. renal or small cell cancer stage III with bone pain, what is the immediate action?

- A. MRI only
- B. Radiotherapy
- C. Iv steroid and MRI
- D. No immediate action

Answer: A

** Can't be sure about this Question**

5. Symptomatic pt. With Positive HBV antigen?

- A. Acute hepatitis

smle ,2017

- B. Chronic hepatitis
- C. Active carrier
- D. Non active carrier

Answer: A/C ??

** Can't be sure about this Question**

Reference: <http://www.cdc.gov/vaccines/pubs/surv-manual/chpt04-hepb.html>

Transient HBsAg positivity (lasting <18 days) might be detected in some patients during vaccination.

- hepatitis B surface antigen (HBsAg)

This tests for the presence of virus. A "positive" or "reactive" HBsAg test result means that the person is infected with the hepatitis B virus, which can be an "acute" or a "chronic" infection.

- hepatitis B surface antibody (HBsAb)

A "positive" or "reactive" HBsAb (or anti-HBs) test result indicates that a person has successfully re-responded to the hepatitis B vaccine or has recovered from an acute hepatitis B infection. 184 smle ,2016

- hepatitis B core antibody (HBcAb)

A "positive" or "reactive" HBcAb (or anti-HBc) test result indicates a past or present infection, but it could also be a false positive.

'inactive HBsAg carrier state'. means a persistent HBV infection of the liver but without continual significant necroinflammatory disease. It is characterized by very low or undetectable serum HBV DNA levels and normal serum aminotransferases

Ref: <http://www.bjmp.org/content/hbsag-carriers-normal-alt-levels-healthy-carriers-or-true-patients>

6. Primary biliary cirrhosis options were about pathophysiology:

Answer: intrahepatic - T lymphocyte mediated attack on small intralobular duct

PBC is characterised histologically by damage to, and eventual loss of, the biliary epithelial cells (BEC) lining small intrahepatic bile ducts. BEC loss is typically accompanied by a significant portal tract inflammatory infiltrate that is mixed in phenotype (T cells) (pubmed)

Pathophysiology

The exact mechanism of the liver damage is unknown, although evidence indicates that it can be of autoimmune origin. The data supporting this hypothesis are as follows: (1) abnormalities of the humoral and cellular immune systems (ie, elevated serum levels of immunoglobulins, mainly immunoglobulin M [IgM]), (2) multiple circulating autoantibodies, (3) granulomas in the liver and regional lymph nodes, (4) impaired regulation of both B and T lymphocytes

Ref: <http://emedicine.medscape.com/article/171117-overview#a6>

Most unique features of PBC are :

- Xanthelasma/xanthoma

smle ,2017

- Osteoporosis

Liver biopsy is the most accurate test.

The most accurate blood test is the antimitochondrial antibody.

Ref: Master the boards p.295

7. Abdominal solid mass (renal i guess but not sure) confirmed by?

- A. CT
- B. MRI
- C. US

Answer: CT

Contrast-enhanced computed tomography (CT) scanning has become the imaging procedure of choice for diagnosis and staging of renal cell cancer

Ref: <http://emedicine.medscape.com/article/281340-workup#c9>

8. Women coming with elevated indirect bilirubin:

- a. Rotor syndrome
- b. Crigler Najjar
- c. Dubin Johnson

Answer: B

Differential diagnosis:

- Unconjugated (indirect) hyperbilirubinemia: Hemolytic, physiologic (newborns), Crigler-Najjar,

Gilbert syndrome Conjugated (direct) hyperbilirubinemia:

1- Biliary tract obstruction: gallstones, cholangiocarcinoma, pancreatic or liver cancer, liver fluke

2- Biliary tract disease: 1° sclerosing cholangitis, 1° biliary cirrhosis

3- Excretion defect: Dubin-Johnson syndrome, Rotor syndrome

- Mixed (direct and indirect) hyperbilirubinemia: Hepatitis, cirrhosis

Ref: <http://emedicine.medscape.com/article/178841-overview>

<http://emedicine.medscape.com/article/178757-overview#a8>

9. Peptic ulcer patient with Anemia, what you will do regarding his anemia?

- a. Oral iron supplement
- b. I.M iron
- c. Blood Transfusion
- d. Answer: B

Reference: uptodate

In Stomach or intestinal ulcers: Iron might cause irritation and make these conditions worse.

Ref: <http://www.webmd.com/vitamins-supplements/ingredientmono-912-iron.aspx?activeingredientid=912>

10. Which one of the following can cause liver cirrhosis?

Answer: ? (No choices provided)

Causes of Cirrhosis :

- Fatty liver (alcohol, metabolic syndrome)
- Chronic viral hepatitis (B, B+D, C; not A or E)
- Autoimmune hepatitis

smle ,2017

- Hemochromatosis
- α 1-antitrypsin deficiency
- Primary biliary cirrhosis
- Chronic hepatic congestion
- 1. cardiac cirrhosis (chronic right heart failure, constrictive pericarditis)
- 2. hepatic vein thrombosis (Budd-Chiari)
- Idiopathic
- Rare: Wilson's disease, Gaucher's disease

Reference: Toronto Notes.

10. Most common hepatitis is?

A- HBV

B -HCV

C- HDV

D- HEV

Answer: HBV

Hepatitis B virus infection is most commonly found in South-East Asia, the Middle and Far East, Southern Europe, and Africa.

Ref: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3530988/>

+ according to the answer of gastro consultant that HBV is the commonest type in KSA.

11. Which common feature of IBS?

A-diarrhea

B-constipation

C-vomiting

answer : A

Reference: <http://www.ncbi.nlm.nih.gov/m/pubmed/21929652/>

For Irritable Bowel Syndrome (IBS) the criteria is as follows:

Recurrent abdominal pain or discomfort at least 3 days/month in the last 3 months associated with two or more of the following:

- 1- Improvement with defecation
- 2- Onset associated with a change in frequency of stool
- 3- Onset associated with a change in form (appearance) of stool

Diagnostic Criterion fulfilled for the last 3 months with symptom onset at least 6 months prior to diagnosis

Ref: https://www.ibsregister.com/ibs_professional_info/rome_iii

12. How to differentiate large ovarian cyst from ascites?

A. Dull anteriorly resonant laterally

B. Resonant anteriorly and dull laterally

Answer: A

(ovarian cyst have midabdominal dullness and lateral tympany)

While Ascites will have tympanic note over the umbilicus and dull over the lateral abdomen and flank areas

Reference: <https://books.google.com.sa/books?id=qW4IKSfM8x8C&pg=PA472&lpg=PA472&dq=%23v=onep-age&q&f=false>

Ref: <https://depts.washington.edu/physdx/liver/tech.html>

13. Asymptomatic patient, known case of chronic gastritis, has positive occult blood stool and his Hb=9, You will manage him by?

- a. IM iron
- b. Oral iron
- c. Erythropoietin
- d. Blood transfusion

Answer: A (IV iron would be more appropriate answer)

14. Similar question in another exam with different choices:

Elderly man on NSAIDs developed dyspepsia. Endoscopy showed gastritis. Labs showed iron deficiency anemia with Hb= 9. What is the treatment?

- A. IV iron
- B. IM iron
- C. Erythropoietin
- D. Oral Iron

Answer: A

Oral ferrous sulfate associated with a significantly higher risk of GI side effects than IV iron. Acquired malabsorption for iron with autoimmune atrophic gastritis or Helicobacter pylori infection.

Reference: <http://www.uptodate.com/contents/treatment-of-the-adult-with-iron-deficiency-anemia>

If the patient tolerated orally you should start with oral iron then IV iron if he doesn't tolerate!

(hema-tologist consultant) ?!

- IV iron is appropriate for patients who are unable to tolerate gastrointestinal side effects of oral iron. Examples include older individuals, pregnant women (who already have gastrointestinal symptoms related to the pregnancy), and individuals with existing gastrointestinal disorders that may exacerbate oral iron side effects. (See 'Side effects (oral iron)' below.)
- IV iron may be needed for those with severe/ongoing blood loss (eg, telangiectasias, varices).
- Gastric surgery (bypass, resection) that reduces gastric acid may severely impair intestinal absorption of oral iron.
- Malabsorption syndromes (celiac disease, Whipple's disease, bacterial overgrowth) may limit absorption of oral iron

15. Patient with Crohn's disease. Most relevant and associated with CD?

- A. Positive Family History
- B. Smoking
- C. Alcohol

Answer: A

Positive family history is the largest independent risk factor for CD and UC

Reference: (Kumar)

While family history of inflammatory bowel disease (IBD) is recognized as the strongest independent risk factor for CD in western populations, it is unknown if family history plays a role in Asians

Ref: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5095575/>

16. Pt. with HBA after 3 week we take bipsy, what is show?

- A. Normal architecture
- B. Fibrosis something
- C. Another something

Answer: A

** Can't be sure about this Question**

smle ,2017

17. Asymptomatic pt. with Positive HBV antigen?

- A. Acute hepatitis
- B. Chronic hepatitis
- C. Active carrier
- D. Non active carrier

Answer: D

INACTIVE carrier, asymptomatic, carry HBV antigen more than 6m and HBVeAB

“The inactive HBsAg carrier state is diagnosed by absence of HBeAg and presence of anti-HBe, undetectable or low levels of HBV DNA in PCR-based assays, repeatedly normal ALT levels, and minimal or no necroinflammation, slight fibrosis, or even normal histology on biopsy”

Ref: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1253537/>

18. What gene is related to Celiac Disease?

Answer: ?

HLA-DQ2 (chromosome 6) found in 80-90% of patients compared with 20% in general population; also associated with HLA-DQ8.

Reference: (Toronto Notes)

The risk of developing celiac disease is increased by certain variants of the HLA-DQA1 and HLA-DQB1 genes.

Reference: (<https://ghr.nlm.nih.gov/condition/celiac-disease#genes>)

Unique test for celiac disease:

- Anti-tissue transglutaminase (first test)
- Antiendomysial antibody
- IgA antigliadin antibody
- Most accurate test is small bowel biopsy showing “Flattening of the villi”

Ref: Master the boards p.284

19. Old patient that presented with abdominal pain from time to time starts in the left mid abdomen radiates to the back, whenever he have the attacks, he lies down on that side and bend his body position like a baby, no vomiting, diarrhea or weight loss, what is the diagnosis?

- A- duodenal ulcer
- B- gastric ulcer
- C- chronic pancreatitis
- D- mesenteric thrombosis

Answer: C

can radiate to back, may improve when leaning forward (Toronto Notes)

specific Diagnostic tests for Chronic pancreatitis:

- abdominal X-ray
- abdominal CT
- Secretin stimulation testing: most accurate.

Treatment: enzyme replacement

Ref: Master the boards p.284

20. Female patient diagnosed with IBD on ceftriaxone with no benefit, what is the organism?

- A. herpes
- B. can't recall others

smle ,2017

Answer: *Pseudomonas aeruginosa*

Ceftriaxone does not have useful activity against *Pseudomonas aeruginosa*. It is generally not active against *Enterobacter* species and its use should be avoided in the treatment of *Enterobacter* infections even if the isolate appears susceptible because of emergence of resistance. Some organisms, such as *Citrobacter*, *Providencia*, and *Serratia* have the ability to become resistant through development of cephalosporinases (these enzymes hydrolyze cephalosporins and render them inactive)

Avoid antibiotic or antidiarrheal therapy >>>increase HUS risk.(first aid)

Herpes simplex virus (HSV) colitis is very rare, Only a few cases have been reported in patients with inflammatory bowel disease (IBD)

Ref: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2886450/>

Facultatively enteropathogenic organisms such as *Klebsiella pneumoniae* and *Pseudomonas aeruginosa* have also been isolated from mucosal biopsies of patients with chronic colitis. These pathogens are also found in the mucosal biopsy specimens of patients with Crohn's disease,

Ref: http://www.medscape.com/viewarticle/481513_3

Although ceftriaxone has some activity against *Pseudomonas aeruginosa*, on the basis of present evidence it cannot be recommended as sole antibiotic therapy in pseudomonal infections

Ref: <https://www.ncbi.nlm.nih.gov/pubmed/6329638>

21. Characteristic of perforated duodenal ulcer?

A - Mid epigastric pain

B - Steatorrhea

C - Melena

Answer: A

Symptoms include sudden, severe abdominal pain, a rapid heartbeat, and a low body temperature. Pain may radiate to one or both shoulders, and the abdomen may become rigid. The abdominal pain is usually sudden, sometimes producing collapse or syncope. Localization is usually epigastric, but it quickly becomes generalized.

Reference: uptodate

22. Question about a Patient with watery diarrhea :

Most cases of acute, watery diarrhea are caused by viruses (viral gastroenteritis). The most common ones in children are rotavirus and in adults are norovirus (this is sometimes called “cruise ship diarrhea” due to well publicized epidemics). Bacteria are a common cause of traveler’s diarrhea.

Ref: <http://patients.gi.org/topics/diarrhea-acute-and-chronic/>
(American college of Gastroenterology)

Acute watery diarrhea is most commonly seen with traveler's diarrhea caused by enterotoxigenic smle ,2017

E. coli (ETEC), parasite-induced diarrhea from Giardia and Cryptosporidium spp. and, in cases of food poisoning (ingestion of preformed toxins), from B. cereus and S. aureus.

Ref:

<http://www.clevelandclinicmeded.com/medicalpubs/diseasemanagement/gastroenterology/acute-diarrhea/>

23. About which marker indicate chronic hepatitis B?

A. IgM

B. HBsAg

Answer:

The diagnosis of chronic HBV infection is based on persistence of HBsAg for more than six months, IgG anti-HBc is positive, while IgM anti-HBc is negative.

Reference: medical diagnosis and management book (moh. Danish)

Ref: <http://www.uptodate.com/contents/overview-of-hepatitis-b-virus-infection-in-children-and-adolescents?source=preview&language=en-US&anchor=H6&selectedTitle=1~150#H6>

24. Peptic ulcer medication cause erectile dysfunction and decrease lipido?

A. Cimetidine

Answer: A

Reference: <http://www.webmd.com/erectile-dysfunction/guide/drugs-linked-erectile-dysfunction>

25. Female using NSAID for her dysmenorrhea developed epigastric pain, most likely Dx?

Answer: gastritis (first Aid)

26. What does it mean when the patient has positive Hbs Ag?

Answer:

HBsAg: This tests for the presence of virus. A "positive" or "reactive" HBsAg test result means that the person is infected with the hepatitis B virus, which can be an "acute" or a "chronic" infection. Infected people can pass the virus on to others through their blood and infected bodily fluids.

Reference: <https://www.cdc.gov/hepatitis/hbv/pdfs/serologicchartv8.pdf>

27. If the patient has Hbs Ag +ve and IgM +ve, what do you treat the patient with?

A- Interferon

B- Lamivudine

Answer: A

#Medscape:

Interferon a and etacavir ~> 1st line agents Lamivudine, adefovir: historical, 2nd, 3rd line agent Adeponectin (a fat cell hormone that increase insulin sensitivity): medscape, Resveratrol, L-carnitine

28. Hereditary chronic pancreatitis is?

A- autosomal dominant

B- polygene

Answer: A

Reference: <https://www.uptodate.com/contents/hereditary-pancreatitis>

29. What is the oncogene for pancreatic ca?

a. Ki-Ras

b. Myc

smle ,2017

Answer: A

There are abnormalities in the structure and/or function of several oncogenes and growth factors in human pancreatic cancer, notably the EGF receptor and its ligand TGF alpha, c-erb B-2 proto-oncogene, Ki-ras oncogene and the tumour suppressor gene p53.

Reference: <http://www.ncbi.nlm.nih.gov/pubmed/1964102>

30. Celiac disease affects which of the following locations?

- A. Distal SB
- B. Proximal SB

Answer: B

Celiac disease Affect the upper small bowel (Duodenum and proximal jejunum) more than lower small bowel.

Reference: [WebMed website and digestive disease center](#)

The reason why the proximal intestine is more frequently affected by celiac disease than the distal intestine is unknown

Ref: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3896877/>

31. Female patient complaining of constipation, weight gain and fatigue. What is the most likely di- agnosis?

- A. Hypothyroidism

Answer: A

Symptoms of Hypothyroidism:

Fatigue

Weakness

Weight gain or increased difficulty losing weight

Coarse, dry hair

Dry, rough pale skin

Hair loss

Cold intolerance (you can't tolerate cold temperatures like those around you)

Muscle cramps and frequent muscle aches

Constipation

Depression

Irritability

Memory loss

Abnormal menstrual cycles

Decreased libido

Ref: <https://www.endocrineweb.com/conditions/thyroid/hypothyroidism-too-little-thyroid-hormone>

Almost everything is decreased with hypothyroidism except weight and menstrual cycle (menorrhagia)

32. Scenario of a patient who came with melena and bleeding take NSAID for 3 weeks what is the cause?

Answer: NSAID use is associated with an increased risk of gastric or duodenal ulcer by inhibition of prostaglandins that leads to symptomatic chronic ulceration, also inhibit platelet function, and their use has been associated with GI bleeding from throughout the GI tract.

Reference: http://www.uwgi.org/guidelines/ch_07/ch07txt.htm

Bleeding — People who have had bleeding from the stomach, upper intestine, or esophagus have an increased risk of recurrent bleeding when taking NSAIDs.

People with platelet disorders such as von Willebrand disease, abnormal platelet function from uremia, and a low platelet count (thrombocytopenia) are advised to avoid NSAIDs.

Ref: <http://www.uptodate.com/contents/nonsteroidal-antiinflammatory-drugs-nsaids-beyond-the-basics>

33. Repeated

34. Repeated

35. Case of guillain barre syndrome, what you will find in LP ?

Answer: A- high protein

Reference: <http://emedicine.medscape.com/article/315632-workup#c13>

Lumbar puncture for cerebrospinal fluid (CSF) studies is recommended. During the acute phase of GBS, characteristic findings on CSF analysis include albuminocytologic dissociation, which is an elevation in CSF protein (>0.55 g/L) without an elevation in white blood cells. The increase in CSF protein is thought to reflect the widespread inflammation of the nerve roots

Ref: <http://emedicine.medscape.com/article/315632-workup?pa=5%2BJu9Ue%2Ft44LcRfyvRENsFY-oX3DmY%2B%2FkrbFiAwJOFoX%2FUDIapI%2F3v585FXly0P%2FYz0EVjAnmhK3qBr%2FW7BAkmF%2FDMAtBBAsM6eN9kpLn%2Fas%3D>

Characterized by : Ascending Weakness with loss of deep tendon reflexes

Treated with IVIG or plasmapheresis (STEROID not helpful)

Ref: Master the Boards p.326

36. Repeated

37. Patient with History of infection, came with low Hb and high wbc, what is the investigation? (according to Dr Abdullah the question is missing important info)

A- Bone marrow biopsy

B- Hb electrophoresis

Answer: I think A

** Can't be sure about this Question**

39. Paracetamol overdose after 24 hrs what happened to liver?

Answer: !!

Phase 1

0.5-24 hours after ingestion

smle ,2017

Patients may be asymptomatic or report anorexia, nausea or vomiting, and malaise
Physical examination may reveal pallor, diaphoresis, malaise, and fatigue

Phase 2

18-72 h after ingestion

Patients develop right upper quadrant abdominal pain, anorexia, nausea, and vomiting

Right upper quadrant tenderness may be present

Tachycardia and hypotension may indicate volume losses

Some patients may report decreased urinary output (oliguria)

Phase 3: Hepatic phase

72-96 h after ingestion

Patients have continued nausea and vomiting, abdominal pain, and a tender hepatic edge

Hepatic necrosis and dysfunction may manifest as jaundice, coagulopathy, hypoglycemia, and hepatic encephalopathy

Acute renal failure develops in some critically ill patients

Death from multiorgan failure may occur

Phase 4: Recovery phase

4 d to 3 wk after ingestion

Patients who survive critical illness in phase 3 have complete resolution of symptoms and complete resolution of organ failure.

Maximal acetaminophen daily doses

Adults: 4g/day

Peds: 75mg/kg/day

Minimum toxic doses of acetaminophen for a single ingestion, posing significant risk of severe hepatotoxicity, are as follows:

Adults: 7.5-10 g

Children: 150 mg/kg; 200 mg/kg in healthy children aged 1-6 years

The clinical course of acetaminophen toxicity generally is divided into four phases. Physical findings may vary, depending on the degree of hepatotoxicity.

Ref: <http://emedicine.medscape.com/article/820200-overview>

40. Liver biopsy taken at level of intercostal space:

- a- Fifth
- b- Seventh
- c- Ninth.
- d- Eleventh.

Answer: B

The biopsy site is usually located in the seventh or eighth intercostal space in the midaxillary line. The site can be further confirmed with either routine ultrasonography or a bedside portable ultrasound machine.

Ref: <http://emedicine.medscape.com/article/149684-technique>

41. Patient history of travel came with bloody diarrhea, what is the cause

A. Amebiasis

smle ,2017

Answer: A

It also is found in people who have traveled to developing countries and in people who live in institutions that have poor sanitary conditions. Amebic dysentery is a severe form of amebiasis associated with stomach pain, bloody stools, and fever

A mnemonic for common infectious causes of bloody diarrhea: CHESS:

Campylobacter

Hemorrhagic E. coli (O157:H7)

Entamoeba histolytica

Salmonella

Shigella

Reference: <http://www.healthline.com/health/amebiasis#Causes3>

42. What Antacid causes constipation?

A. Aluminum hydroxide

Answer: A

Disturbances of gut motility occur frequently under a high-dose antacid regimen. Typical symptoms are diarrhea and constipation. They are due to the cations of the antacids. Aluminum causes constipation, magnesium induces diarrhea, and calcium has no definite motor effect

Ref: <https://www.ncbi.nlm.nih.gov/pubmed/6858402>

43. What is most likely diagnosis in patient came for regular check and found to have HBsAg? (no more details);

a-Acute

b-Chronic

c-Carrier inactive

Answer: B

With regards of Hepatitis B surface antigen In people who recover, this protein usually disappears after 4 to 6 months. Its continued presence suggests that chronic infection has developed.

Ref: <http://www.uptodate.com/contents/hepatitis-b-beyond-the-basics>

44. A 6 years old child of positive HBV mother not taken any vaccine except BCG after delivery. What will you give him?

a-MMR, OPV, HBV, Varicella

b-HIB, MMR, OPV, HBV, PCV

c-HIB, MMR, OPV, HBV,

Answer = MMR , OPV , Varicella , PCV, HIB

*All can be given so choose the answer that don't include HBV

** Can't be sure about this Question**

45. Women not oriented and confused her husband have HBV IgG titer is -ve Direct bilirubin is high

(55) what will you do to confirm Dx?

smle ,2017

Answer: IgM

Total hepatitis B core antibody (anti-HBc):

Appears at the onset of symptoms in acute hepatitis B and persists for life. The presence of anti-HBc indicates previous or ongoing infection with hepatitis B virus in an undefined time frame.

IgM antibody to hepatitis B core antigen (IgM anti-HBc):

Positivity indicates recent infection with hepatitis B virus (<6 mos). Its presence indicates acute infection.

Ref: <https://www.cdc.gov/hepatitis/hbv/pdfs/serologicchartv8.pdf>

46. Which type of hepatitis have available vaccine?

A - Hep B

Answer: A

Hepatitis A and B

47. What is the treatment of choice for Traveler's diarrhea?

a. Ciprofloxacin.

b. Amoxicillin.

c. Metronidazole.

Answer: A

The most common organism is enterotoxigenic E. coli and it is treated with fluoroquinolones (e.g. Ciprofloxacin)

Reference: Uptodate

Initial treatment: rehydration, the Abx only will decrease the duration of symptoms;

1st line: antibiotics include fluoroquinolones, such as ciprofloxacin or levofloxacin or ofloxacin;

2nd line: azithromycin;

3rd line: Rifaximin

first-line antibiotics include fluoroquinolones, such as ciprofloxacin or levofloxacin

Ref: <https://wwwnc.cdc.gov/travel/yellowbook/2016/the-pre-travel-consultation/travelers-diarrhea>

48. Triple therapy for gastric ulcer in 10 yo boy; Ppi + metro + ?

Answer:

Treatment of

Peptic Ulcer: best initial therapy is PPI combined with clarithromycin and amoxicillin. In those who do not respond to therapy, Metronidazole and Tetracycline can be used as alternative antibiotic.

In case of penicillin allergy use: PPI + Clarithromycin + Metronidazole

Ref: Master the boards p.274

Do upper endoscope for Peptic ulcer in case of high risk of stomach cancer people. This includes people over the age of 45, as well as those who experience:

Anemia (a low number of red blood cells)

smle ,2017

Weight loss
Gastrointestinal bleeding
Difficulty swallowing

Ref: <http://www.healthline.com/health/peptic-ulcer#tests4>

49. Oral leukoplakia that can't be swiped off. Most likely to be?

a-Dysplasia

Answer: A?

Leukoplakia is a term used to describe a noninfectious change in the mucosal epithelium characterized by a white plaquelike lesion that cannot be rubbed off. [22] In most cases, lesions defined by clinical examination as leukoplakia consist of epithelial hyperkeratosis, hyperparakeratosis, hyperorthokeratosis, and combinations of these changes with acanthosis, and they are benign. However, it has been reported that approximately 20% of leukoplakia lesions develop dysplasia

Ref: <http://emedicine.medscape.com/article/2105120-overview#a4>

Causes of oral leukoplakia:

- 1- Oral squamous cell carcinoma
- 2- Chronic candidiasis (will be swiped off and leave a bleeding spot)
- 3- Submucosal fibrosis (Underlying tissues are firm and inelastic.)
- 4- Hairy leukoplakia (Painless white plaques along the lateral tongue borders.

History of HIV or immunosuppression)

- 5- Syphilitic leukoplakia (Typically located predominantly over the dorsum of the tongue)
- 6- Frictional keratosis (May be able to identify a source of chronic irritation (e.g., a faulty dental restoration, an ill-fitting denture, or parafunctional habits such as bruxism or chronic cheek biting)).
- 7- Lichen planus
- 8- Discoid lupus erythematosus
- 9- White sponge naevus

Ref: <http://bestpractice.bmj.com/best-practice/monograph/621/diagnosis/differential.html>

50. Kwashiorkor disease is due to which kind of diet?

a-High carb, low protein diet

b-Low carb, high protein

Answer: A

Reference: <http://emedicine.medscape.com/article/1104623-clinical#b5>

Kumar Clarks Clinical Medicine, 7th , P 215

51. Pt presents with black vomiting after ingesting large amount of medication (suicidal attempt). What is the most likely medication?

Answer: Iron toxicity

#initial features are characterized by

- Nausea.
- vomiting (the vomit may be grey or black in colour).
- abdominal pain.
- diarrhoea.

smle ,2017

Reference: Kumar Clarks Clinical Medicine,7th , P 944
Ref: <http://emedicine.medscape.com/article/815213-clinical>

52. How to diagnose hepatitis B ?

Answer:

HBsAg, hepatitis B core antibody (anti-HBc), and hepatitis B surface antibody (anti-HBs)

Reference: http://www.uptodate.com/contents/diagnosis-of-hepatitis-b-virus-infection?source=see_link#H9192

Kumar Clarks Clinical Medicine,7th , P 337

Ref: <https://www.cdc.gov/hepatitis/hbv/pdfs/serologicchartv8.pdf>

53. Pt with absence seizure the doctor wants to start him on sodium valproate. what test should be done before starting the treatment?

A) Liver function ,

B) creatinine ,

C) urea ..

Answer: A

Side effects of VPA include nausea, vomiting, hair loss, easy bruising, and tremor

VPA is associated with weight gain, obesity, insulin resistance, and the metabolic syndrome VPA can also cause thrombocytopenia and other coagulation disturbances and has also been associated with subclinical hypothyroidism with mild to moderate elevations in thyrotropin (TSH) levels VPA has also been linked to the polycystic ovarian syndrome. A number of case reports have linked VPA to Fanconi syndrome in children with severe disability

VPA-exposure in utero is associated with major malformations and other adverse effects, including neurodevelopmental abnormalities. VPA should be avoided in pregnancy when possible

Approximately 5 to 10 percent of patients developed ALT elevations during long term VPA therapy; most of the time these abnormalities are asymptomatic and can even resolve with continuation of the drug. In addition, there are more serious forms of hepatotoxicity that can occur with VPA:

_VPA-related hyperammonemic encephalopathy (VHE)

_Acute hepatocellular injury with jaundice can occur

****Although routine monitoring of hepatic function has not been shown to permit early identification of serious toxicity or improve outcome, many physicians choose to obtain liver function tests (LFTs) once or twice a year in patients who are clinically asymptomatic. The FDA recommends checking LFTs prior to initiating treatment and at frequent intervals thereafter, especially during the first six months

Reference: UPTODATE

54. Gastroenteritis ddx:

Answer:

DIFFERENTIAL DIAGNOSIS — The differential diagnosis of acute viral gastroenteritis includes other causes (infectious and non-infectious) of acute diarrhea. Diarrhea that lasts over a week in an individual with a history of travel, hiking, or oral-anal sexual activity should prompt evaluation for smle ,2017

protozoa such as Giardia and cryptosporidium. Recent antibiotic use or hospitalization should prompt consideration of Clostridium difficile infection. Common foodborne illnesses (eg, Staphylococcus aureus) need to be considered, particularly when the incubation period is shorter than is typical for viral illness (ie, within 8 to 16 hours). The presence of alarm symptoms or signs should prompt further investigation for an alternate diagnosis.

Causes of chronic diarrhea that may less commonly masquerade as acute viral gastroenteritis include: colorectal cancer, irritable bowel syndrome, inflammatory bowel disease, microscopic colitis, malabsorption syndromes, post-cholecystectomy related diarrhea, medication-induced diarrhea, laxative abuse, and chronic infections. Patients with acute viral gastroenteritis may also present with isolated vomiting without prominent diarrhea. Clinicians should consider adverse effects of medications and acute vestibular disorders in the differential diagnosis of these patients.

Reference: uptodate

55. Treatment of HCV?

Answer:

#chronic :

Pegylated Interferon + ribavirin.

#Acute :

Interferon has been used in acute cases to prevent chronic disease. Needle-stick injuries must be followed and treated early if there is evidence of HCV viraemia, usually re-tested for at 4 weeks.

Reference: Kumar Clarks Clinical Medicine, 7th , P 340 , 341 Toronto-note p380

Ref: <http://emedicine.medscape.com/article/177792-treatment>

56. 40 year old patient complaining of weight loss, nausea, lethargy and jaundice. When he was asked about similar attack in the past, he mentioned 4 episodes during the past two years. What is the most Likely diagnosis?

a. Acute pancreatitis.

b. Cancer head of pancreas.

c. Peptic ulcer disease.

d. Chronic pancreatitis.

Answer: B

The most characteristic sign of pancreatic carcinoma of the head of the pancreas is painless obstructive jaundice.

Reference: <http://emedicine.medscape.com/article/280605-clinical> Toronto Notes 2015, GS51

** Can't be sure about this Question**

57. 27 year old smoker who was studying in a foreign country for two years and lived in a student housing. He returned home two months ago. The patient complains of 4 day mid epigastric pain, what is the most likely diagnosis?

a. Viral Hepatitis.

b. H. pylori infection.

c. Acute Pancreatitis.

d. Myocardial infarction.

Answer: B

Epigastric pain is the most common symptom of both gastric and duodenal ulcers. It is characterized by a gnawing or burning sensation and occurs after meals — classically, shortly after meals with gastric ulcer and 2-3 hours afterward with duodenal ulcer.

Reference: <http://emedicine.medscape.com/article/181753-overview>

58. Enteric fever best diagnosed in the first week of presentation by?

- A- blood culture
- B- stool culture
- C- multiple something?
- D- bone marrow

Answer: A

Reference: Kumar Clarks Clinical Medicine, 7th, P 144

Enteric Fever = Typhoid Fever = Typhoid

Multiple blood cultures (>3) yield a sensitivity of 73%-97%. Large-volume (10-30 mL) blood culture and clot culture may increase the likelihood of detection

<http://emedicine.medscape.com/article/231135-workup>

59. ASA high dose with GIT complication how to treat or avoid it?

- A. Cimetidine
- B. Misoprostol

Answer: PPI (the best) – if not in the choices Misoprostol

Misoprostol and PPIs were more effective than H₂-blockers in the prevention of both gastric and duodenal severe damage; more studies need to evaluate the role of short-term prevention in patients with arthritis who require acute NSAID treatment.

Ref: <https://www.ncbi.nlm.nih.gov/pubmed/11575445>

60. First sign of portal HTN?

- A- splenomegaly
- B- hepatomegaly
- C- ascites

Answer : C

** Can't be sure about this Question**

61. Celiac pt, what is safe for him?

- A. Rice

Answer : A,

rice is safe for celiac patients

Reference: <http://wheat.pw.usda.gov/ggppages/topics/Celiac.vs.grains.html>

- gluten free diet: avoid barley, rye, wheat
- oats allowed if not contaminated by other grains
- rice and corn flour are acceptable
- iron, folate supplementation (with supplementation of other vitamins as needed)

Reference: Toronto Notes 2015, G18

smle ,2017

62. Aspirin works in COX will lead to :

- A. Decrease Thromboxane
- B. Leukotriene

Answer: A

Irreversibly inhibit acetylates COX → inhibiting TXA2 synthesis → inhibiting platelet aggregation

Reference: Kumar Clarks Clinical Medicine,7th , P 443 + 753

irreversibly acetylate serine 530 of cyclooxygenase (COX)-1. This effect inhibits platelet generation of thromboxane A2, resulting in an antithrombotic effect.

Ref:<http://www.uptodate.com/contents/aspirin-mechanism-of-action-major-toxicities-and-use-in-rheumatic-diseases>

63. aspirin toxicity lead to?

- A. Resp. Alkalosis followed by metabolic acidosis
- B. metabolic acidosis followed by Resp. Alkalosis
- C. Metabolic alkalosis followed by resp. acidosis

Answer: A

The acid-base, fluid, and electrolyte abnormalities seen with salicylate toxicity can be grouped into phases:

Phase 1 of the toxicity is characterized by hyperventilation resulting from direct respiratory center stimulation, leading to respiratory alkalosis and compensatory alkaluria. Potassium and sodium bicarbonate are excreted in the urine. This phase may last as long as 12 hours.

In phase 2, paradoxical aciduria in the presence of continued respiratory alkalosis occurs when sufficient potassium has been lost from the kidneys. This phase may begin within hours and may last 12-24 hours.

Phase 3 includes dehydration, hypokalemia, and progressive metabolic acidosis. This phase may begin 4-6 hours after ingestion in a young infant or 24 hours or more after ingestion in an adolescent or adult

Reference: <http://emedicine.medscape.com/article/1009987-overview>

64. Food poisoning , investigation shows gram positive cocci?

- A. Staph aureus
- B. Shigella
- C. Salmonella

Answer: A

Reference: Kumar Clarks Clinical Medicine,7th , P 123 ,130,131, 133

“Shigella and salmonella is Gram –ve”

Staphylococcal food poisoning is caused by ingesting a preformed heat-stable staphylococcal enterotoxin. Food can be contaminated by staphylococcal carriers or people with active skin infections

Ref: <http://www.merckmanuals.com/professional/infectious-diseases/gram-positive-cocci/staphylococcal-infections>

65. Best treatment for primary biliary cirrhosis is?

- A. azathioprine
- B. Ursodeoxycholic acid

Answer: B

Treatment of Primary biliary Cirrhosis: Ursodeoxycholic acid (improves bilirubin and aminotransferase) + Malabsorption of fat-soluble vita-mins (A, D and K) (when deficiency is detected and prophylactically in the jaundiced patient)

+ Bisphosphonates (for osteoporosis) + colestyramine (helpful for Pruritus)

Reference: Kumar Clarks Clinical Medicine, 7th, P355

Ursodeoxycholic acid (UDCA) is the major medication used to slow the progression of the disease. Patients with early disease have clinical, biochemical, and histologic improvement.

<http://emedicine.medscape.com/article/171117-treatment>

66. patient with bilateral Lower limb edema + distended abdomen + on examination there is small vessels on abdomen, what could be the cause?

- A. liver cirrhosis
- B. Heart failure

Answer: A

Reference: Kumar Clarks Clinical Medicine, 7th, P329

67. Case about IBD Which cell type responsible about ulceration in intestine ?

- a) B CELL
- b) T CELL

Answer: b

Reference: Kumar Clarks Clinical Medicine, 7th, P287

The first tier of cytokine responses are governed by the T cell differentiation patterns dominating the disease

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3773507/>

68. Patient on NSAID with signs of ulcer, what you will do?

- A. Triple therapy
- B. Urea breath test
- C. Immediate endoscope

Answer: B(?)

** Can't be sure about this Question**

*—Alarm symptoms include evidence of bleeding (e.g., anemia, heme-positive stool, melena), perforation (e.g., severe pain), obstruction (e.g., vomiting), and malignancy (e.g., weight loss, anorexia).

Ref: <http://www.aafp.org/afp/2007/1001/p1005.html>

69. Child post meal complain of nausea, abdominal distention, cramps, she oriented and cooperative. this symptom after he came from school 1month ago. Vital sign at admission normal but after that will be decrease BP Normal temperature, How to reach diagnosis?

- A. history of food intolerance
- B. pus and stool examination
- C. Stool culture

Answer : A

70. Rota confirmatory diagnosis?

- A- Serum antibody
- B- Stool antigen
- C- Stool leukocyte

Answer: B

The diagnosis can be established by PCR for genome detection or ELISA for the detection of rotavirus antigen in faeces and by electronmicroscopy of faeces. Histology of the jejuna mucosa in children shows shortening of the villi with crypt hyperplasia and mononuclear cell infiltration of the lamina propria

Reference: Kumar Clarks Clinical Medicine,7th , P112

The most widely available method for confirmation of rotavirus infection is detection of rotavirus antigen in stool by enzyme-linked immunoassay (EIA)

Ref: <https://www.cdc.gov/vaccines/pubs/pinkbook/rota.html>

71. Man present with epigastric pain for 3 month worse after eat diagnosed as H pylori triple treatment given to him what is the best indicator for his improvement?

- A. endoscope
- B. ph
- C. blood test for h pylori
- D. clinical improve

Answer: A?

** Can't be sure about this Question**

urea breath test or stool test for H. pylori (for active Hp) 6 weeks after end of treatment to be sure eradication is successful

Reference: Kumar Clarks Clinical Medicine,7th , P112

Toronto-note G14

“Symptoms may not be an accurate indicator of treatment success. The American College of Gastroenterology (ACG) endorses the carbon 13-labeled urea breath test (13C-UBT) as the most reliable test to confirm H pylori eradication”

Ref: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4219329/>

Blood will be positive even after Treatment, so not helpful.

72. 19 year old female, presenting with abdominal pain, diarrhea, bloating, improved with defecation, diagnosis?

- A. IBD

smle ,2017

- B. IBS
- C. Celiac

Answer: B

pain or discomfort associated with two or more of the following:

- 1 improvement with defecation
- 2 onset associated with a change in frequency of stool
- 3 onset associated with a change in form (appearance) of stool

Reference: Kumar Clarks Clinical Medicine,7th , P312

73. 30 years with chronic diarrhea and ataxia and abnormal movements. Jejunal Biopsy showed: T. Whipple infection. Management?

- A. Short term antibiotics
- B. Steroids
- C. Long term Antibiotics

Answer: C

Treatment is with antibiotics which cross the blood–brain barrier, such as trimethoprim and sulphamethoxazole daily for 1 year. This is often preceded by a 2-week course of streptomycin and penicillin or ceftriaxone. Treatment periods of less than a year are associated with relapse in about 40%.

Reference: Kumar Clarks Clinical Medicine,7th , P281

Antibiotics are the mainstay of treatment. Because of the tendency of Whipple disease to relapse on short courses of antibiotics (2 wk to several mo), most authorities suggest a prolonged course (as long as 1 y)

Ref: <http://emedicine.medscape.com/article/183350-medication#2>

74. Pt with anemia, high bilirubin, positive direct and indirect coombs, photo of smear showing spherocytosis, what's the dx?

- A. AIHA (autoimmune hemolytic anemia)
- B. spherocytosis

Answer: A

Spherocyte is in both : Hereditary spherocytosis and AIHA

Coombs test is positive only in AIHA

Direct coombs test specific for Extravascular Hemolysis

Reference: Kumar Clarks Clinical Medicine,7th , P416 Toronto Notes 2015,H22

75. Young female came with jaundice, disoriented, tremor. Husband has HBV, lab -ve. LFT slightly elevated What lab to order next?

- A. serum copper
- B. serum level of ceruloplasmin
- C. HBV core

Answer: B

Ref: <http://emedicine.medscape.com/article/183456-workup>

Toronto- note G34

for wilson disease the suspicion should be high in patients presenting with extrapyramidal disorders or with liver diseases or of unknown origin. For diagnosis, in many patients a combination of tests reflecting disturbed copper metabolism may be needed. Not a single test is per se specific and, thus, a range of tests has to be applied (presence or absence of Kayser-Fleischer smle ,2017

rings or neurologic symptoms, serum ceruloplasmin, liver copper content, urinary copper excretion, mutation analysis;

Ref: <https://www.ncbi.nlm.nih.gov/pubmed/24650289>

76. Long scenario about patient with peptic ulcer disease you give him PPI + amoxicillin , what can you add to them ?

A- clarithromycin

Answer: A

Reference: Kumar Clarks Clinical Medicine,7th , P216

triple therapy for 7-14 d (Hp-PacR): PPI bid (e.g. lansoprazole 30 mg bid) + amoxicillin 1 g bid + clarithromycin 500 mg bid

Ref: TORONTO-NOTE G14

77. Question about splenic sequestration (with lobar infiltrate in lung)??Incomplete question Sick Cell Disease can present with splenic sequestration and lobar infiltrate in lung.

Ref: <http://emedicine.medscape.com/article/205926-overview>

78. Patient presented to primary health care with his annual health visit, In lab result: HBsAg is (+ve) & quot; this is the only test that written in this question, The patient has?

A- Acute HBV

B- Chronic HBV

C- Chronic HBV Carrier

Answer: C

patients are usually discovered incidentally on blood tests, such as when they are screened for donating blood for transfusion or when attending genital medicine or antenatal clinics. Patients with inactive chronic hepatitis have HBsAg in their serum.

Reference: Kumar Clarks Clinical Medicine,7th , P338

79. Case about pancreatitis what is the treatment?

79. Pt with abdominal tenderness and high amylase, lipase what is the management?

#Acute pancreatitis : aggressive IV fluid and NPO until symptoms resolve

#chronic pancreatitis: Pain management and enzyme replacement

Reference: Master the Boards

80. How to diagnose Giardia lamblia?

A- three consecutive stool analysis

B- three separate stool analysis

Answer: B

multiple stool samples (daily x 3 d) for microscopy, stool antigen used occasionally, since the parasite may be excreted at irregular intervals

occasionally small bowel aspirate or biopsy

Reference: Kumar Clarks Clinical Medicine,7th , P162 Toronto Notes 2015, G18

Ideally, 3 specimens from different days should be examined because of potential variations in fecal excretion of cysts. *G. intestinalis* is identified in 50-70% of patients after a single stool examination and in more than 90% after 3 stool examinations.

Ref: <http://emedicine.medscape.com/article/176718-workup>

81. Patient with bilateral abdominal mass?

A. Polycystic kidney disease

Answer: A

Cystic renal disease present as solitary or multiple renal cysts in the kidneys

Palpable, bilateral flank masses occur in patients with advanced ADPKD

Reference: <http://emedicine.medscape.com/article/244907-overview>

Kumar Clarks Clinical Medicine, 7th, P642

82. Patient presented with severe vomiting. his labs showed hypocalcaemia. what is your management?

A. furosemide

B. hydration

Answer: B

Loss of water and electrolytes, should be treated by replacement of the loss. If possible, this should be with oral water and sodium salts

Reference: Kumar Clarks Clinical Medicine, 7th, P660

83. Patient with AST very high, the cause?

A. Alcohol

Answer: A

Aspartate aminotransferase (AST) is primarily a mitochondrial enzyme (80%; 20% in cytoplasm) and is also present in heart, muscle, kidney and brain. High levels are seen in hepatic necrosis, myocardial infarction, muscle injury and congestive cardiac failure

Reference: Kumar Clarks Clinical Medicine, 7th, P324

in Alcohol related hepatitis AST:ALT >2:1

Ref: Toronto-note G35

84. MVA (Motor vehicle Accident) when to do diagnostic peritoneal lavage?

A- Hypotensive patients.

B- All MVA patients.

C- Unconscious patients with severe head injury.

D- Conscious patients with abdominal pain.

Answer : A

DPL can be used to evaluate both blunt and penetrating abdominal trauma in patients who are hemodynamically unstable or who require urgent surgical intervention for associated extra-abdominal injuries. DPL can rapidly confirm or exclude the presence of intraperitoneal hemorrhage. Thus, the patient with a closed head injury, the unstable patient who has been in a motor vehicle

accident, or the patient with a pelvic fracture and potential retroperitoneal hemorrhage can be appropriately triaged to emergency laparotomy

Reference: <http://emedicine.medscape.com/article/82888-overview>

85. The cause of Crohn's disease?

A. unknown

Answer: A

The cause of Crohn disease is unknown

Ref: <http://www.uptodate.com/contents/crohn-disease-beyond-the-basics>

86. HELLP syndrome?

A- Hypertension,....., low enzyme

B- Hypertension,....., high enzyme

C- Hemolysis , Elevated liver enzyme , low platelet

Answer: C

HELLP syndrome, named for 3 features of the disease (hemolysis, elevated liver enzyme levels, and low platelet levels)

Ref: <http://emedicine.medscape.com/article/1394126-overview>

87. Patient with IBD, mild to moderate, what is the mainstay of treatment?

A- Surgery

B- Antibiotics

Answer:b

Step I - Aminosalicylates

Step IA - Antibiotics

Step II – Corticosteroids

Step III – Immunomodulators

Ref: <http://emedicine.medscape.com/article/179037-treatment#d10>

88. Case of lactose intolerance?

Ref: <http://www.medicinenet.com/script/main/mobileart.asp?articlekey=7809>

89. What hepatitis can be prevented by vaccination?

A. A

B. B

C. C

D. D

Answer: vaccination for HBV/HAV

90. Repeated

91. Patient c/o liver cirrhosis and ascites, now he c/o wight loss, what should you do?

A. CEA

B. CA125

smle ,2017

- C. abdominal Us
- D. Alphabetic Protein

Answer: d

cirrhosis is a risk factor for hepatocellular carcinoma. When elevated, the afp is 75-91% specific, and values greater than 400 ng/ml are generally considered diagnostic of hcc in the proper clinical context. Ultrasonographic identification of hcc can be difficult in the background of regenerative nodules in the cirrhotic liver. Cea is mainly for colon cancer. Ca125 for ovarian cancer.

Reference: <http://emedicine.medscape.com/article/197319-workup#c1>

92. Mountain climber who has hypoxia, which of the following liver zones is most affected by hypoxia?

- A- Central of acini zone II
- B- Peripheral of acini zone II
- C- Sinusoidal

Answer: Zone3

Functionally, the liver can be divided into three zones, based upon oxygen supply. Zone 1 encircles the portal tracts where the oxygenated blood from hepatic arteries enters. Zone 3 is located around central veins, where oxygenation is poor. Zone 2 is located in between.

Ref: <https://books.google.com.sa/books?isbn=1437726232>

93. MVA, femur fracture, high ALP, what would confirm that this elevation in ALP is not hepatic in origin?

- A. Glucose 6 phosphatase
- B. kinase
- C. RLT
- D. GGT

Answer: D

The only liver enzyme in the choices

94. A patient had weight gain, because she can't taste the food or smell. Examination is normal, she was seen by neuro and psychiatry with no diagnosis. What's her Diagnosis?

- A.Meningioma
- B.Aneurysm
- C.Malingering

Answer: C

The most common goals of people who malingering in the emergency department are obtaining drugs and shelter. In the clinic or office, the most common goal is financial compensation and choices.

A & B can be diagnosed easily.

Reference: <http://emedicine.medscape.com/article/293206-clinical>

95. Elderly with abdominal tenderness and dilated bowel loops?

I think it is a case about intestinal obstruction, read about it.

80. Vit B3 deficiency? <<<<

I think it is a case about pellagra (niacin deficiency), read about it.

81. Pt male 50s i think with chronic epigastric abd pain, last week lost 7 kg, +ve stool occult blood;

- A. Chronic pancreatitis
- B. Chronic cholecystitis
- C. Chronic gastritis

Answer: i think due to significant wt loss, should think about malignancy, but the case is not clear.

82. Man in acitampinicol drink 2 glass of win every week LFT (high) and bilirubin (high) dx?

- A. Alcoholic hepatitis
- B. Drug induced hepatitis
- C. Whipl

Answer: B

Explanation:

Answer might vary depending on LFT pattern & Risk factors in history (e.g. >3-6 standard drinks/d in men for >10 yr leads to cirrhosis, but only in about 10-20% of those who consume this amount daily on a continuous basis; cirrhosis risk increases with amount of alcohol consumed above threshold).

Resource: Toronto notes for different types of hepatitis, G28

83. Young girl with jaundice (and I think liver failure) her color turned from yellow to green, why?

- A. Hypoxia
- B. Oxidation of bilirubin.
- C. I don't remember the rest

Answer: B

84. Less complicated of NSAID drugs in PUD?

85. A patient came to you with severe diarrhea and vomiting for several days the patient is untalkative and you can't take detailed history from him

bp in standing 80/60 , bp in sitting 120/80, what cause of fluid loss?

- A decrease extracellular fluid
- B decrease extracellular glucose
- C decrease intracellular fluid
- D diluted hyponatremia

Answer: A

Explanation: Dehydration (low fluid volume in the body) causes orthostatic hypotension other causes.

Resource: http://my.clevelandclinic.org/health/diseases_conditions/hic_orthostatic_hypotension
smle ,2017

86. 80 year old with symptom of vit b12 deficiency, What to do first?
- A. Vitamin b12
 - B. Reticulocyte count

Answer: injection A

<http://www.nhs.uk/Conditions/Anaemia-vitamin-B12-and-folate-deficiency/Pages/Treatment.aspx>

87. Pt with history of GERD, required aspirin for the treatment of rheumatoid Arthritis, what medication you're going to add next?

Answer: Misoprostol

Explanation: combine NSAID with PPI or misoprostol in one tablet to treat NSAIDS induced ulceration.

Resource: Toronto notes (G14)

88. Senario consistent with sialadenolithiasis (the pain in the submandibular Area) they are asking about the location of obstruction?

- A- Submandibular
- B- Sublingual
- C- Parotid
- D- Submental

Answer: A

Explanation: Pain site + in Sialolithiasis 80% of cases are in submandibular gland.

Resource: Toronto notes (OT31)

89. What is maximum normal 2 h postprandial blood glucose?

- B. 8
- C. 9
- D. 10
- E. 11

Answer: D

Explanation: BG 2 h post 75 g OGTT ≥ 11.1 mmol/L (200 mg/dL).

Resource: Toronto notes, FM23

90. During colonoscopy of patient who has fragile thin surface of the colon with multiple blood dots , there was no previous chronic disease, what is the most likely diagnosis?

- A. Ulcerative colitis
- B. Mesenteric schema

smle ,2017

Answer: B?

91. Case of pain in mandibular region increase the swelling while eating and subside after it (Swelling in the horizontal line of the mandible):

- A. Ncancer
- B. Caliculai

Answer: B

Explanation: In calculus, the pain & swelling is associated with salivation (i.e. eating).

Resource: Toronto notes (OT31)

92. Young male complaining of epigastric discomfort, he tried Over-the-counter (OTC) medication to relieve this discomfort, he noticed some improvement but experienced constipation. Which OTC drug most likely he tried?

- A. Calcium carbonate
- B. Sodium carbonate
- C. Aluminum hydroxide
- D. Something aluminum

Answer:?? (A&C could cause constipation and both of them used as OCTs)

93. Patient presented with severe vomiting on exam he looks ill with dry mucous membrane capillary refill 3 seconds and he cries with tears what is the appropriate management?

- A. severe and treat with dextrose
- B. moderate and treat with ORS
- C. moderate and treat with pedialyte (I chose this on as he cries with tears so its not severe but im not sure)
- D. this is a 5% dehydration Answer:

94. 25 years teacher,, complaining of abd pain, fatigue, on exam there was icting , palpable liver 1cm,, also 2 student complaining from same complain?

- A- HAV
- B- HBV
- C- HCV

Answer: A

<http://www.webmd.com/hepatitis/hepa-guide/hepatitis-a-symptoms>

95. Pt with bilateral flank swelling, dull, move with shifting? Answer: ascites smle ,2017

96. Female e jaundice, Her husband is HBV +ve , they did for her HBS antigen -ve HAV -ve HCV – ve. What to do next?!! HBC antigen ?!!

97. HBsAg +ve

A. acute hepatitis

B. chronic hepatitis

C. acute carrier

D. chronic carrier Answer: no more enough

98. 25 years teacher, complaining of abd pain, fatigue, on exam there was icting, palpable liver 1cm, also 2 student complaining from same complain:

A. HAV

B. HBV

C. HCV

Answer: A (repeated)

<http://www.webmd.com/hepatitis/hepa-guide/hepatitis-a-symptoms>

99. Type of HBV?

- A. DNA
- B. RNA

Answer: A

Resource: Toronto notes – G31

100. Anti obesity medication how its work (apt -Lipes)

<http://www.uptodate.com/contents/weight-loss-treatments-beyond-the-basics>

101. Which antidiabetic medication cause weight gain? Answer: Sulfonylurea

102. Treatment of gestational DM is? Answer: insulin http://www.medscape.com/viewarticle/568728_3

103. Young obese want to lose weight, advice;

- A. Yoga
- B. Bicycle
- C. weight lifting

Answer:

104. Diagnosis of Peptic ulcer disease:

105. Diagnosis of GERD:

106. Unwanted side effects of anticholinergic?

- A) diarrhea
- B) blurred vision
- C) excessive salivation
- D) urinary incontinence

Answer:B

Explanation: Anticholinergic autonomic symptoms: (dry mouth > impotence > constipation > blurred vision).

Resource: Toronto notes

107. Obese man with low calorie diet and intensive exercise, could not lose weight, he has DM& HTN, best way to lose weight?

smle ,2017

- A. Surgery
- B. Medication
- C. decrease calories
- D. increase intensity of exercise INH is not mentioned

Answer: B

Explanation: In obesity, if life style fails then we base our decision of treatment on BMI with either medications or bariatric surgery (Please review Toronto notes, FM8 Fig.4). While in DMT2 patients we treat with medication first.

Resource: Toronto Notes FM8 & FM25

108. Treatment of plummer vinson syndrome?

- A. iron

Answer: A

Toronto notes, G10

<http://emedicine.medscape.com/article/187341-treatment>

109. Young boy presented with diarrhea sometimes bloody, weight loss, arthritis, anemia. the diag-nosis is?

- A. Crohns
- B. UC
- C. Celiac

Answer: A

A clear picture of chronic diarrhea in pediatric age group you have to read about but in this q the picture of ibd is more clear and supported by arthritis and bloody diarrhea which present in all types of ibd but its more common in crohn. Also, crohn is common in young age and the absence of uc features like tenesmus and urgency make crohn more probable

Source: Toronto notes, G20

110. A 70-year-old male with history of dysuria, frequency and urgency, DRE revealed tenderness but no masses, Temp is high, What is the most likely diagnosis?

- A) Cystitis
- B) Acute prostatitis
- C) Rectal abscess

Answer: B

Explanation: Urinary Sx + Tenderness on DRE (Digital Rectal examantion) + Fever => think prostatitis. Cystitis rarely associated with fever.

Resource: Toronto notes, FM29.

smle ,2017

111. Preventable cause of gastroenteritis by vaccine?

Answer: Rotavirus

112. 12-years with hepatic failure admitted to ICU, his skin was yellow, now become green in color, what is this indicates? (not mentioned obstructive jaundice in the choices!)

A)Oxidation of bilirubin B)Impending death Answer: A

113. Patient treated for duodenal ulcer. Now complains of breast enlargement and decrease sexual desire. Which drug?

Answer: Ranitidine (h2 blocker)

Ref./ <http://www.drugs.com/sfx/ranitidine-side-effects.html> (repeated)

114. Pt with history of gastric ulcer, Which of the following are used for pain control not causing gastric irritation?

- A. aspirin
- B. Ibuprofen
- C. Coex Mb
- D. Indomethacin

Answer: C

115. Patient treated for duodenal ulcer. Now complains of breast enlargement and decrease sexual desire. Which drug?

Answer: Ranitidine (H2 blocker)

Reference: <http://www.drugs.com/sfx/ranitidine-side-effects.html>

116. Lady come to the clinic to regular check up with everything is normal with table of direct and indirect bilirubin (within the normal range) what is your diagnosis?

- a. Rotor syndrome
- b. Crigler Najjar
- c. Dubin Johnson
- d. Gilbert syndrome

Answer: D (repeated) ??

117. Barrett's esophagus;

- A. Adenocarcinoma
- B. SCC

Answer: A

118. A patient with unilateral parotid swelling, he's postcholecystectomy. Saliva was cloudy (I think), culture from parotid saliva was negative;

- a. Sarcoid granulo
- b. Bacterial ...
- c. Cancer...
- d. Sjogren syndrome

Answer: B

119. Asymptomatic 40 y female patient direct bilirubin 5 indirect 9 what is your diagnosis?

- A. gilbert disease
- B. rotor syndrome
- C. dubin johnson syndrome Answer: A

- Unconjugated (indirect) hyperbilirubinemia: Hemolytic, physiologic (newborns), Crigler-Najjar, Gilbert syndrome
- Conjugated (direct) hyperbilirubinemia:
 - 1- Biliary tract obstruction: gallstones, cholangiocarcinoma, pancreatic or liver cancer, liver fluke.
 - 2- Biliary tract disease: f 1° sclerosing cholangitis and 1° biliary cirrhosis
 - 3- Excretion defect: Dubin-Johnson syndrome, Rotor syndrome.
- Mixed (direct and indirect) hyperbilirubinemia: Hepatitis, cirrhosis.

120. Young boy eat battery of remote control what is your immediate action?

121. Young lady with abdominal pain, bloating, what treatment to give? A- TCA
B- Antispasmodic Answer: B

122. College student complains of generalized pain relieved by defecation. No blood or mucus.

Diag-nosis?

- A) IBS
- B) IBD

Answer: A

Explanation:

Diagnostic criteria: 3d in 3m of episodic abdominal discomfort that is two or more of 1- relieved by defecation, 2-change in stool frequency or consistency 3- change in stool appearance.

Review Rome III Criteria in Toronto notes.

Resource: Toronto notes, G23

123. y male 6m hx of diarrhea mixed with blood + wt loss + no family hx of inflammatory disease, then pt had intermittent fever, in sigmoidoscopy see fragile mucosa of rectum and spot blood, Dx?
smle ,2017

- A. bacterial dysentery
- B. UC
- C. ischemic colitis

Answer: B?

124. Medication for resistant hiccups? Answer:
Chlorpromazine is the most thoroughly studied and appears to be the drug of choice.
Reference: Medscape <http://emedicine.medscape.com/article/775746-treatment#d10>

125. Aphthous ulcer:
Answer: IBD
<http://emedicine.medscape.com/article/867080-overview#a5>

126. Kayser fleischer ring, What treatment?

- A. Penicillamine
- B. Deferoxamine

Answer: A

Explanation:

Treatment of Wilson disease, 4 drugs available;

1. penicillamine chelates copper, poorly tolerated
 2. trientine chelates copper
 3. zinc impairs copper excretion in stool/decreases copper absorption from gut
 4. tetrathiomolybdate preferred if neurological involvement
- screen relatives
 - liver transplant in severe cases

Resource: [Toronto notes, G33](#)

143. Patient treated for duodenal ulcer. Now complains of breast enlargement and decrease sexual desire. Which drug?

Answer: Ranitidine (h2 blocker)

Ref./ <http://www.drugs.com/sfx/ranitidine-side-effects.html> (repeated)

144. 35 y/o female, used ampicillin 1 week ago for UTI, now presented with Hx of fever, hypotension and tachycardia;

- A. pseudomembranous colitis
- B. toxic megacolon

Answer: A

Explanation: Clostridium difficile usually follows antibiotic treatment (especially clindamycin, fluoroquinolones, penicillins, cephalosporins) Can develop pseudomembranous colitis.

Resource: Toronto notes, ID12

NEUROLOGY

TABLE 21-1

NERVE LESIONS







Nerve Injury	Injury Description	Impairments	Clinical Aspects
Femoral nerve	Trauma at femoral triangle Pelvic fracture	Flexion of thigh is weakened Extension of leg is lost Sensory loss on anterior thigh and medial leg	Loss of knee jerk reflex Anesthesia on anterior thigh
Obturator nerve	Anterior hip dislocation Radical retropubic prostatectomy	Adduction of thigh is lost Sensory loss on medial thigh	
Superior gluteal nerve	Surgery Posterior hip dislocation Poliomyelitis	Gluteus medius and minimus function is lost Ability to pull pelvis down and abduction of thigh are lost	Gluteus medius limp or "waddling gait" Positive Trendelenburg sign Contralateral 
Inferior gluteal nerve	Surgery Posterior hip dislocation	Gluteus maximus function is lost Ability to rise from a seated position, climb stairs, or jump is lost	Patient will lean the body trunk backward at heel strike 
Common fibular nerve	Blow to lateral aspect of leg Fracture of neck of fibula	Eversion of foot is lost Dorsiflexion of foot is lost Extension of toes is lost Sensory loss on anterolateral leg and dorsum of foot	Patient will present with foot plantar flexed ("foot drop") and inverted Patient cannot stand on heels "Foot slap" 
Tibial nerve at popliteal fossa	Trauma at popliteal fossa	Inversion of foot is weakened Plantar flexion of foot is lost Flexion of toes is lost Sensory loss on sole of foot	Patient will present with foot dorsiflexed and everted Patient cannot stand on toes

TABLE 20-1		NERVE LESIONS	
Nerve Injury	Injury Description	Impairments	Clinical Aspects
Long thoracic nerve	Stab wound Mastectomy	Abduction of arm past horizontal is compromised	Test: Push against a wall causes winging of scapula
Axillary nerve	Surgical neck fracture of humerus Anterior dislocation of shoulder joint	Abduction of arm to horizontal is compromised Sensory loss on lateral side of upper arm	Test: Abduct arm to horizontal and ask patient to hold position against a downward pull
Radial nerve	Midshaft fracture of humerus Badly fitted crutch Arm draped over a chair	Extension of wrist and digits is lost Supination is compromised Sensory loss on posterior arm, posterior forearm, and lateral aspect of dorsum of hand	Wrist drop 
Median nerve at elbow	Supracondylar fracture of humerus	Flexion of wrist is weakened Hand will deviate to ulnar side on flexion Flexion of index and middle fingers at DIP, PIP, and MP joints is lost Abduction, opposition, and flexion of thumb are lost Sensory loss on palmar and dorsal aspects of the index, middle, and half of the ring fingers and palmar aspect of thumb	Ape hand Benediction hand 
Median nerve at wrist	Slashing of wrist Carpal tunnel syndrome	Flexion of index and middle fingers at MP joint is weakened Abduction and opposition of thumb are lost Sensory loss same as at elbow	Test: Make an O with thumb and index finger
Ulnar nerve at elbow	Fracture of medial epicondyle of humerus	Hand will deviate to radial side upon flexion Flexion of ring and little finger at DIP is lost Flexion at MP joint and extension at DIP and PIP joints of ring and little finger are lost Adduction and abduction of fingers are lost Adduction of thumb is lost Little finger movements are lost Sensory loss on palmar and dorsal aspects of half of ring finger and little finger	Claw hand 
Ulnar nerve at wrist	Slashing of wrist	Flexion at MP joint and extension at DIP and PIP joints of ring and little finger are lost Adduction and abduction of fingers are lost Adduction of thumb is lost Little finger movements are lost Sensory loss same as at elbow	Test: Hold paper between middle and ring fingers

DIP = distal interphalangeal, MIP = middle interphalangeal, MP = metacarpophalangeal, PIP = proximal interphalangeal

1. patient with Lt. Hemiplegia, MRI at T2 show hyperdense area in the Rt. Side of the brain.

Which of the following will worsen the pt. prognosis?

- A. blood glucose < 6.5
- B. BP < 140

Answer: A

2. Patient complains of headache (worst headache in life) CSF result (blood)

- A. brain abscess
- B. brain infection
- C. epidural hematoma
- D. ruptured berry aneurysm

Answer: D

Explanation: Subarachnoid hemorrhage is sudden bleeding into the subarachnoid space. The most common cause of spontaneous bleeding is a ruptured aneurysm. Symptoms include sudden, severe headache, usually with loss or impairment of consciousness. Secondary vasospasm (causing focal brain ischemia), meningismus, and hydrocephalus (causing persistent headache and obtundation) are common. Diagnosis is by CT or MRI; if neuroimaging is normal, diagnosis is by CSF analysis. Treatment is with supportive measures and neurosurgery or endovascular measures, preferably in a comprehensive stroke center.

Resource: (<http://www.merckmanuals.com/en-ca/professional/neurologic-disorders/stroke-cva/subarachnoid-hemorrhage-sah>)

3. Which antiviral is used in Parkinsonism:

- A. ribavirin
- B. zidovudine
- C. ganciclovir
- D. amantadine

Answer: D

Explanation: Antiparkinsonian Agents (Anticholinergic Agents): (benztropine, amantadine & diphenhydramine).

Source: Toronto notes, PS47

4. A 6 year old girl, brought by parents to ER with history of falling from height... Not talking but crying, withdrawal from pain, open her eye only in response to Doctor talking... Calculate GCS

- A. 9
- B. 10
- C. 11
- D. 12

Answer: B crying=3

TABLE 38-2		
Glasgow Coma Scale		
BEHAVIOR	RESPONSE	SCORE
Eye opening response	Spontaneously	4
	To speech	3
	To pain	2
	No response	1
Best verbal response	Oriented to time, place, and person	5
	Confused	4
	Inappropriate words	3
	Incomprehensible sounds	2
	No response	1
Best motor response	Obeys commands	6
	Moves to localized pain	5
	Flexion withdrawal from pain	4
	Abnormal flexion (decorticate)	3
	Abnormal extension (decerebrate)	2
	No response	1
Total score:	Best response	15
	Comatose client	8 or less
	Totally unresponsive	3

Glasgow Coma Scale

Points Scored



5. Loss of sense of smell which lobe affected ?

- A. Frontal
- B. Occipital
- C. Parietal
- D. Temporal

Answer: D

Temporal lobe : senses of smell and sound, as well as processing of complex stimuli like faces and scenes

Frontal lobe : conscious thought; damage can result in mood changes, social differences, etc. The frontal lobes are the most uniquely human of all the brain structures.

Parietal lobe : plays important roles in integrating sensory information from various senses, and in the manipulation of objects; portions of the parietal lobe are involved with visuospatial processing

Occipital lobe : sense of sight; lesions can produce hallucinations

Limbic system : emotion, memory, emotional expression, resolve conflict from frustration. "Odors often trigger emotional reactions and memories" (Elaine & Katja, 2015).

Insula" ;island inside" pain, taste, hunger, visceral functions, social emotions, time perception and awareness "connects to the cortex and the limbic systems" (Blanc et. al.,2014) .

6. Patients with epilepsy, which of the following receptors most likely is stimulated?

- A. Protein G
- B. glutamate
- C. serotonin
- D. kinase

Answer: B

Explanation: some antiepileptic drugs are “glutamate receptor antagonists” works specifically on glutamate receptors, some other AEDs (such as topiramate) work on glutamate receptors and other targets.

Resource: <http://www.epilepsysociety.org.uk/howantiepilepticdrugswork#.VmyX0K2e1D8>

7. scenario about extremities numbness and stomatitis ?

Answer: Vit B12 deficiency

For further info. review - USMLE step 2 ck lecture notes (P,183)

8. Epileptic patient with gingival bleeding and white gain which medication:

- A. phenytoin

<http://reference.medscape.com/drug/dilantinphenytekphenytoin343019#>

<http://emedicine.medscape.com/article/1076264overview#>

9. Pt came to ER with dilated pupils, diaphoresis , tachycardia what's the cause?

- A. Sympathomimetic
- B. Organophosphate
- C. Anticholinergic

Answer : A

Resource: Toronto notes ER52

10. SE of nitroglycerin:

- A. Throbbing headache

Answer :A

Resource: Toronto notes, ER36

11. Patient presented with status epilepticus, lorazepam was given, however the patient didn't improve. What is the most appropriate drug to be given?

- A. IV phenobarbital
- B. IV phenytoin
- C. Oral carbamazepine

Answer: B

Explanation: The first line in managing status epilepticus are benzodiazepines, second line is phenytoin and third line is phenobarbital.

Resource: <http://bestpractice.bmj.com/best-practice/monograph/464/treatment/detail-s.html>

- Review table 17 in Toronto notes, ER25

12. Least one cause tardive dyskinesia :

- A. clonazpine,
- B. risperidone,
- C. haloperidol,
- D. Chlorpromazine

Answer: A

13. Case of migraine what next step :

- A. MRI
- B. blood culture
- C. more history and physical ex)

Answer: C

14. Case male with convulsion then loses his consciousness he is on antidepressants drug and drug for congestive heart failure O/E all normal ECG shows dysrhythmia Which drug can cause this:

- A. quinine
- B. digitalis

smle ,2017

C. SSRI

D. TCA ANSWER D

15. ptn with increase of ICP complain of vomiting , tinnitus , nausea , headache and blurred vision , the doctor order for him CT scan , what the cranial nerve will discover to know the diagnosis before doing imaging study ?

A)Optic B)Facial C)Trochlear D)Oculomotor

Answer: A

Looking for Papilloedema which is swelling of the optic disc

16. A patient with high ICP (I think it was due to a brain tumor), which of the following nerves is most likely to be affected?

- A. Trochlear
- B. 6th cranial
- C. Optic
- D. Facial

Answer: B

Increase ICP leads to CN III and VI deficient.

Reference: First Aid USMLE 2.

6th cranial most common nerve affected b'c has long course in brain... answered by neurologist

17. How you test trochlear nerves :

- A)Adduction and downward
- B)Abduction and downward

Answer: B

Resource: Rosens ER, P:1410

18. diabetic controlled on medication developed (eye down and out) dropped upper eye- lid limited movement of eye medially and up and down

- A. Right oculomotor palsy
- B. right facial palsy

Answer: A

Resource: Rosens ER, P:1410

19. Pain and numbness in left thumb and index, of sensation over the dorsum 1/3 of left hand, to confirm the dx?

- A. Nerve conduction studies
- B. CT
- C. MRI

Answer: A

smle ,2017

Explanation: Ultrasound potentially can identify space occupying lesions in and around the median nerve, confirm abnormalities in the median nerve (eg increased cross sectional area) that can be diagnostic of CTS, and help guide steroid injections into the carpal tunnel.

Electrophysiologic studies, including electromyography (EMG) and nerve conduction studies (NCS), are the first line investigations in suggested carpal tunnel syndrome (CTS).

Resource: Medscape.

20. hemiplegic pt come with abnormality in the eye(may be nystagmus)where is the lesion in the brain :

- A. Pons
- B. medullary oblongata
- C. internal capsule
- D. midbrain

Answer: ?? Q not complete

To localized hemiplegia:

Internal capsule: hemiplegia & UMN Facial palsy + hemianesthesia + Homonymous hemianopia

Mid brain: crossed hemiplegia + weber syndrom (3rd nerve palsy) + Benedicts syndrome (3rd nerve , red nucleus, cerebellar ataxia)

Pons: crossed hemiplegia + millard gubler syndrome(6th & 7th nerve palsy) Medulla: crossed hemiplegia +12th nerve palsy+ loss of sensation

Spinal cord: brown sequard syndrome (hemiplegia in same side without face involvement)

21. numbness and pain on thumb and index , confirmatory test :

- A. compression test
- B. phalen's test
- C. tinel's test
- D. ###

Answer: A

Explanation:

Accuracy of the Clinical Assessment for Carpal Tunnel Syndrome:

- Phalen's: Sensitivity: 0.75 Specificity: 0.47
- Tinel's: Sensitivity: 0.60 Specificity: 0.67
- Carpal Tunnel Compression Test: Sensitivity: 0.87 Specificity: 0.90

Resource: Toronto notes, PL28

22. What is the most accurate test for carpal tunnel syndrome:

- A. Tinel
- B. Compression test
- C. Durkan's carpal test
- D. Phallens test

Answer: (B&C)

Explanation: Durkan's test is another name of compression test. Answers B&C are referring to the same test.

Resource: Rosens ER, P:589

23. numbness of the lateral side of hands and fingers in computer programmer female that is confirmed by phalen test , in which position would u splint the hand:

A)Dorsiflexion

Answer: A

24. Type of cerebral palsy lower paralysis more than upper ?

- A. Diplegia
- B. Quadriplegia
- C. hemiplegia

Answer A

Explanation: one limb (monoplegia), one side of body (hemiplegia), both legs (diplegia), or both arms and legs (quadriplegia).

Resource: Toronto note, P86

25. Elderly Patient presented with chest pain palpitation and SVT with normal vital signs including O2 sat. air entry was bilateral which of the following is most helpful in establishing the diagnosis:

smle ,2017

- A) Pulmonary arteriography
- C) Chest CT
- D) TSH

Answer : TSH??

26. Neurofibromatosis gene 1 located in :

- A. Chromosome 17 q 22:11
- B. Chromosome 17 p 22:11

Answer: A

Explanation: mutation in NF1 gene on 17q11.2 (codes for neurofibromin protein).

Resource: Toronto notes, P86

27. Ascending paralysis with areflexia post URT infection ;

- A. Guillain Barre syndrome

Answer: A

GBS is a demyelinating neuropathy with ascending weakness.

[Http://emedicine.medscape.com/article/315632-overview#a2](http://emedicine.medscape.com/article/315632-overview#a2)

28. Young male had a history of two seizures in the last 30 minutes, No history of diabetes no history of head trauma, at initial presentation had another seizure. What is the best to give him now?

- A. phenytoin
- B. diazepam
- C. phenobarbital

Answer: B

Source: Toronto notes, ER25

29. Pt. Overdosed a medication and presented Comatose , dilated pupil, hyperreflexia: what meds:

- A)Erdophnium
- B) SSRI
- C) TCA D)Something

Answer: C

Explanation: Patients with TCA overdose typically present with tachycardia, flushed and dry skin, mydriasis, and altered level of consciousness. They may be alert and confused, severely agitated, mute, hallucinating, or even deeply comatose. Speech is often rapid and mumbling in character.

Resource: Rosens ER, P1976

30. Question about parkinson location (damage) in the brain

smle ,2017

A. Substantia nigra
answer is [Ahttp://www.pdf.org/about_pd](http://www.pdf.org/about_pd)

31. Glove neuropathy cause?

- A. Vit b12
- B. Vit b6

Answer: A

Explanation:

polyneuropathy: symmetrical distal stocking-glove pattern. Etiology: DM (most common), renal disease, substances, toxins, genetics, SLE, HIV, leprosy, alcohol, B 12 deficiency, uremia.

Resource: [Toronto notes, N38](#)

32. Old male Hemiplegia, CT showed ischemia, examination normal except for Hemiplegia, now he is stable doing physiotherapy.. Taking hydrochlorothiazide...2 yrs ago had a history of acute gastric ulcer... What to give him:

- A. Do nothing
- B. tPA
- C. Aspirin
- D. Warfarin

Answer: C

Explanation: tpa: time to therapy for acute ischemic stroke management is 3 - 4.5 hours.

Contraindication to tpa ... aspirin: aha/asa guidelines recommend giving aspirin, 325 mg orally, within 24-48 hours of ischemic stroke onset. Warfarin: currently, data are inadequate to justify the routine use of heparin or other anticoagulants in the acute management of ischemic stroke.

Resource: <http://emedicine.medscape.com/article/1916852-treatment#showall>

33. 16-year-old came with headache band like, behind eye throbbing. Stressful life

- A. Migraine
- B. Tension

Answer: b

Explanation:

Tension headache never happens during sleep, gradual over 24 h. The site is posterior/occipital. Increases with stressors. Treated by modifying stressor(s), local measures, NSAIDs, tricyclic antidepressants.

Resource: [Toronto notes, FM33](#)

34. Young female having symptoms of optic neuritis and other neuro symptoms (Case of MS) what is the best diagnostic test :

A-MRI

answer : A

Multiple sclerosis (MS) is diagnosed on the basis of clinical findings and supporting evidence from ancillary tests, such as magnetic resonance imaging (MRI) of the brain and spinal
smle ,2017

cord and cerebrospinal fluid examination.

<http://emedicine.medscape.com/article/1146199workup>

35. 23 y girl come e one eye blindness+past hx 2 year back headech + diplopia ...ect bestinvestigation?

- A. Mri
- B. Ct
- C. Cbc

Multiple sclerosis is probable and MRI is the probable answer

36. patient complains of headache, he lost his wife recently, crying a lot and socially iso- lated, sleep is not affected,i can't remember the duration ?

- A. Major depressive episode
- B. Conversion
- C. dysthymia

Answer: A

Question is incomplete – please review Toronto notes, PS10

37. Def of status epilepticus ?

Status epilepticus (se) is a common, life-threatening neurologic disorder that is essentially an acute, prolonged epileptic crisis. In patients with known epilepsy, the most common cause is a change in medication. Most seizures terminate spontaneously.

[Http://emedicine.medscape.com/article/1164462-overview](http://emedicine.medscape.com/article/1164462-overview)

<http://www.uptodate.com/contents/convulsive-status-epilepticus-in-adults-classification-clinical-features-and-diagnosis>

38. Drug that interfere with OCP ?

Antiepileptic ? Not sure http://www.mckinley.illinois.edu/handouts/pill_interactions_drugs.html

39. weakness ... deficiency of ?

- A. Vit b1
- B. Vit b3

fatigue . muscle tenderness numbness are 3 symptoms of B1 THiamine Defic

Answer: (Question is only one word 😊) – probably the answer is A

Explanation: Thiamine (Vit-B1) can lead to beriberi syndrome (dry & wet).

In dry beriberi, damage happens to the nerves and can lead to decreased muscle strength and eventually, muscle paralysis.

Resource: Toronto notes, N17

40 After a motor vehicle accident (MVA) a patient can't bring the spoon to feed himself which type of cerebral lobe is affected:

- A. Temporal
- B. Parietal
- C. Occipital
- D. Cerebellum

Answer: d

Explanation:

The cerebellum: is principally concerned with balance and the regulation of posture, muscle tone and muscular co-ordination.

Frontal lobe: a-the motor cortex: the primary motor area. It receives afferents from the premotor cortex, thalamus and cerebellum and is concerned with voluntary movements. B-the premotor cortex.

Resource: clinical anatomy applied anatomy for students and junior doctors.

41. Patient complain of headache band like distribution ?

- A)Cluster
- B)Migraine
- C)Tension

Answer: C

Resource: Toronto notes, FM33

42. clear case of absence seizure then asked what is going to happen to this patient if given fentanyl:

- A. Glutamate receptors activation
- B. Seizure activity due to toxic neurotransmitters release
- C. Demyelination.

Answer: b

Epidural fentanyl is local anesthetic: moa due to its high lipid solubility it rapidly binds dorsal horn receptors in the spinal cord. G- protein coupled receptors & inhibit adenylate cyclase
Nb: it's not related to absence seizure.

43. What is the following drug causes erectile dysfunction:

- A. Sartoline
- B. olanzapine

Answer: A - (I think he meant sertraline "SSRI")

Resource: Toronto notes, U31

44. Schizophrenic, haloperidol 15 mg, presented Comatose, muscle rigidity, ruled eyes, no fever
:

- A. Neuroleptic malignant syndrome*
- B. Tardive dyskinesia
- C. Dystonia
- D. Conversion

Answer :c

Resource: First aid USMLE step 2 ck, P:443

45. Headache when combing hair, tender vessel on temporal area, sudden loss of vision or clouding in one eye what next action?

- A. oral prednisolone for 3 months
- B. immediate cortisone eye drops

Answer: A

Explanation: Sx of giant cell arteritis, treat with high dose prednisolone.

Resource: First aid USMLE step 2 ck, P:271

46. Pt with difficulty in swallowing she has frontal baldness and cataract (other symptoms that I can't remember) Her mother has the same condition

- A. Myotonic muscular dystrophy

Answer: A

47. Sign in Duchenne muscular dystrophy?

- A. Gowers sign

48. Duchenne muscular dystrophy:

Answer: proximal muscle wasting

49. Case of Guillain Barre syndrome (hx of diarrhea 3w past, then develop ascending symmetrical LL paralysis...)

Answer: Guillain Barre syndrome

50. Women traveled 18 hrs after landing She couldn't put her feet back on the shoes The best Dx test?

- A) MRI pelvis
smle, 2017

- B)CT pelvis & abdomen
- C)Ct abdomen
- D)Compression US

Answer: D

Explanation: Long flights is a risk factor for DVT + she has lower limb swelling.

Resource: Toronto notes, ER33

51. case about deafness and paralysis of tympanic muscle and other muscle i can not recall it
- A. trigeminal
 - B. facial

Answer: the q not clear mean The tensor tympani is a muscle within the ear, Innervation of the tensor tympani is from the tensor tympani nerve, a branch of the mandibular division of the trigeminal nerve

https://en.wikipedia.org/wiki/Tensor_tympani_muscle

if the q mean tympanic membrane so, the nerve is facial N.

52. patient with neck pain and headache in occipital area for months ,, there is a limitation in movement ? What is Young female has severe attack of headache anxiety and palpitation she also have lost weight and her skin looks (i forgot the word) which test will order:
- A. Brain MRI
 - B. Urine catecholamine
 - C. TSH

Answer: B

Explanation: Question is not clear but it looks like Sx of pheochromocytoma (other ddx include hyperthyroidism Choice C).

Source: Toronto notes, ER36

53. Case of urine incontinence.. pt urinate without sense or stressor dx?
- a)reflex incontinence
 - b)overflow
 - c)stress

Answer: B

Source: First aid USMLE step 2 ck, P:389

54. Patient has history of meningitis before 4 weeks , came againe to hospital , what isthe lap smle ,2017

result will increase?

- a) protein
- b) leukocytosis
- c) glucose

Answer:A

55. Elderly patient already diagnosed with Alzheimer's dementia disease , he became agitated and have hallucinations and delusions (psychotic symptoms). What is the appropriate drug in his case ?

A)olanzepine B)risperidone C)Haloperidol

Answer: B

Risperidone is the best studied of the atypical antipsychotics for psychosis and behavioral disturbances associated with dementia. Its advantages include minimal sedation, less weight gain, and fewer metabolic and anticholinergic effects compared with olanzapine and clozapine.

<http://www.psychiatrictimes.com/geriatric-psychiatry/managing-psychosis-patients-alzheimer-disease/page/0/3>

56. Neck pain radiating intrascapular and numbness?

- A. Vertebral collapse
- B. Polymyalgia rheumatic

Answer: A

57. Blindness. Numbness that comes and goes (MS). Diagnostic test?/

- A. MRI

58. older patient with memory loss and change of behavior ?

- A. Alzheimer Answer: A

59. Which of Alzheimer's drugs is hepatotoxic?

- A. Tacrine
- B. Donepezil
- C. Rivastigmine

Answer : A

Source: First aid USMLE step 2 ck, P:304

60. loss of sensation in the anterior aspect of leg and weak plantar flexion What is the nerve root?

- A. L5
- B. S1
- C. ##
- D. ##

smle ,2017

Answer: B

Resource: Toronto notes, OR3

61. Patient with drop foot, loss of sensation in 1st & 2nd metatarsal joints, what's the damaged nerve?

A- Common peroneal

B- Deep Peroneal

C- Tibial n.

D- Femoral n

Answer: B

Explanation: Dropped foot could be caused by both A&B. But since pt. has sensory loss over 1st & 2nd metatarsals then the answer is B (Deep peroneal).

Resource: Toronto notes, OR3

62. 65 years old male, presenting with peripheral neuropathy which progressed to weakness (Subacute combined degeneration), labs shows Macrocytic anemia, Diagnosis?

A. Vit. B12 Deficiency Answer: A

63. 32 years old male presenting with left sided headache associated with nausea, vomiting, photophobia, aura, lasting for 12 hours occurring 4-5 times per month, what's your best modality of investigation?

A)CBC B)ESR

C)History and examination

D) MRI

Answer: C

64. Causative organism of meningitis ???

A. Neisseria meningitidis

63. patient after tooth extraction he feel numbness in his left anterior tongue what nerve is sensory supply to this area :

A. lingual

B. infralobular

Answer: A

Explanation: Tongue sensory supply: Anterior 2/3: lingual nerve.

Resource: [wikipedia](#)

65. CSF LP shows + IgG and irregular band under the gel : MS, spinal tumor?

Elevation of IgG levels in the cerebrospinal fluid (CSF) of patients with inflammatory diseases of the central nervous system (multiple sclerosis [MS], neurosyphilis, acute inflammatory polyradiculoneuropathy, subacute sclerosing panencephalitis) is due to local central nervous system (CNS)

66. Nerve can cause problems in eye and ear ?

- A. oculomotor 3
- B. trochlear 4
- C. facial 7
- D. abducent 6

Answer: C

67. Nerve responsible for the tonsils

Answer: lesser palatine nerve from maxillary division of trigeminal

68. Nerve responsible for the sinuses

Answer : maxillary division of trigeminal

69. Man with abnormal teeth order and marginated white patch on his tongue with ulcer Dx:

- A. Toxic
- B. ingestion
- C. Excessive
- D. grow of tongue cells

NO Oral thrush , either Aphthous ulcer

70. Retinal edema between which layer ?

https://en.wikipedia.org/wiki/Macular_edema

71. Headache , pain in Rt eye ,Halos around light :

- A. Hyphema
- B. digoxin
- C. toxicity Answer: C

72. Question about migraine meds?

- A. Triptan Answer: A Treatment
smle ,2017

- Tension headache: NSAIDs and other analgesics
- Migraine: triptans or ergotamine as abortive therapy
- Cluster headache: triptans, ergotamine, or 100% oxygen as abortive therapy
- Giant cell (temporal) arteritis: prednisone
 - Pseudotumor cerebri: weight loss; acetazolamide Master the board.

73. the nerve that supply the largest part of tongue is hypoglossal nerve supplies the anterior 2/3 of the tongue answer: ant 2/3 of tongue supply sensory =lingual from trigeminal while taste by chora tympani from facial

- 74.** Girl with BMI 16 and fine hair all over body
A. Anorexia Nervosa

Answer : A

Resource: USMLE Step 2 CK – Psychiatry, P64

- 75.** Clinical dementia?

- A. Vit b12 def

Dementia is a pattern of mental decline caused by different diseases or conditions. Most commonly, dementia occurs when brain nerve cells (neurons) die, and connections between neurons are interrupt- ed. These disruptions have a variety of causes and usually cannot be reversed. Alzheimer's disease causes over 60% of all dementias. Vascular disease, such as stroke, is the second most common cause. In rare cases, dementia is caused by a treatable condition, and it may be partially or entirely reversed if the condition is diagnosed and treated early.

[Http://www.drugs.com/health-guide/dementia.html](http://www.drugs.com/health-guide/dementia.html)

76. patient diagnosed as MG Come To ER with weakness & severe fatigability she is on pyridostigmine what initial step you do?

- A. Add other drug
B. Plasmapheresis

Answer: B

Explanation:

Short-term immunomodulation (for crises) - IVIG and plasmapheresis.

+

Tensilon ® is a drug that inhibits acetylcholinesterase (as well as Pyridostigmine). It improves muscle function immediately in myasthenia gravis, but not in a cholinergic crisis This test is infrequently used; when performed, a crash cart should be nearby as respiratory difficulty and/or bradycardia may occur.

Resource: Toronto notes, N40

77. temporal arteritis pt "clear scenario" this pt is in higher risk of:

A- CAD

B- Blindness

C- Brain tumor

Answer: B

Explanation: Medical Emergency Untreated, GCA can lead to permanent blindness in 20-25% of patients Treat on clinical suspicion.

Resource: Toronto notes, RH20

78. Alzheimer disease or lowes bodies CT brain changes ?

The initial criteria for CT scan diagnosis of Alzheimer disease includes diffuse cerebral atrophy with enlargement of the cortical sulci and increased size of the ventricles. A multitude of studies indicated that cerebral atrophy is significantly greater in patients with Alzheimer disease than in patients who are aging without Alzheimer disease. Ref: <http://emedicine.medscape.com/article/336281overview#a2>

79. administering pyridoxine and supportive care?

Pyridoxine used as vitamin B6 dietary supplement. The classic clinical syndrome for vitamin B6 deficiency is a seborrhoeic dermatitis like eruption, atrophic glossitis with ulceration , angular cheilitis , conjunctivitis , intertrigo , and neurologic symptoms of somnolence , confusion, and neuropathy . The elderly and alcoholics have an increased risk of vitamin B6 deficiency, as well as other micronutrient deficiencies

80. patient with lower limb weakness and sensation also angular stomatitis ?

A. Vit B1

B. Vit B3 Answer: B not sure

Unclear Q. Please review First Aid USMLE step 2ck, P:517

81. early sign of hypomagnesemia :

Answer:

The earliest manifestations is neuromuscular include: tetany (eg, positive Trousseau or Chvostek sign or spontaneous carpopedal spasm, hyperreflexia), and tremor and muscle fasciculations.

* Positive Chvostek sign and Trousseau sign

*Hyperactive deep tendon reflexes

*Loss of deep tendon reflex is the hypermagnesemia

82. Old guy with Uneven teeth.. ?

A. Neurofibromatosis

83. pt with neck pain and occipital headache , no history of trauma , there is a limitation in neck movement on examination , weakness in upper shoulder What is the diagnosis?

- A. Acervical
- B. spondylosis
- C. meningitis Answer: C

84. Loss of memory, no loss of conscious ,...ect Finding, Enlarge ventricle, atrophy of... What is the diagnosis:

- A. Alzheimer dementia
- B. Multi Infarct Answer: A

85. case of neuroparalysis and numbness in all extremity ..
Answer:

86. case of neurosis what is investigation perform ?

- A. urinalysis
- B. urine Culture Answer:

87. At serum magnesium levels less than 1mEq/L, patients develop the following symp- toms:
Tremor

Hyperactive deep tendon reflexes Hyperreactivity to sensory stimuli Muscular fibrillations
Positive Chvostek and Trousseau signs Carpopedal spasms progressing to tetany Vertical
nystagmus

Mental status changes may become evident and may include irritability, disorientation,
depression, and psychosis. Cardiac arrhythmias and reversible respiratory muscle failure can
also occur in severe hypomagnesemia

88. Female complaining of hair growth no seizure for 7 years wants to stop the drug?

- A) Stop the drug after 6 months (tapering)
- B) Continue the drug indefinitely
- C) Continue till 10 years

Answer: A

Reference: Peer review

89. Patient with exophthalmos and swollen lids and you can feel its pulse, TFTnormal. What's
your diagnosis.

- A. Hyperthyroid
- B. Cellulitis
- C. Cavernous sinus thrombosis

Answer: C

Ref :[http://emedicine.medscape.com/article/791704clinical# showall](http://emedicine.medscape.com/article/791704clinical#showall)
It can be B according to other info if provided in the Q

90. In Guillain Barré syndrome, which cell will be affected?

Answer: Schwann cells

Explanation: Immune reactions against target epitopes in Schwann-cell surface membrane or myelin result in acute inflammatory demyelinating neuropathy (85% of cases); reactions against epitopes contained in the axonal membrane cause the acute axonal forms of GBS (15% of cases).

Reference: https://www.uptodate.com/contents/guillain-barre-syndrome-pathogenesis?source=see_link

91. A patient is having seizure since 35 minutes. He already had I.V. diazepam with no benefits. What will you do?

Answer: Fosphenytoin

Explanation:

1st line:

The best initial therapy for status epilepticus is benzodiazepine (lorazepam, diazepam) intravenously.

2nd line:

If the seizure persists despite benzodiazepine does, then give Fosphenytoin or phenytoin. Both have the same efficacy, but Fosphenytoin has fewer adverse effects compared to phenytoin.

3rd line:

If benzodiazepines and Fosphenytoin did not stop the seizure, then administer Phenobarbital Finally. The ultimate therapy for Refractory status epilepticus is to use a neuromuscular blocking agent such as succinylcholine, vecuronium, or pancuronium to allow you to intubate the patient and then give general anesthesia such as midazolam or propofol. The patient must be placed on a ventilator before the administration of propofol, which can stop breathing.

Reference: Master the board, https://www.uptodate.com/contents/convulsive-status-epilepticus-in-adults-treatment-and-prognosis?source=search_result&search=status%20epilepticus&selectedTitle=1~150.

92. Fever and cough then facial nerve then loss of reflexes?

- A.Tetanus
- B.Botulism

Answer: B.

Explanation: The scenario is limited and it fits GBS more than Botulism. The pattern of weakness (starting with bilateral cranial nerves then descending) supports Botulism, yet the history of cough and fever (i.e. infection) goes more with GBS, which might be one of the missing options.

smle ,2017

Reference:

https://www.uptodate.com/contents/botulism?source=search_result&search=botulism&selectedTitle=1~80

93. Which of the following drugs causes hair growth :

- A. phenytoin
- B. phenobarbital
- C. valproic acid
- D. carbamazepine

Answer: A.

Explanation: The major systemic side effects of phenytoin are gingival hypertrophy, body hair increase, rash, folic acid depletion, and decreased bone density.

Reference: https://www.uptodate.com/contents/antiseizure-drugs-mechanism-of-action-pharmacology-and-adverse-effects?source=search_result&search=antiepileptic%20drugs&selectedTitle=1~150.

94. Treatment of cluster headache:

Answer: 100% oxygen

Explanation: 100% oxygen administered via a nonrebreathing facial mask with a flow rate of at least 12 L/min is a first line abortive therapy for cluster headache. Subcutaneous sumatriptan can be used too.

Reference: Master the board, UpToDate.

95. Old pt with recent memory loss and poor self care and social withdrawal , what to give him ?

- A. Neostigmine
- B. Rivastigmine

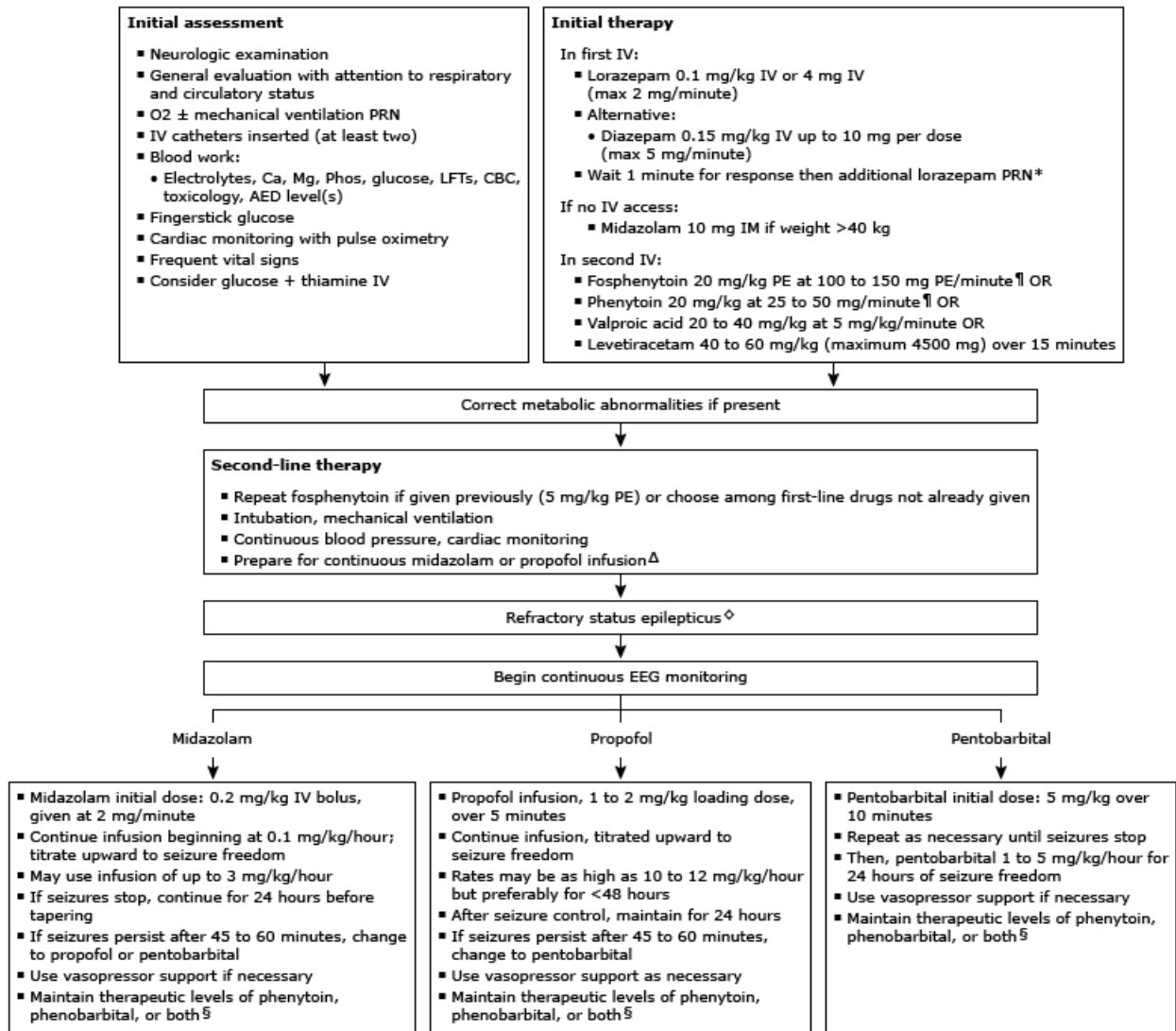
Answer: B.

Explanation: The treatment for mild to moderate alzheimer's disease is central cholinesterase inhibition. We chose rivastigmine because it crosses the blood-brain barrier while neostigmine doesn't.

Reference: [Http://emedicine.medscape.com/article/1134817-treatment#d10](http://emedicine.medscape.com/article/1134817-treatment#d10)

96. Patient with status epilepticus: (I don't think there was intubation as one of the options)

Answer:



Reference: UpToDate

97. Patient with seizure, what is the treatment

- A. Phenobarbitone
- B. Phenytoi
- n

Answer: This question needs more details.

Explanation:

Antiepileptic Drugs:

Generalised tonic-clonic: Carbamazepine, Lamotrigine, Oxcarbazepine, Sodium valproate.

Tonic or atonic: Sodium valproate.

Absence: Ethosuximide Lamotrigine, Sodium valproate.

Myoclonic: Levetiracetam, Sodium valproate, Topiramate.

Focal (partial): Carbamazepine, Lamotrigine, Levetiracetam, Oxcarbazepine, Sodium valproate.

Reference: <https://www.nice.org.uk/guidance/cg137/chapter/Appendix-E-Pharmacological-treatment>

98. Treatment of chronic pain ?

Answer: This question needs more details.

Explanation:

Neuropathic pain: the initial treatment of neuropathic pain involves either antidepressants (tricyclic antidepressants or dual reuptake inhibitors of serotonin and norepinephrine) or calcium channel alpha 2-delta ligands (gabapentin and pregabalin).

Nociceptive pain: In contrast to neuropathic pain, the pharmacologic approach to nociceptive pain primarily involves nonnarcotic and opioid analgesia.

Initially, pain may respond to simple over the counter analgesics, such as paracetamol, ibuprofen, aspirin, or naproxen.

Reference: https://www.uptodate.com/contents/overview-of-the-treatment-of-chronic-non-cancer-pain?source=search_result&search=Chronic%20pain&selectedTitle=1~150.

99. Old lady living alone for 5 years. She has memory problem and looks pale.

Answer: Vitamin B12 deficiency

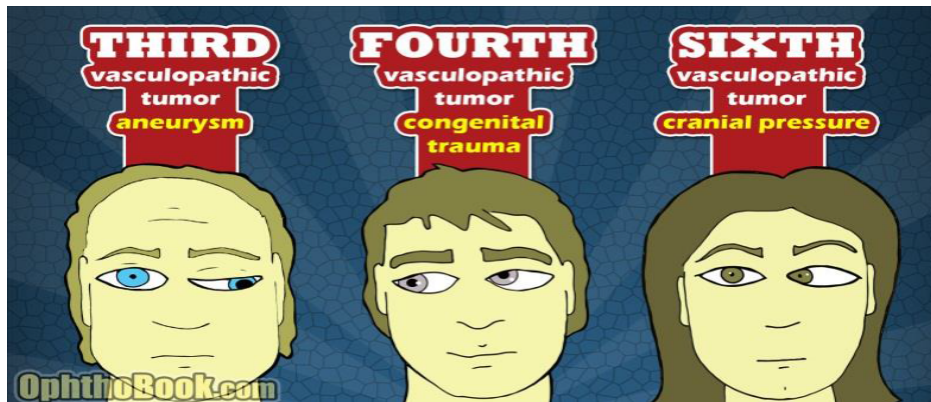
Explanation: This patient is “pale”, this is a hint for anemia, vitamin B12 deficiency can cause memory problems plus anemia. Whenever you have an old patient with memory problems, exclude Hypothyroidism and Vitamin B12 deficiency before thinking of neurodegenerative diseases.

Reference: StepUp to Medicine.

101. 3rd Cranial nerve palsy presentation?

Answer: Out and down

Explanation:



100. Medication for resistant hiccups:

Answer: Chlorpromazine

Explanation: Drug therapy should be reserved for treatment of hiccups when physical maneuvers have failed. Chlorpromazine has been one of the most commonly used drugs for hiccups, has good efficacy, and is generally well tolerated at low doses.

Reference: https://www.uptodate.com/contents/overview-of-hiccups?source=search_result&search=hiccups&selectedTitle=1~150

101. When examining the Trochlear nerve you'll ask the patient to move his eye to which direction:

- A. Medial upward
- B. Medial downward
- C. Lateral upward
- D. Lateral downward

Answer: B

Explanation: Trochlear nerve supplies the superior oblique muscle.

Reference: <http://emedicine.medscape.com/article/1200187-overview#a10>.

102. Gingival hypertrophy side effect

- A. Carbamazepine
- B. Phenytoin
- C. Phenobarbital

Answer: B

Explanation: Gastrointestinal side effects including gingival hyperplasia (in as many as 50% of treated patients) have been reported. The gingival hyperplasia associated with phenytoin is occasionally severe enough to merit surgical removal.

Reference: <http://www.drugs.com/sfx/phenytoinsideeffects.html>

103. Patient with Multiple sclerosis relapse present to the ER. What is the acute management?

Answer: I.V. glucocorticoids.

Explanation: Three to seven day courses of intravenous methylprednisolone, 500 to 1000 mg daily, with or without a short prednisone taper.

Reference: https://www.uptodate.com/contents/treatment-of-acute-exacerbations-of-multiple-sclerosis-in-adults?source=search_result&search=multiple%20sclerosis&selectedTitle=6~150

104. Patient with Cafe au lait spots, to diagnose neurofibromatosis:

Answer: Presence of axillary freckling

Explanation: Diagnosis of NF1 requires 2 or more of the following:

- ≥ 6 café au lait spots (>5 mm if prepubertal, >1.5 cm if postpubertal)
- ≥ 2 neurofibromas of any type or one plexiform neurofibroma
- ≥ 2 Lisch nodules (hamartomas of the iris)
- Optic glioma
- Freckling in the axillary or inguinal region
- A distinctive bony lesion (e.g. sphenoid dysplasia, cortical thinning of long bones)
- A first degree relative with confirmed NF1

Reference: Toronto notes.

105. A patient with myasthenia gravis presents with myasthenic crisis What is the cause?

- A. Anticholinesterases
- B. Pyridostigmine

Answer: Both answers are the same! It can't be called myasthenic crisis if the cause is Pyridostigmine.

Explanation: A potential major side effect of excessive anticholinesterase medication is weakness, which can be difficult to distinguish from worsening myasthenia gravis. This paradoxical weakening with anticholinesterase medications is called "cholinergic crisis". Myasthenic crisis can result from noncompliance with medications, infection, and other physiologic stressors. It can also result from different types of medications, please look them up.

Reference: https://www.uptodate.com/contents/myasthenic-crisis?source=search_result&search=myasthenic%20crisis&selectedTitle=1~62,
<http://emedicine.medscape.com/article/793136-overview#a2>

106. A girl with migraine. She doesn't want to take any prophylactic medications?

- A. Biofeedback
- B. Sumatriptan
- C. Ergotamine
- D. Propranolol

Answer: A

Explanation: Biofeedback is an effective non-pharmacological treatment.
smle ,2017

Reference: <https://www.ncbi.nlm.nih.gov/pubmed/19935987>

107. Patient developed dysphagia. On examination there was deviation of the uvula to the left side. Which nerve is affected?

- A. Left Vagus nerve
- B. Right Vagus nerve
- C. Hypoglossal nerve
- D. Glossopharyngeal nerve

Answer: B

Explanation: In glossopharyngeal nerve (sensory) involvement, there will be no response when touching the affected side. With vagal nerve damage, the soft palate will elevate and pull toward the intact side regardless of the side of the pharynx that is touched. If both CN IX and X are damaged on one side (not uncommon), stimulation of the normal side elicits only unilateral response, with deviation of the soft palate to that side; no consensual response is seen. Touching the damaged side produces no response at all.

Reference: http://www.dartmouth.edu/~dons/part_1/chapter_7.html.

108. Loss of sensation over the maxilla and mandible, which nerve is affected:

Answer: Trigeminal nerve.

Explanation: Trigeminal nerve supply facial sensation.

Reference: <http://emedicine.medscape.com/article/1873373-overview#a2>

109. . Best treatment of trigeminal neuralgia?

- A) Carbamazepine
- B) Prednisolone
- C) Naloxon

Answer: A.

Explanation: Carbamazepine is the best studied treatment for classic TN and is established as effective.

Reference: <https://www.uptodate.com/contents/trigeminal-neuralgia>.

110. A patient with facial nerve involvement. Presents with loss of taste sensation of the anterior 2/3 of tongue. There is loss of function of stapedius as well. At what point is the injury?

Answer: Facial canal between geniculate ganglion and nerve to stapedius muscle.

Reference: <http://www.ncbi.nlm.nih.gov/books/NBK385/>

111. Patient developed nausea and vomiting then developed cranial nerve palsies and bilateral symmetrical progressive LL paralysis. What is the most likely diagnosis?

- A. Tetanus
- B. Botulism
- C. Lead poisoning

Answer: B.

smle ,2017

Explanation: Botulism is an acute neurologic disorder that causes potentially life threatening neuroparalysis due to a neurotoxin produced by Clostridium botulinum. The 3 main clinical presentations: Infant botulism, Foodborne botulism and Wound botulism. Signs and Symptoms:

- Occur 48h after ingestion
- Difficulty with convergence, ptosis, paralysis of extraocular muscles
- Dilated, poorly reactive pupils
- Other autonomic dysfunction: jaw weakness, dysarthria, dysphagia.
- Spreads to trunk and limbs
- Abdominal cramps with nausea and vomiting
- Symmetric weakness with paralysis and absent/decreased deep tendon reflexes
- Anticholinergic symptoms: dry mouth, constipation, urinary retention
- Rarely respiratory distress, potentially advancing to respiratory failure

Reference:

https://www.uptodate.com/contents/botulism?source=search_result&search=botulism&selectedTitle=1~80 , Toronto Notes and Medscape

112. Which of the following toxins has many uses?

- A. Botulinum
- B. Tetanus

Answer: A.

Explanation: Botulinum toxins play a very significant role in the management of a wide variety of medical conditions, especially strabismus and focal dystonias, hemifacial spasm, and various spastic movement disorders, headaches, hypersalivation, hyperhidrosis, and some chronic conditions that respond only partially to medical treatment.

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2856357/>

113. What the scientific term of chewing ice?

Answer: Pagophagia

Explanation: it is a form of the disorder pica involving the compulsive consumption of ice or iced drinks.

Reference: <https://www.ncbi.nlm.nih.gov/pubmed/1410082>

114. What is the first structure you will hit after lumbar puncture?

- A. Interspinous
- B. Ligamentum flavum
- C. Anterior spinal ligament
- D. Posterior spinal ligament

Answer: A

Explanation:
smle ,2017

- 1) Skin
- 2) Fascia and SC fat
- 3) Supraspinous ligament
- 4) Interspinous ligament
- 5) Ligamentum flavum
- 6) Epidural space and fat (epidural anesthesia needle stops here)
- 7) Subdural space
- 8) Arachnoid.

Reference:

http://www.med.umich.edu/lrc/coursepages/m1/anatomy2010/html/musculoskeletal_system/spinalcord_case.html

115. What is the drug of choice for absence seizure?

- A. Phenytoi
- B. Carbamazepine
- C. Ethosuximide

Answer: C

Reference: Master the Board.

116. Old patient presented with agitation, urinary incontinence, confusion and impaired short-term memory. Long-term memory is intact. CT shows temporal and hippocampal atrophy. Which of the following genes might be affected?

- a.13
- b.15
- c.18
- d.X

Answer: We need to know the are to answer this question.

Explanation: Alzheimer's Disease:

Early onset (age 30 to 60): 3 major genes for autosomal dominant AD have been identified
Šamyloid precursor protein (chromosome 21), presenilin 1 (chromosome 14) and presenilin 2 (chromosome 1).

Late onset (mid 60s and later): The E4 polymorphism of apolipoprotein E is a susceptibility genotype (E2 is protective). The APOE gene is located on the long (q) arm of chromosome 19.

Reference: Toronto Note

117. How you can confirm Brain stem death?

- a. Absence of doll eye
- b. Active coughing & gag reflex
- c. One inactive pupil

Answer: A

Explanation: The process for brain death certification includes 3 Performance of a complete neurological examination. Components of a complete neurological examination are:
iii. Absent corneal, oculocephalic (doll's eye), cough and gag reflexes. The corneal reflex may be altered as a result of facial weakness.

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2772257/>

118. Patient came with severe pain involving the forehead to nose (trigeminal distribution) what is the diagnosis ?

Answer: trigeminal neuralgia

Explanation: TN is defined clinically by sudden, usually unilateral, severe, brief, stabbing or lancinating, recurrent episodes of pain in the distribution of one or more branches of the fifth cranial (trigeminal) nerve.

Reference: <https://www.uptodate.com/contents/trigeminal-neuralgia>

119. Which of this drug cause seizure ?

- A. isoniazid
- B. ethambutol
- C. rifampicin
- D. pyrazinamide

Answer: A

Reference: <https://www.uptodate.com/contents/isoniazid-drug-information?source=preview&search=isoniazide&anchor=F184746#F184746>

120. Q about. Numbness. What drug?

Answer: Isoniazid

Reference: <https://www.uptodate.com/contents/isoniazid-drug-information?source=preview&search=isoniazide&anchor=F184746#F184746>

121. Reversible cause of stroke?

- a. Hypertension
- b. Obesity

smle ,2017

c. Smoking

Answer: A

Explanation: I'm not quite sure what do they mean by reversible in this question. Hypertension is linked to stroke more than obesity and smoking.

Reference: https://www.uptodate.com/contents/overview-of-secondary-prevention-of-ischemic-stroke?source=search_result&search=stroke%20risk%20factors&selectedTitle=1~150

122. Patient with pinpoint pupil antidote?

Answer: Naloxone

Explanation: pinpoint pupil comes with opiate poisoning, the antidote in which is Naloxone.

Reference: https://www.uptodate.com/contents/acute-opioid-intoxication-in-adults?source=search_result&search=opiate%20poisoning&selectedTitle=1~146

123. most common tumor intracranial in adult ?

- A. Hemangioblastoma
- B. Ependymoma
- C. Schwannoma

Answer: B (not sure)

Explanation: Gliomas are the most prevalent type of adult brain tumor, accounting for 78 percent of malignant brain tumors. Meningiomas are the most common benign intracranial tumors. Pituitary adenomas are the most common intracranial tumors after gliomas, meningiomas and schwannomas.

So: the most common brain tumors are (in sequence)

1. Glioma
 2. Meningioma
 3. Schwannoma
 4. Pituitary adenoma
- Gliomas include: Astrocytomas, Ependymomas, Glioblastomamultiforme, Medulloblastomas, and Oligodendrogliomas.
 - In children: Medulloblastoma

Reference: American Association of Neurological Surgeons <http://www.aans.org/patient%20information/conditions%20and%20treatments/brain%20tumors.aspx>

124. Mainstay treatment for parkinson's disease?

- A. Dopamine agonists
- B. Mao inhibitors
- C. Anticholinergics
- D. Levodopa

Answer: D

Explanation: Levodopa (L-dopa) is well-established as the most effective drug for the symptomatic treatment of idiopathic or Lewy body PD

smle ,2017

Reference: https://www.uptodate.com/contents/pharmacologic-treatment-of-parkinson-disease?source=search_result&search=parkinson's%20disease&selectedTitle=2~150

125. Patient has parotitis complains of pain with eating that radiate to the ear, with nerve transmit pain with eating?

- A. 8
- B. 9
- C. 10
- D. 7

Answer: D

Explanation: I really don't have a good explanation except that 8th, 9th, and 10th are away from the parotic gland and the 7th runs through it.

126. A seizing mother was given phenobarbital. How will you advise her regarding her lactation?

- A. Stop immediately lactation
- B. Wait for 8 hours after taking the drug then lactate
- C. Stop lactating gradually over 3 weeks
- D. Continue lactation

Answer: C

Explanation: Phenobarbital is excreted in breast milk. A delayed interest in breast-feeding may occur in infants exposed in utero. Infantile spasms and other withdrawal symptoms have been reported following the abrupt discontinuation of breast-feeding.

Reference: <https://www.uptodate.com/contents/phenobarbital-drug-information?source=preview&search=phenobarbital&anchor=F208940#F208940>

127. Which nerve carries the referred pain of the parotid to the ear?

- A. Vagus
- B. Facial
- C. Auriculotemporal
- D. Trigeminal

Answer: Probably D.

Explanation: The sensory innervation of the ear is served by the auriculotemporal branch of the fifth cranial nerve (CN V), the first and second cervical nerves, the Jacobson branch of the glossopharyngeal nerve, the Arnold branch of the vagus nerve, and the Ramsey Hunt branch of the facial nerve. Neuroanatomically, the sensation of otalgia is thought to center in the spinal tract nucleus of CN V. Not surprisingly, fibers from CNs V, VII, IX, and X and cervical nerves 1, 2, and 3 have been found to enter this spinal tract nucleus caudally near the medulla. Hence, noxious stimulation of any branch of the aforementioned nerves may be interpreted as otalgia.

Reference: <http://emedicine.medscape.com/article/845173-overview#a6>

128. Unwanted side effect of anticholinergics?

- A. Diarrhea
- B. Blurred vision
- C. Excessive salivation
- D. Urinary incontinence

smle ,2017

Answer: B

Explanation: According to medscape, remember common signs and symptoms with the mnemonic, "red as a beet, dry as a bone, blind as a bat, mad as a hatter, hot as a hare, and full as a flask." the mnemonic refers to the symptoms of flushing, dry skin and mucous membranes, mydriasis with loss of accommodation, altered mental status, fever, and urinary retention, respectively.

Reference: <http://emedicine.medscape.com/article/812644-clinical#showall>

129. Adolescent with fever, headache, meninges after swimming in a river; causative organism

- A. Streptococcus
- B. H. Influenza
- C. N. Meningitides
- D. Naegleria fowelri

Answer: D or to lesser extend A.

Explanation: A history of swimming in a river points toward Naegleria fowelri which causes Primary amebic meningoencephalitis a rare disease that have been reported only 143 times in US since 1964. In real life I will go with A, in the exam I'll choose D.

Reference: <https://www.cdc.gov/parasites/naegleria/general.html>

130. Case of meningitis caused by meningococcal type b. Which of the following can decrease risk of spreading of the infection:

- A. Do nothing
- B. Give ceftriaxone or cefotaxime to decrease risk of spreading from nasal mucosa
- C. Give meningiooccal vaccine for pt & contact
- D. Isolation of all contact for 4 weeks

Answer: B

Explanation: Close contacts of someone with meningococcal disease should receive antibiotics to help prevent them from getting the disease.

Reference: <https://www.cdc.gov/meningococcal/about/causes-transmission.html>

131. A patient with tuberculosis on medication for 3 months. He developed pins and needles sensation of his lower limbs. Deficiency of which of the following caused his symptoms?

- A. Niacin
- B. Folic acid
- C. Iron
- D. Pyridoxine (B6)

Answer: D

Explanation: Vitamin B6 (pyridoxine) supplementation during isoniazid (INH) therapy is necessary in some patients to prevent the development of peripheral neuropathy.

Reference: https://www.uptodate.com/contents/isoniazid-drug-information?source=search_result&search=isoniazid&selectedTitle=1~150

132. College student have meningitis. What to do as a prophylaxis to dorm friends next?

- A. Isolate all contacts for 4 weeks
- B. Immunize all contacts
- C. Give antibiotic (Penicillin and other similar antibiotics) – exact sentence was written
- D. Do nothing

Answer: D

smle ,2017

Explanation: *Close contacts* means those who have major respiratory fluid contact, such as Household contacts, kissing, or sharing cigarettes or eating utensils.

Routine school and work contacts are not close contacts. Sitting in class with Someone with Neisseria infection does not make them a close contact

Reference: Master the board

133. Pt with absence seizure the doctor wants to start him on sodium valproate, what test should be done before starting the tx?

- A. Liver function
- B. Creatinine
- C. Urea

Answer: A

Explanation: Hepatic failure resulting in fatalities has occurred in patients receiving valproate. Perform serum liver tests prior to therapy and at frequent intervals thereafter, especially during the first 6 months.

Reference: https://www.uptodate.com/contents/valproate-pediatric-drug-information?source=search_result&search=sodium%20valproate&selectedTitle=2~150

134. Women brought her father had dementia of recent events what will you do?

- A. Refer to geriatric
- B. Give him antipsychotic
- C. Measure IQ

Answer: A

Explanation: the least wrong answer that we can get by exclusion. Please read about evaluation of dementia here https://www.uptodate.com/contents/evaluation-of-cognitive-impairment-and-dementia?source=search_result&search=Dementia&selectedTitle=1~150#H6

135. Patient admitted to hospital with headache, nausea and vomiting (signs of increased icp) what you find in eye examination ?

- A. Papilledema
- B. Central retinal artery ischemia
- C. Glaucoma

Answer: A

Explanation: Papilledema secondary to impaired axonal transport and congestion

Reference: https://www.uptodate.com/contents/evaluation-and-management-of-elevated-intracranial-pressure-in-adults?source=search_result&search=ICP&selectedTitle=1~150#H8

136. Amyotrophic lateral sclerosis which horn is infected>>

- A. Anterior horn
- B. Lateral horn
- C. Posterior horn

Answer: A

Explanation: ALS was identified as a clinical syndrome distinguishable from other motor neuron diseases such as primary lateral sclerosis, primary muscular atrophy, and progressive bulbar

palsy, based upon the location of first symptom and the extent to which anterior horn cells or corticomotor neurons are initially involved

Reference: <https://www.uptodate.com/contents/epidemiology-and-pathogenesis-of-amyotrophic-lateral->

[sclerosis?source=search_result&search=Amyotrophic%20lateral%20sclerosis&selectedTitle=3~150](https://www.uptodate.com/contents/epidemiology-and-pathogenesis-of-amyotrophic-lateral-sclerosis?source=search_result&search=Amyotrophic%20lateral%20sclerosis&selectedTitle=3~150)

137. Best strategy to decrease stroke among public:

- A. Anti smoking campaign
- B. Free blood lipid screening
- C. Blood pressure screening

Answer: c

Explanation: Hypertension, which promotes the formation of atherosclerotic lesions, is the single most important treatable risk factor for stroke.

Reference: https://www.uptodate.com/contents/overview-of-secondary-prevention-of-ischemic-stroke?source=search_result&search=stroke%20risk%20factors&selectedTitle=1~150

138. Cavernous sinus thromboembolism. Which sinus is more common?

- A. Ophthalmic
- B. Maxillary
- C. Sphenoid

Answer: c (not sure)

Explanation: Most commonly nasal furuncle then ethmoid and sphenoid sinuses.

139. A 30-year-old male presented with severe headache, never had like this headache before, photophobia, neck rigidity. Intracranial hemorrhage was suspected. Where is the most likely site of this hemorrhage?

- A. Intracerebral
- B. Subarachnoid
- C. Epidural

Answer: B

Explanation: The overwhelming majority of patients with aneurysmal subarachnoid hemorrhage (SAH) present with a sudden onset severe headache which may be associated with brief loss of consciousness, seizures, nausea or vomiting or meningismu

Reference: https://www.uptodate.com/contents/clinical-manifestations-and-diagnosis-of-aneurysmal-subarachnoid-hemorrhage?source=search_result&search=SAH&selectedTitle=1~150#H12

140. Left Hemiplegia, MRI at T2 shows hyperdense area in the rt. Side of the brain. Which of the following will worsen the patient prognosis?

- A. Blood glucose < 6.5
- B. Blood pressure < 140

Answer: B (not sure)

Explanation: There are ongoing studies evaluating the benefits of keeping blood glucose between 80-130, so I don't think going below 6.5 (117) will harm the patient. On the other hand decreasing the BP below 140 may affect the perfusion.

smle ,2017

Reference: https://www.uptodate.com/contents/initial-assessment-and-management-of-acute-stroke?source=search_result&search=stroke&selectedTitle=1~150#H100191613

141. 50 yo w painless loss of vision in one eye, with headache and pain when touching the hair on the same side. Wts next:

- A. Topical steroids
- B. Oral steroids
- C. Brain ct

Answer: b

Explanation: The patient has giant cell (temporal) arteritis. Though if the vision is affected IV steroids is recommended.

Reference: https://www.uptodate.com/contents/treatment-of-giant-cell-temporal-arteritis?source=search_result&search=giant%20cell%20arteritis&selectedTitle=3~118

142. Teacher who suffer from headache on temporal side, ct normal blood pressure normal he was taking paracetamol but not improve well , what can you give ?

- A. Aspirin
- B. Ibuprofen
- C. Triptans

Answer: c

Explanation: For moderate to severe migraine attacks not associated with vomiting or severe nausea, oral migraine-specific agents are first-line, including oral triptans and the combination of sumatriptan-naproxen

Reference: https://www.uptodate.com/contents/acute-treatment-of-migraine-in-adults?source=search_result&search=migraine%20treatment&selectedTitle=1~150#H2

143. Medical student diagnosed as meningitis, what you do for him?

- A. Start antibiotics
- B. Isolate him for 4 weeks
- C. Give him influenza vaccine for his colleagues

Answer: A

bacterial meningitis must be the first and foremost consideration in the differential diagnosis of patients with headache, neck stiffness, fever, and altered mental status. Acute bacterial meningitis is a medical emergency, and delays in instituting effective antimicrobial therapy result in increased morbidity and mortality.

Reference: <http://emedicine.medscape.com/article/232915-workup>

144. 45 years old with proximal muscle weakness, tongue fasciculation, with history of recurrent aspiration pneumonia. What is the diagnosis?

- A. Mononeuropathy
- B. Myasthenia gravis
- C. Myasthenic syndrome

Answer: All answers are wrong. This presentation will go more with ALS or other lower motor neuron diseases.

145. Bacterial meningitis in LP:

- A. Decrease glucose and increase protein smle ,2017

B. Increase glucose and decrease protein

Answer: A

Reference: https://www.uptodate.com/contents/clinical-features-and-diagnosis-of-acute-bacterial-meningitis-in-adults?source=search_result&search=Meningitis&selectedTitle=1~150

146. A woman with neck pain after the pain there is tingling and shock like waves and weakness, what is diagnosis?

A. Whiplash injury

B. Brachia

C. Plexus injury

Answer: The question is not complete.

147. Guillain-barre syndrome?

A. Ascending paralysis more in the legs

B. Descending asymmetrical paralysis

Answer: A

Reference: <http://emedicine.medscape.com/article/315632-overview>

148. Guillain barre syndrome, distal progresses paralysis upper and lower limb what will you find on CSF?

A. Increase protein

B. Decrease glucose

Answer: A

Explanation: The increase in CSF protein is thought to reflect the widespread inflammation of the nerve roots

Reference: <http://emedicine.medscape.com/article/315632-workup>

149. Baby after operation has loss of gag reflex in left side, normal uveal movement. What nerve injured?

A. Glossopharyngeal

B. Vagus

Answer: A

Explanation: The sensory limb is mediated predominantly by CN IX (glossopharyngeal nerve). The motor limb by CN X (vagus nerve).

150. A pt with meningitis, which combination of antibiotic should be given?

A. Vancomycin + ampicillin

B. Amoxicillin + gentamycin

Answer: A

Explanation: Antibiotic choice was guided by age.

Reference: step-up to medicine 4th edition.

154. A question about huntington disease:

You can read more about huntington disease here:

https://www.uptodate.com/contents/huntington-disease-clinical-features-and-diagnosis?source=search_result&search=huntington%20disease&selectedTitle=1~53

155. Case of migraine headache.

Read about Migraines: <http://emedicine.medscape.com/article/1142556-overview>

156. Gillian barre associated with?

Answer: Cranial nerve involvement

Reference: https://www.uptodate.com/contents/guillain-barre-syndrome-in-adults-clinical-features-and-diagnosis?source=search_result&search=GBS&selectedTitle=1~105

157. Pt had Hx of AFib and prior stroke, how to prevent this patient from secondstroke?

Answer: Warfarin

Explanation: Systemic embolization, and particularly stroke, is the most frequent major complication of atrial fibrillation (AF).

Reference: https://www.uptodate.com/contents/overview-of-atrial-fibrillation?source=search_result&search=atrial%20fibrillation&selectedTitle=1~150

158. Wernicke's area pathology leads to:

Answer: fluent aphasia

Wernicke's aphasia is a fluent aphasia with markedly impaired comprehension. In its classic form, speech is voluminous, but meaningless, containing paraphasic errors and neologisms

Reference: https://www.uptodate.com/contents/approach-to-the-patient-with-aphasia?source=search_result&search=wernicke%20aphasia&selectedTitle=1~3

159. Blindness and Numbness that comes and goes (multiple sclerosis). What is the Diagnostic test?

Answer: MRI

Reference: <http://emedicine.medscape.com/article/1146199-workup#c10>

160. Brest feeding mother k/c of seizure on phenytoin ask about breast feeding:

Answer: According to a pediatric neurologist: Either to stop feeding which is better or change to another antiepileptic drug that doesn't get excreted in milk, both answer right.

161. Which nerve is responsible for muscle that causes tongue movement?

Answer: hypoglossal

Reference: <http://aclandanatomy.com/multimediaplayer.aspx?multimediaid=10528519>

162. On the eye type of headache:

Answer: clusters headache

Reference: https://www.uptodate.com/contents/cluster-headache-epidemiology-clinical-features-and-diagnosis?source=search_result&search=clusters&selectedTitle=1~150

163. Treatment of cluster headache:

A. 100% oxygen

Answer: A

Explanation: 100% oxygen by mask is the abortive therapy for cluster headache.

Reference: master the board

164. Patient taking carbamazepine developed generalized rash and peeling of epidermis:

Answer: steven johnson syndrome

Reference: [Http://emedicine.medscape.com/article/1197450-overview#a5](http://emedicine.medscape.com/article/1197450-overview#a5)

165. 70 Year-old female brought to your clinic by her daughter. The daughter said her mother's memory deteriorated in the last 2 years. She can dress her self but with difficulty, she can cook for herself but sometimes leave the oven on, what's the management?

Answer: Refer her to geriatric clinic.

Explanation: I don't really get the question but it has been mentioned couple of times with the same answer.

166. Alzheimer disease or lowes bodies ct brain changes ?

The initial criteria for ct scan diagnosis of alzheimer disease includes diffuse cerebral atrophy with enlargement of the cortical sulci and increased size of the ventricles. A multitude of studies indicated that cerebral atrophy is significantly eater in patients with alzheimer disease than in patients who are aging without alzheimer disease.

Reference: <http://emedicine.medscape.com/article/336281-overview#a2>

167. Brain ventricles anatomy

Answer: The neural canal dilates within the prosencephalon, leading to the formation of the lateral ventricles and third ventricle. The cavity of the mesencephalon forms the cerebral aqueduct. The dilation of the neural canal within the rhombencephalon forms the fourth ventricle. The lateral ventricles communicate with the third ventricle through interventricular foramens, and the third ventricle communicates with the fourth ventricle through the cerebral aqueduct.

Reference: <Http://emedicine.medscape.com/article/1923254-overview#a2>

168. Most common brain cancer?

Answer: Astrocytoma

Explanation: astrocytoma type of glioma which is the most common brain tumors

Reference: <http://braintumor.org/brain-tumor-information/understanding-brain-tumors/tumor-types/>

169. Post-herpetic neuralgia treatment.

A. Antiviral

smle ,2017

B. Tricyclic antidepressant

Answer: Tricyclic antidepressant [TCA] (Amitriptyline or Nortriptyline),

Explanation: These drugs inhibit the reuptake of norepinephrine and serotonin in the central nervous system. They are thought to increase the inhibition of nociceptive signals from the periphery

Reference: Master the board, Medscape

170. What the investigation should be done before lumbar puncture?

Answer: Platelets

Explanation: We recommend NOT performing an LP in patients with coagulation defects who are actively bleeding, have severe thrombocytopenia (eg, platelet counts <50,000 to 80,000/ μ l), or an INR >1.4, without correcting the underlying abnormalities.

Reference: Uptodate

171. Clear case of absence seizure, what happens if we give fentanyl?

Answer: fentanyl-induced epileptiform activity on the electrocorticogram

Reference: http://www.scielo.br/pdf/rba/v61n2/en_v61n2a13.pdf

172. A patient with difficulty in swallowing she has frontal baldness and cataract (other symptoms that I can't remember) her mother has the same condition

Answer: Myotonic muscular dystrophy

Reference: First aid for the USMLE step 1 CK 2014, p89

173. 65 years old male, presenting with peripheral neuropathy which progressed to weakness (subacute combined degeneration), labs shows macrocytic anemia, diagnosis?

Answer: Vitamin B12 deficiency

Explanation: Vitamin B12 deficiency presentation beside the anemia symptoms (megaloblastic macrocytic anemia), they present with neurological changes — classic picture of subacute combined degeneration of the dorsal and lateral spinal columns.

Reference: https://www.uptodate.com/contents/clinical-manifestations-and-diagnosis-of-vitamin-b12-and-folate-deficiency?source=search_result&search=B%2012&selectedTitle=5~150

174. Old lady with forgetfulness and numbness

Answer: B12 deficiency

Reference: https://www.uptodate.com/contents/clinical-manifestations-and-diagnosis-of-vitamin-b12-and-folate-deficiency?source=search_result&search=B%2012&selectedTitle=5~150

175. Vegetarian with numbness and socks and gloves distribution:

A. B6 deficiency

B. B12 deficiency

Answer: B

Reference: https://www.uptodate.com/contents/clinical-manifestations-and-diagnosis-of-vitamin-b12-and-folate-deficiency?source=search_result&search=B%2012&selectedTitle=5~150

176. Glove neuropathy cause?

- A. Vitamin b12
- B. Vitamin b6

Answer: A

Explanation: Presentations vary greatly among patients. The symmetric glove-and-stocking paresthesias, or tingling in the distal aspect of the toes, numbness, coldness, a pins-and-needles feeling, and occasional feelings of swelling or constriction, are slowly progressive and insidious. Symptoms progress up the legs, occasionally affect the fingers, and culminate in weakness and spasticity.

Reference: <http://emedicine.medscape.com/article/1171558-clinical>

177. B6 & B12

deficiency Answer: ??

- B6 deficiency: Overt deficiencies of vitamin B6 are probably rare. Marginal deficiencies may be more common, manifested as nonspecific stomatitis, glossitis, cheilosis, irritability, confusion, and depression.
- The classic clinical picture of cobalamin deficiency (Vitamin B12), mentally sluggish, shiny tongue (atrophic glossitis), and a shuffling broad-based gait. Hematologic changes (e.g., macrocytic anemia with oval macrocytes and increased neutrophil lobulation) and neurologic abnormalities classic picture of subacute combined degeneration of the dorsal (posterior) and lateral spinal columns, neuropathy which is symmetrical and affects the legs more than the arms. It begins with paresthesias and ataxia associated with loss of vibration and position sense, and can progress to severe weakness, spasticity, clonus, paraplegia, and even fecal and urinary incontinence.

Reference: Uptodate

Nephrology

1- patient with depigmentation and problems in her eyes (I can't recall them), what can be associated with it?

A-renal

Answer:

(Incomplete Question)

2- Repeated

3- case of UTI methicillin sensitive?

A-Cloxacillin

B-indole positive

C-E coli

Answer:

(incomplete Question)

Indole-Positive Bacteria is Bacteria that test positive for cleaving indole from tryptophan include: Aeromonas hydrophila, Aeromonas punctata, Bacillus alvei, Edwardsiella sp., Escherichia coli,

smle ,2017

Flavobacterium sp., Haemophilus influenzae, Klebsiella oxytoca, Proteus sp

Treatment of Cystitis : Nitrofurantoin or TMP/SMZ. Ciprofloxacin is reserved from routine use to avoid resistance. 3 days is sufficient for uncomplicated cystitis.

Treatment of Pyelonephritis: Ceftriaxone or ertapenem

Ampicillin and gentamycin

Ciprofloxacin (Quinolones are the best initial therapy for pyelonephritis)

Ref: Master the boards p.32,33

4- DM with high BP and deteriorating renal what to give?

A- ACEI (lisinopril)

Answer: A

Scientists have made great progress in developing methods that slow the onset and progression of kidney disease in people with diabetes. Drugs used to lower blood pressure can slow the progression of kidney disease significantly. Two types of drugs, angiotensin-converting enzyme (ACE) inhibitors and angiotensin receptor blockers (ARBs), have proven effective in slowing the progression of kidney disease. ACE inhibitors have lowered proteinuria and slowed deterioration even in people with diabetes who did not have high blood pressure.

Ref: <http://www.medicinenet.com/script/main/mobileart.asp?articlekey=101334&page=6>

5- case of pyelonephritis, what is the next step?

A- Admit and give antibiotics

B-Do investigations

C- Give him antibiotics at home

Answer: (scenario not clear)

pyelonephritis: Dysuria with Flank or costovertebral angle tenderness, High fever , Occasionally with abdominal pain from an inflamed kidney and Urinalysis shows increased WBCs. Imaging studies (CT or sonography) are done to determine if there is an anatomic abnormality causing the infection. Treat with: • Ceftriaxone, ertapenem • Ampicillin and gentamicin until culture results are known • Ciprofloxacin (oral for outpatient) Admit if severe or non-resolving or renal obstruction

Reference: Master the board & Toronto

Management According to the severity ; Mild cases :OPD treatment “Fluroquinolone: Ciprofloxacin is the 1st line”

Sever Cases : Admission + IV Antibiotics “Fluroquinolone + 3rd or 4th generation

Cephalosporins: Ceftri-axone, Cefepime or Carbapenem" can be used according to the case

Reference: USMLE STEP 2 CK FA 9th edition P221

6- Repeated

7- You give patient ACEI for treating hypertension , what you'll add?

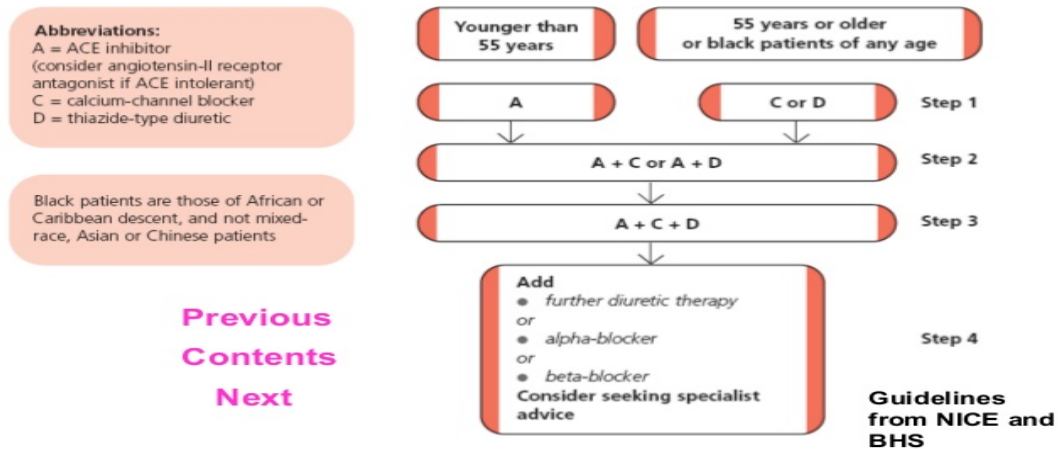
smle ,2017

Answer: dihydropyridine calcium channel blocker eg amlodipine

Based upon the results of the ACCOMPLISH trial we recommend the use of a long-acting dihydropyridine calcium channel blocker plus a long-acting angiotensin-converting enzyme (ACE) inhibitor/ARB (such as amlodipine plus benazepril as used in ACCOMPLISH).

Ref: <https://www.uptodate.com/contents/choice-of-drug-therapy-in-primary-essential-hypertension?source=machineLearning&search=hypertension&selectedTitle=2~150§ionRank=1&an-chor=H11#H11>

Guidelines For Treatment



Repeated

8- patient presented with Hypotension, his phosphatase in normal level, after one day his phosphate level decrease, what organ damage?

- A- Liver
- B- kidney
- C- lung

Answer: B

Major causes of hypophosphatemia

Internal redistribution
Increased insulin secretion, particularly during refeeding
Acute respiratory alkalosis
Hungry bone syndrome
Decreased intestinal absorption
Inadequate intake
Inhibition of phosphate absorption (eg, antacids, phosphate binders, niacin)
Steatorrhea and chronic diarrhea
Vitamin D deficiency or resistance
Increased urinary excretion
Primary and secondary hyperparathyroidism
Vitamin D deficiency or resistance
Hereditary hypophosphatemic rickets
Oncogenic osteomalacia
Fanconi syndrome
Other - acetazolamide, tenofovir, IV iron, chemotherapeutic agents
Removal by renal replacement therapies

can't be sure about this Question

9- Repeated

10- patient presented with severe vomiting. his labs showed hypocalcemia. what is your

smle ,2017

management?

A-furosemide

B-hydration

Answer : none of these choices are correct

if hypocalcemia: Ca& Mg Supplements + Treat the underlying cause + Thiazide

if hypercalcemia: IV Hydration + Furosemide

Reference: USMLE STEP 2 CK FR 9th edition

Reference: step up p 310

11- patient with bilateral abdominal mass:

A-Polycystic kidney disease.

Answer: A

Reference: <http://emedicine.medscape.com/article/244907-overview>

13-Old patient complaining of frequent urination, but difficulty initiating urine. Palpation shows distended bladder. Type?

A- overflow

B- urge

C- stress

Answer: A

(if the question is asking about the type of incontinence)

Possibly due to BPH

Ref: <http://emedicine.medscape.com/article/437359-overview>

14- HTN, fluid overload, azotemia?

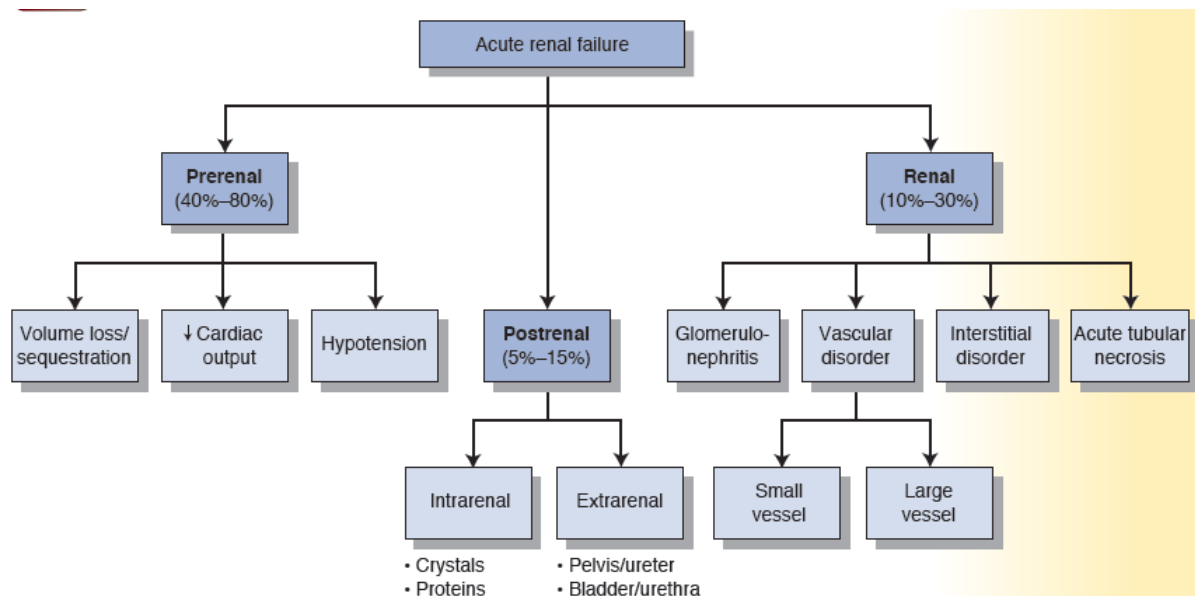
A- DM

B- nephropathy

C- bilateral renal artery stenosis

Answer: B ?

Q is not clear enough, Can't be sure about it



The diagnostic factors of Renal Artery Stenosis:

presence of key risk factors (common)

onset of HTN age >55 years (common)

hx accelerated, malignant, or resistant HTN (common)

hx unexplained kidney dysfunction (common)

hx multivessel CAD (common)

hx other PVD (common) abdominal bruit (common)

sudden or unexplained recurrent pulmonary oedema (common)

onset of HTN age <30 year

Ref: <http://bestpractice.bmj.com/best-practice/monograph/435/diagnosis/history-and-examination.html>

15- Repeated

16- patient with right kidney 14 Cm and left kidney 7 cm.. Arteriography: renal artery stenosis, what to do?

A. CT angio

B. Ct abdomen

C. biopsy

Answer: A

Q is not clear but explanation will be written in q number 19

smle ,2017

17-Non opaque radiography?

Answer: Uric acid

Ref: <http://emedicine.medscape.com/article/983759-overview>

18-To decrease UTI recurrence?

A – decrease urea, decrease PH, increase osmolarity

B - increase urea, decrease PH, increase osmolarity

Answer : B

Biochemical properties are normally important in making bacterial survival difficult in urine: acid pH, high urea content, and high osmolality.

Reference: <https://www.auanet.org/education/adult-uti.cfm>

19-Patient complaining of severe uncontrolled HTN, “Renography” not sure”, showed Lt renal artery stenosis, next step is to?

A- Venography

B- IVP

C- CT angiography

D- Renography

Answer: C

Non-invasive;

It is reasonable to begin with a renal ultrasound, followed by either CT or MR angiography or a captopril renal scan depending on the preference of the institution/physician.

1-Duplex ultrasound (sensitivity 84% to 98%, specificity 62% to 99%).

2-Gadolinium-enhanced magnetic resonance angiography (sensitivity 90% to 100%, specificity 76% to 94%).

3-CT angiography (sensitivity 59% to 96%, specificity 82% to 99%).

4-Captopril renal scan (sensitivity 45% to 94%, specificity 81% to 100%)

Invasive test;

Conventional angiography, the most sensitive and specific test for assessing anatomical narrowing of the renal artery, also allows for therapeutic intervention at the same time.

Requires arterial catheterization.

Reference: <http://bestpractice.bmj.com/best-practice/monograph/435/diagnosis/tests.html>

**20-patient with long history of uncontrolled HTN , he presented to you with headache and 160/90 BP , what you will see in his kidneys?
smle ,2017**

A) Decrease sclerosis

B) Increase hyalinization of arterioles

Answer: B

With HTN : intimal thickening and luminal narrowing of the large and small renal arteries and the glomerular arterioles, and Glomerulosclerosis: both focal global (involving the entire glomerulus) and focal segmental sclerosis

Reference: <http://www.uptodate.com/contents/clinical-features-diagnosis-and-treatment-of-hypertensive-nephrosclerosis?source=preview&search=%25252Fcontents%25252Fsearch&anchor=H11268824#H2>

21-Old patient with Back pain, dysuria , frequency. what is the next investigation?

A- PSA

B-ALP

Answer: A

Due to suspicion of prostate Cancer

If the patient was never diagnosed with prostate cancer order PSA, Total PSA is the initial test of choice.

If a diagnosis of prostate cancer is made in a patient with greater than 5-year life expectancy, or disease is symptomatic, then imaging is recommended

A bone scan should be ordered in a patient with T1 and PSA >20 micrograms/L (>20 nanograms/mL) or T2 and PSA>10 micrograms/L (>10 nanograms/mL), a Gleason score of ≥8, or T3 or T4 disease, and any time the patient is symptomatic.

Ref: <http://bestpractice.bmj.com/best-practice/monograph/254/diagnosis/tests.html>

22-boy with hematuria and SNHL, his father has end stage renal disease and SNHL, what diagnosis? (sensorineural hearing loss)

A-alport syndrome

Answer: A

Rare familial nephropathy due to abnormalities in type IV collagen.

May be inherited in 1 of 3 patterns: X-linked, autosomal recessive, or autosomal dominant.

Associated with considerable clinical variability of age of onset of chronic renal failure.

Frequently associated with sensorineural hearing loss.

Monitoring and treatment of renal disease is the main treatment.

TRIAD OF : Renal dx, sensorineural hearing loss and Anterior lenticonus

Ref: <http://emedicine.medscape.com/article/238260-overview>

23-Repeated

smle ,2017

24-The most common cause of renal failure is?

A-diabetes mellitus

B-hypertension

Answer: A

Diabetes is the most common cause of ESRD

Reference: www.kidneyfund.org/kidney-disease/kidney-failure/

25-The most common cause of secondary hypertension is?

A-kidney disease

B-pheochromocytoma

C-conn

D-Cushing

Answer: A

Explanation: Renal/renovascular disease—renal artery stenosis (most common cause of secondary HTN)

Reference: step-up to medicine third edition page 429

26-case of fanconi syndrome?

No choices were provided

In children, Fanconi's syndrome results in growth retardation, renal rickets, and severe metabolic acidosis. Adult cases exhibit similar urinary losses, but the clinical impact is largely restricted to metabolic acidosis.

●Fanconi's syndrome is marked by the appearance in the urine of all amino acids. Specific amino aciduria as seen in isolated cystinuria, glucose loss in isolated glycosuria, and isolated phosphaturia do not constitute Fanconi's syndrome.

Reference: read more from here <http://emedicine.medscape.com/article/981774-clinical>

27-child with decreased UOP, tea colored urine, generalized swelling. next investigation?

Answer: Urine Analysis

Reference: Master The Board 3rd edition P353

28-Patient with DM, how to prevent progressive renal disease?

Answer: ACEI

ACEI decrease intraglomerular hypertension and decrease damage to the kidney

smle ,2017

Reference: <http://www.medscape.com/viewarticle/445180>

29-HTN pt with decreased GFR:

A-Bilateral renal artery stenosis

A- B- DM nephropathy

Reference: A Incomplete scenario

...

30-Prostatic ca marker:

A-a- feto

B-alk

C-.

Answer: could be B

Explanation :Extensive clinical trials comparing acid phosphatase, alkaline phosphatase (ALKP) and prostate specific antigen (PSA) have shown that PSA is the most sensitive and specific of the tumour markers available for prostate cancer. In extensive metastatic disease the combination of PSA and ALP reflects the tumour activity.

Reference: <http://www.medscape.com/viewarticle/445180>

31-Polycystic (renal) disease:

A.AR

B.x-linked

Explanation:

the term polycystic kidney disease is reserved for one of two hereditary conditions

-Autosomal dominant polycystic kidney disease (ADPKD), common type.

A mutation in the PKD1 gene , which is located on chromosome 16 and encodes polycystin 1, is present in 85 percent of patients with ADPKD.

Most other patients with ADPKD have a mutation in the PKD2 gene , which encodes polycystin 2 and is

located on chromosome 4.

-Autosomal recessive polycystic kidney disease (ARPKD), previously called infantile polycystic kidney disease.

mutations in the PKHD1 gene located on chromosome 6p21.

https://www.uptodate.com/contents/autosomal-dominant-polycystic-kidney-disease-in-children?source=see_link.

32-Best investigation to measure GFR?

A.Inuline

B.24 urine creatinine collection

C.other options were irrelevant

Answer: inuline

smle ,2017

“The gold standard of exogenous filtration markers is inulin.” Inulin is a physiologically inert substance that is freely filtered at the glomerulus, and is neither secreted, reabsorbed, synthesized, nor metabolized by the kidney but

In the United States, “the most common methods utilized to estimate the GFR are: measurement of the creatinine clearance” and estimation equations based upon serum creatinine such as the Cockcroft-Gault equation

Reference:<http://www.uptodate.com/contents/assessment-of-kidney-function#H22>

33-NEPHRITIC SYNDROME?

A-HTN

B-Hyperbilirubinemia

C- Edema

D- hyperlipidemia

Answer: A

Reference: <http://emedicine.medscape.com/article/239278-overview>

34 -pt with bilateral flank pain for 6 months and there is gene 16 mutation , what is the disease?

A.Adult polycystic kidney disease

B.pcos

Answer: A Go to Q 31

35-Pt presented with right flank pain, no dysuria or penile discharge?

Answer: renal colic

36-Repeated Q

37-ABG case of pt presented with vomiting ?

A-Metabolic alkalosis

Answer: A

The patient’s medical history is most helpful (look for vomiting, gastric drainage, diuretic therapy, and so on).

Reference: [step up to medicine p321](#)

38-Patient 3 weeks after URTI develop rash, knee pain, and hematuria. What's the Dx?

A- Henoch-Schönlein purpura

Answer: A

Henoch-Schönlein purpura “IgA vasculitis” characterized by manifestations:

- Palpable purpura in patients with neither thrombocytopenia nor coagulopathy 95-100%
- Arthritis/ arthralgia “especially involving the knees and ankles” 60-84%
- Abdominal pain “usually diffuse, with acute-onset” 35-85%
- Renal disease “proteinuria, hematuria”

In one half to two thirds of children, an upper respiratory tract infection (URTI) precedes the clinical on-set of HSP by 1-3 weeks

Reference: <http://emedicine.medscape.com/article/984105-overview>

39-IgA nephropathy:

1. Asymptomatic recurrent hematuria/mild proteinuria is common. This is the most common cause of glomerular hematuria. Gross hematuria after an upper respiratory infection (or exercise) is common.
2. Renal function is usually normal.
3. Mesangial deposition of IgA and C3 are seen on electron microscopy.
4. The prognosis in most patients is good with preservation of renal function (renal insufficiency may develop in 25%).
5. Some advocate steroids for unstable disease, but no therapy has been proven to be effective

40-Adult presented with edema and proteinuria. low albumin, Normal urea and creatinine? A-
nephrotic syndrome
B-interstitial nephritis
C-nephritic syndrome

Answer: A

Serum creatinine will be in the normal range in uncomplicated nephrotic syndrome, such as that occurring in minimal-change nephropathy. In children, the serum creatinine level will be lower than it is in adults. The normal adult serum creatinine level is approximately 1 mg/dL, whereas that of a child aged 5 years will be about 0.5 mg/dL. Values higher than this in children indicate reduced kidney function. the serum albumin level is classically low in nephrotic syndrome

Reference :Read more about it <http://www.mayoclinic.org/diseases-conditions/nephrotic-syndrome/basics/definition/con-20033385>

41-First symptoms of hypomagnesaemia?

- A-muscle paralysis
- B-Hypotension
- C-loss of deep muscle reflex
- D-respiratory depression

Answer: B **

Reference: Professional Guide to Diseases page 595

42-High K⁺ ,wide QRS:

A-give ca gluconate

Answer: A

ECG changes in hyperkalemia

become prominent when K⁺ > 6.0 and include:

- Peaked T waves (by 10 mm)
- A prolonged PR interval
- Widening of QRS and merging of QRS with T wave
- Ventricular fibrillation and cardiac arrest (with increasing levels of K⁺)

Rx If the hyperkalemia is severe, or if ECG changes are present, first give IV calcium.

Calcium stabilizes the resting membrane potential of the myocardial membrane— that is, it decreases membrane excitability.

Reference: step up to medicine p 313

43-Repeated Q

44-Pt drink some material made from ethanol use for freezing what the complication?

A-Rapid progressive glomerulonephritis

B-pyelonephritis

C-ATN

Answer: C

Tubular etiologies may include ischemia or cytotoxicity. Cytotoxic etiologies include the following: Heme pigment - Rhabdomyolysis, intravascular hemolysis

Crystals - Tumor lysis syndrome, seizures, ethylene glycol poisoning, megadose vitamin C, acyclovir, indinavir, methotrexate

Drugs - Aminoglycosides, lithium, amphotericin B, pentamidine, cisplatin, ifosfamide, radiocontrast agents

Reference: <http://emedicine.medscape.com/article/243492-overview#showall>

45-elderly with acute urine retention what is the initial management :

a.transurethral prostatectomy

b.partial prostatectomy

c.foley catheter and urine culture

Answer: C

In men, AUR is most often secondary to benign prostatic hyperplasia (BPH) . In men with BPH, risk factors for developing AUR include advanced age,

Other causes of outflow obstruction in men include constipation, cancer (prostate or bladder), urethral stricture, urolithiasis, phimosis, or paraphimosis, Most patients with suspected acute uri-

smle ,2017

nary retention (AUR) will have a bladder ultrasound that will confirm the diagnosis. However, in patients whose history and physical examination strongly suggest a diagnosis of AUR, it is reasonable to proceed with catheterization without a bladder ultrasound, which is both diagnostic and therapeutic.

ACUTE MANAGEMENT: The initial management of acute urinary retention (AUR) is prompt bladder de-compression by catheterization.

Reference: <http://www.uptodate.com/contents/acute-urinary-retention>

46-repeated

!!! 47-pt use diuretics and he developed muscle weakness and diarrhea what is the cause,?

A-hyper k

B- hypo k

C- hyper Na

Answer: A

Reference: Master the board, Nephrology section

Diuretics can cause hypokalemia. Potassium sparing diuretic however, could cause hyperkalemia. This question might lack some important information that could guide to the right answer. The most likely answer in this case is hyperkalemia since this patient has diarrhea.

Signs and Symptoms

HYPERKALEMIA

- GI
 - Nausea, vomiting, diarrhoea
- CVS
 - Arrhythmias
- NEUROMUSC
 - Weakness, paralysis, respiratory failure

HYPOKALEMIA

- GI
 - Ileus, constipation
- CVS
 - Arrhythmias, arrest
- NEUROMUSC
 - Weakness, lethargy, depressed reflexes

**48-12 -years with hepatic failure admitted to ICU, his skin was yellow .now become green in color , what is this indicates :(not mentioned obstructive jaundice in the choices!)
A-Oxidation Of bilirubin.**

B-Impending

death . Answer: ?

Bilirubin is generated by sequential catalytic degradation of heme mediated by two groups of enzymes:

- Heme oxygenase
- Biliverdin reductase

Heme oxygenase initiates the opening of the porphyrin ring of heme by catalyzing the oxidation of the alpha-carbon bridge. This leads to formation of the green pigment, biliverdin, which is then reduced by the biliverdin reductase to the orange-yellow pigment bilirubin IX-alpha.

So the green pigmentation either by high level of heme oxygenation (eg in hemolysis) or low Biliverdin reductase due to defect in the gene that codes for the enzyme.

Choice A “oxidation of bilirubin” will lead to the formation of biliverdin.

These details are from biochemistry point of view. The question here, however, still could not be answered.

References: 1- <http://www.uptodate.com/contents/bilirubin-metabolism#> 2- Green jaundice: an unusual case revisited - ResearchGate

49-patient diagnosed as MG, Come To ER with weakness & severe fatigability, she is on pyridostigmine, what initial step you do?

This is a case of severe disease (class IV and V, myasthenic crisis) 1st line in management

intubation and mechanical ventilation Plus

plasma exchange or intravenous

immunoglobulin Plus

Supportive

care Then

Corticosteroid

Reference: <http://bestpractice.bmj.com/best-practice/monograph/238/treatment.html>

50- Which cells forming the filtration layer in the kidney?

A-mesangil

B-podocytes

C-partial

Answer:

B

The healthy kidney filters metabolic byproducts into the urine but prevents the passage of albumin and other larger essential molecules. This selective filtration occurs across the glomerular capillary wall:

The glomerular capillary wall, through which the filtrate must pass, consists of the following three layers:

- Fenestrated capillary endothelium, extensively coated with a layer of poly anionic glycosaminoglycans and glycoproteins.
- Glomerular basement membrane (GBM), containing heparin sulfate and other anionic glycosaminoglycans.
- Podocytes (or epithelial cells), which are attached to the GBM by discrete foot processes. The pores

between the foot processes (slit pores) are closed by a thin membrane called the slit diaphragm, which functions as a modified adherens junction and may also be permeated by anatomical pores.

Reference: <http://cursoenarm.net/UPTODATE/contents/mobipreview.htm?4/21/4432>

51-repeated

52-Hx and investigation All normal except Hyponatremia and crepitation on Ex, what would you give?

A.IV NS

B.furosemide

Answer: B

This might be a case of paraneoplastic ADH release.

Treatment of hyponatremia is as follows

1. Isotonic and hypertonic hyponatremias—Diagnose and treat the underlying disorder.

2. Hypotonic hyponatremia

- a. Mild (Na^+ 120 to -130 mmol/L)—Withhold free water, and allow the patient to re-equilibrate spontaneously
 - b. Moderate (Na^+ 110 to 120 mmol/L)—loop diuretics (given with saline to prevent renal concentration of urine due to high ADH)
 - c. Severe (Na^+ < 110 mmol/L or if symptomatic)—Give hypertonic saline to increase serum sodium by 1 to 2 mEq/L/hour until symptoms improve.
- Hypertonic saline rapidly increases the tonicity of ECF.
 - Do not increase sodium more than 8 mmol/L during the first 24 hours. An overly rapid increase in serum sodium concentration may produce central pontine demyelination.

Reference: step up page 307

53-Case with: ph 7.2 \ pCo2 : decreased below normal range \ bicarbonate decreased below normal range. Dx ?

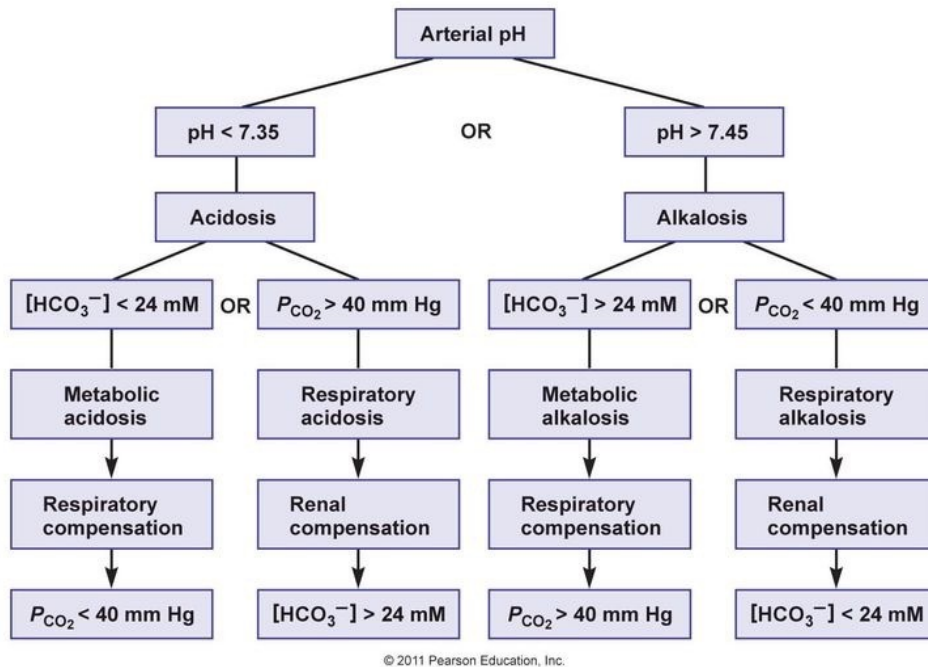
A-Compensated Metabolic acidosis

B-Uncompensated Metabolic acidosis

C-Compensated respiratory acidosis

D-Uncompensated Metabolic acidosis

it is metabolic acidosis but up to this info you can't say is it with compensation or hidden respiratory alkalosis , if $paco_2 = (1.5 \times hco_3) + 8 \pm 2$ (winter's formula) then it is with compensation.



54-According Henoch schonlein purpura , which of the following carries bad prognosis? A-Renal failure

B-Hepatic failure

Answer: A

Morbidity in the initial phase of HSP (IgAV) is primarily a result of gastrointestinal complications. The long-term morbidity in patients with HSP (IgAV) is a result of renal disease.

The risk of chron-ic renal disease is increased in adults

Risk factors for a worse renal prognosis include nephrotic range proteinuria, elevated serum creatinine, hypertension, and certain histologic findings.

Reference: <http://www.uptodate.com/contents/henoch-schonlein-purpura-immunoglobulin-a-vas-culitis-management?source=preview&search=henoch+schonlein+purpura&language=en-US&anchor=H10&selectedTitle=2~142#H10>

55-Patient with vomiting and diarrhoea. What type of electrolyte imbalance?

A- Hyponatremia.

B-
Hyperglycemia.

C-
Hyperkalemia.

Answer: A

Usually due to water loss in excess of sodium loss, eg: diarrhoea , vomiting , burn.

According to several sources, vomiting and diarrhea can cause both hypo and hypernatremia. Hypokalemia rather than hyperkalemia can result as well

Reference: Oxford clinical medicine

http://www.uptodate.com/contents/image?im-ageKey=NEPH%2F69879&topicKey=NEPH%2F2376&source=see_link&utdPopup=true

56- Patient presented with color soda urine since one week, during examination congestion of throat with cervical lymphadenopathy with fever, What's the cause?

A-Acute glomerulitis

B-Iga nephropathy

C-Acute cystitis

Answer: B

Reference:

uptodate

Approximately 40 to 50 percent present with one or recurrent episodes of visible hematuria, usually following an upper respiratory infection. This has sometimes been called "synpharyngitic

hematuria." These episodes can be provoked by bacterial tonsillitis, or by other viral upper respi- ratory infections

57- Young female with malar rash, photophobia, joint pain, hematuria?

A-lupus nephritis

B-HSP

Answer: A (To diagnose SLE, you needs 4 or > of the following criteria)

Diagnostic criteria in SLE

S	• Serositis [pleuritis, pericarditis]	B	• Blood [all are low - anemia, leukopenia, thrombocytopenia]
O	• Oral ulcers	R	• Renal [protein]
A	• Arthritis	A	• ANA
P	• Photosensitivity	I	• Immunologic [DS DNA, etc.]
M	Malar rash	N	• Neurologic [psych, seizures]
		D	Discoid rash



Reference: Master the board

58-Old male pt presented with urgency and frequency symptoms, what's the first thing that u will do?

A-PSA

B-trans rectal US

Answer: PSA (you have to exclude prostate cancer because he is old, and these symptoms can present in someone with prostate cancer)

Prostate specific antigen (PSA) is the most sensitive test for early detection of prostatic cancer. Following diagnosis, PSA is used to follow progression of disease and response to treatment. However, the PSA is not a specific test. PSA can be elevated in prostatic hyperplasia or prostatitis.

Although debate is ongoing, a PSA of 4 in a male over the age of 50 is generally agreed upon as indication for transrectal ultrasonography (TRUS) biopsy.

Reference: First aid for surgery

Repeated q 21

Benign prostatic hyperplasia (BPH) is a common disorder that increases in frequency progressively with age in men older than 50 years .

The clinical manifestations of BPH are lower urinary tract symptoms (LUTS) that include storage symptoms (increased daytime frequency, nocturia, urgency, and urinary incontinence), voiding symptoms (a slow urinary stream, splitting or spraying of the urinary stream, intermittent urinary stream, hesitancy, straining to void, and terminal dribbling), and irritative symptoms (frequent urination, urinary urgency).

serum prostate specific antigen — Prostate cancer can cause obstructive symptoms, although the presence of symptoms is not predictive of prostate cancer . Measurements of serum PSA may be used as a screening test for prostate cancer in these men with BPH, preferably in men between the ages of 50 to 69 years and before therapy for BPH is discussed.

smle ,2017

59-Patient with HTN and he has hypercalcemia, RX?

A. Furosemid

Answer: A

Furosemide would seem a good choice for this patient since it will lower blood pressure and decrease the calcium as well. (Do not use thiazide diuretics , because it increases the ca+)

Generally, hypercalcemia is treated as follows:

Increase urinary excretion.

- a. IV fluids (normal saline)—first step in management
- b. Diuretics (furosemide)—further inhibit calcium reabsorption
2. Inhibit bone resorption in patients with osteoclastic disease (e.g., malignancy).
 - a. Bisphosphonates (pamidronate)
 - b. Calcitonin
3. Give glucocorticoids if vitamin D-related mechanisms (intoxication, granulomatous disorders) and multiple myeloma are the cause of the hypercalcemia.

However, glucocorticoids are ineffective in most other forms of hypercalcemia.

4. Use hemodialysis for renal failure patients.
5. Phosphate is effective but incurs the risk of metastatic calcification.

Reference: page 311 step up

60-wheal with erythematous base itching lymph node enlargement periorbital swelling hepatosplenomegaly?

A-Rheumatic arthritis

B-Angioedema

C-Cholinergic urticarial

D-itching more with urticarial

Answer: repeated most likely

B

This question is not very clear. However, Schnitzler syndrome could be the most appropriate explanation for these features combined

“Schnitzler syndrome is a rare disease characterised by chronic hives (urticaria) and periodic fever, bone pain and joint pain(sometimes with joint inflammation), weight loss, malaise, fatigue, swollen lymph glands and enlarged spleen and liver.^[1]

The urticarial rash is non-itching in more than half of cases, which is unusual for hives. It is most prominent on the trunk, arms and legs, sparing the palms, soles, head and neck. Associated angioedema has been reported in a few patients.

Reference: wikipedia

61-about chronic granulomatous disease?!!

Incomplete question
smle ,2017

62-female patient swallow 1 liter of car_anti_freeze water (ethylene glycol), what is going to hap- pen?

A-interstitial nephritis

B-End stage renal disease

repeated q see 44

63-Urge incontinence principle management?

A-Medical

B-Surgical

C-Medical and surgical

D-Bladder training and physio

Answer: C **medical & surgical !!** (I don't know what principle management mean ??

However if principle mean first line treatment it's bladder training)

Behavioural approaches plus lifestyle changes is the first line treatment:

- Behavioural treatments include bladder retraining and prompted voiding. [65] Pelvic muscle exercises can be combined with bladder training. [58] [65] Bladder training (bladder drills/timed voiding) involves techniques to distend the bladder (e.g., by adjusting fluid intake) or delay voiding. [66] Prompted voiding teaches patients to initiate micturition themselves. [61]
- Functional electrical stimulation can be used together with pelvic floor exercises.[B Evidence] This technique is performed twice daily and is delivered via a probe placed vaginally or rectally.
- Lifestyle interventions include weight loss, caffeine reduction, fluid management, reduction of physical exertion (e.g., exercise), smoking cessation, and resolution of chronic constipation.

Reference: BMJ

- in patients with urgency incontinence who do not respond to lifestyle interventions or pelvic floor muscle exercise, we recommend treatment with either an alpha blocker or antimuscarinic medication Surgical treatments for urinary incontinence are reserved for patients who do not respond to medical management.

Reference: <http://www.uptodate.com/contents/urinary-incontinence-in-men#H9860300>

64-A patient with renal function test abnormalities. Tests show beads on string appearance. What is the diagnosis?

A. renal artery disease

B. fibromuscular dysplasia

Answer: B

The string-of-beads appearance is considered pathognomonic for medial fibroplasia on diagnostic angiography

Reference: <http://emedicine.medscape.com/article/417771-overview#a>

65-Pt had pyelography showing rt kidney 7 cm and left kidney 16 or 14 cm, arteriography shows rt renal stenosis, Next management?

A- arteriography

B- Lt kidney percutaneous biopsy

smle ,2017

C- CT angiography

D- CT abdomen

Answer : C Repeated!!

(CT angiography is a good tool for RAS diagnosis, However conventional angiography is more sensitive but it's high invasive procure)

REFERENCE: <http://bestpractice.bmj.com/best-practice/monograph/435/diagnosis/tests.html>

66-Urine incontinence, bladder palpable during examination, what type of urine does the patient has?

A- Stress.

B- Overflow.

C- Reflux.

D- Urgency.

Answer: B :Overflow incontinence

- Overdistended bladder and urinary retention →dribbling and inability to empty bladder

Reference: <http://www.medbullets.com/step1-renal/15072/urinary-incontinence>

67-Case of urine incontinence, patient urinates without sense or stress,, dx?

A-Reflex incontinence

B-overflow incontinence

C-stress incontinence

Answer: B

Overflow incontinence

Overdistended bladder and urinary retention → dribbling and inability to empty bladder

Etiology:

1. impaired detrusor contractility
 - neurogenic i.e., diabetes mellitus, B12 deficiency, alcoholism
 - pathologies affecting the spinal cord i.e., spinal stenosis, multiple sclerosis, tumors
 - medications i.e., anticholinergics, alpha agonists, calcium channel blockers, opioids, psychotherapeutics
2. bladder outlet obstruction
 - i.e., benign prostatic hyperplasia (BPH), pelvic organ prolapse (advanced), iatrogenic (i.e., pelvic surgery), fibroids

Reference: <http://www.medbullets.com/step1-renal/15072/urinary-incontinence>

68-A patient with dyspnea, pallor, edema of legs and itching. What is the diagnosis?

A. Scabies

B. renal failure

Answer: B

● Symptoms of renal failure

- anorexia
- fatigue
- mental status changes
- nausea and vomiting
- pruritus
- shortness of breath

Reference: <http://www.medbullets.com/step2-3-renal/20693/acute-renal-failure>

69- Breast cancer patient who receives many medications (cyclophosphamide, fluorouracil, ..etc). In order to avoid the adverse effect of having hemorrhagic cystitis which of the following will be given to this patient?

A. Bleomycin

B. Danazol

C. Carbenicillin

D. Mesna

Answer: D

Reference: FA for step1 2015 page 410

70-Scenario with urine analysis only which shows:

PH of urine normal, chloride high, bicarbonate low

smle ,2016

and other mentioned in labs but within normal limit, what's dx?

- A-metabolic acidosis
- B-metabolic alkalosis
- C-rep. Alkalosis
- D-rep. acidosis

Answer: B

Saline-resistant metabolic alkalosis (urine chloride >20 mEq/L)—characterized by ECF expansion and hypertension (due to increased mineralocorticoids)

a. Most are secondary to adrenal disorders (primary hyperaldosteronism).

Increased levels of mineralocorticoid secretion lead to increased tubular reabsorption of Na^+ and HCO_3^- , and an excessive loss of Cl^- in the urine. The result is metabolic alkalosis and expansion of the ECF compartment (because of increased Na^+ reabsorption).

Reference: [step up to medicine, third edition, page 321](#)

71-Normal pH and high Bicarbonate?

Question is not complete but most likely Respiratory acidosis with compensatory metabolic Alkalosis

72-Most sign renal cancer:

- A-Cachexia
- B-Hematuria
- C-Abdominal mass

Answer: B

Renal cell carcinoma

Symptoms

- hematuria (90%)
- pain (45%)
- fever (20%)

Reference: <http://www.medsbullet.com/step1-oncology/15031/renal-cell-carcinoma>

73-NF1 gene responsible for?

A - Neurofibromatosis type 1 (NF1)

Answer: A

NF1 is due to mutations in the NF1 gene, located at chromosome 17q11.2.

Reference: <http://www.ctf.org/understanding-nf/nf1>

74-Smoking increases risk of?

- A. Bladder cancer

Answer: A

Smoking is the most important risk factor for bladder cancer. Smokers are at least 3 times as likely to get bladder cancer as nonsmokers. Smoking causes about half of the bladder cancers in both men and women

Reference: <http://www.cancer.org/cancer/bladdercancer/detailedguide/bladder-cancer-risk-factors>

smle ,2016

75-A patient presented with hemoptysis and signs of nephropathy. Biopsy of the lung showed presence of anti-GBM antibodies. What is the most likely diagnosis?

- A. Rheumatoid arthritis
- B. Systemic lupus erythematosus
- C. Goodpasture syndrome
- D. Acute glomerulonephritis

Answer: C

Frank hemoptysis suggests Goodpasture syndrome (glomerulonephritis and pulmonary hemorrhage associated with anti GBM antibody) but this also can be a prominent feature of systemic vasculitis

Reference: <http://emedicine.medscape.com/article/981258-overview>

76-DKA case with dehydration signs, Hx of wt. loss last 2 week, In ER given IV fluid and slow infusion insulin.. What is more to concern? (ER)

- A. Cerebral edema
- B. Renal Failure
- C. Hypoglycemia

Answer: A

Cerebral edema (or cerebral injury) is an uncommon but potentially devastating consequence of diabetic ketoacidosis (DKA). It is far more common among children with DKA than among adults.

Reference: http://www.uptodate.com/contents/cerebral-edema-in-children-with-diabetic-ketoacidosis?source=see_link§ionName=TREATMENT&anchor=H14%252523H14

77-What is the most common cause of HTN?

- A-Essential
- B-NSAID induced
- C-Primary hyperaldosteronism

Answer: A

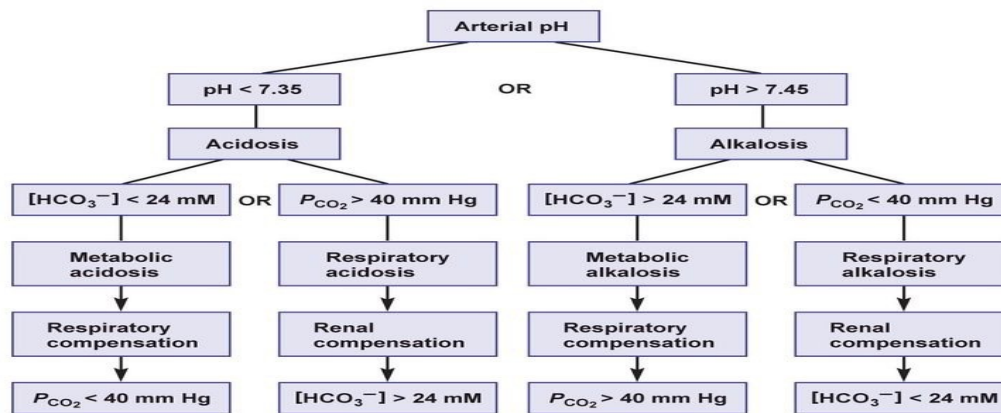
Reference: <http://www.mayoclinic.org/diseases-conditions/high-blood-pressure/basics/causes/con-20019580>

78- PH: 7.2 , HCO₃ : 25 , co₂ : 60 ...

- A. Metabolic acidosis.
- B. Respiratory acidosis

Answer: B

Explanation: In acute or acute-on-chronic respiratory acidosis, the PaCO₂ is elevated above the upper limit of the reference range (ie, >45 mmHg) with an accompanying acidemia (ie, pH <7.35).



© 2011 Pearson Education, Inc.

Reference: https://www.uptodate.com/contents/the-evaluation-diagnosis-and-treatment-of-the-adult-patient-with-acute-hypercapnic-respiratory-failure?source=search_result&search=respiratory%20acidosis&selectedTitle=1~150#H1033772780

79- Effect of HTN on kidney?

A-Decrease glumer

B-Hydraulic of vessels

Answer: ???

Explanation: High blood pressure can damage blood vessels in the kidneys, reducing their ability to work properly. When the force of blood flow is high, blood vessels stretch so blood flows more easily. Eventually, this stretching scars and weakens blood vessels throughout the body, including those in the kidneys.

If the kidneys' blood vessels are damaged, they may stop removing wastes and extra fluid from the body. Extra fluid in the blood vessels may then raise blood pressure even more, creating a dangerous cycle.

Hypertensive nephrosclerosis is characterized histologically by vascular, glomerular, and tubulointerstitial involvement

Reference: <https://www.niddk.nih.gov/health-information/kidney-disease/chronic-kidney-disease-ckd/high-blood-pressure>

<http://www.uptodate.com/contents/overview-of-hypertension-in-adults#H10>

https://www.uptodate.com/contents/clinical-features-diagnosis-and-treatment-of-hypertensive-nephrosclerosis?source=see_link#H2

80- patient with history urethral discharge culture (negative) and severe unilateral knee pain what is the diagnosis?

Answer: Reiter's syndrome also called Reactive arthritis

Explanation: Reactive arthritis (ReA), formerly termed Reiter syndrome, is an autoimmune condition that develops in response to an infection. It has been associated with gastrointestinal (GI) infections with *Shigella*, *Salmonella*, *Campylobacter*, and other organisms, as well as with genitourinary (GU) infections (especially with *Chlamydia trachomatis*).

Mnemonic to remember: can't see can't pee can't climb a tree Classically presents with

- urethritis
- conjunctivitis or uveitis

smle ,2016

- arthritis

Reference: <http://emedicine.medscape.com/article/331347-overview?pa=Hu02L%2F1%2BSPNPVCo2nGXBHL95riFDLWFsmxWAXEJvXQAdj8rGIgxENS9c%2FmbI1vAdX8MwC0EECWzp432Skuf9qw%3D%3D>

81- filling defect seen with acoustic shadow in the renal US?

- A. Clot
- B. Tumor
- C. Uric acid
- D. Papillary necrosis

Answer: Q is not clear If hypo >>uric/If hyper >> papillary (I think C).

Explanation: **Acoustic shadowing** on an ultrasound image is characterised by a signal void behind structures that strongly absorb or reflect ultrasonic waves. This happens most frequently with solid structures, as sound conducts most rapidly in areas where molecules are closely packed, such as in bone or stones.

Reference: <https://radiopaedia.org/articles/acoustic-shadowing>

82- -A 45-year-old man is involved in an automobile accident and sustains severe injuries with considerable blood loss and hypotension. He is transferred from the emergency department to an intensive care unit, where he develops multiorgan failure. During the first 2 days in the intensive care unit, his plasma phosphate was within normal limits. Subsequently, it began to rise, eventually reaching 6.0 mg/dL. Failure of which of the following organs would most likely have this effect?

- A. heart
- B. lung
- C. kidney
- D. liver

Answer: C

Causes of hyperphosphatemia

Acute phosphate load
Endogenous
Cell lysis (tumor lysis syndrome, rhabdomyolysis)
Exogenous
Phosphate-containing medications (laxatives, fosphenytoin)
Intestinal uptake (vitamin D toxicity)
Cellular shift
Lactic or ketoacidosis
Decreased renal clearance
Reduced glomerular filtration rate
Acute kidney injury
Chronic kidney disease
Increased tubular reabsorption
Hypoparathyroidism or pseudohypoparathyroidism
Acromegaly
Bisphosphonates
Vitamin D toxicity (also increases intestinal absorption)
Familial tumoral calcinosis

Reference: <https://www.uptodate.com/contents/overview-of-the-causes-and-treatment-of-hyperphosphatemia>

83- Na: 135 Cl: 100 HCO₃: 12, AG?

A. 23

B. 10

Answer: A

Explanation: $AG = Na - (Cl + HCO_3)$

Range of normal AG: 10 ± 2

The normal value for the serum anion gap is 8-16 mEq/L. However, there are always unmeasurable anions, so an anion gap of less than 11 mEq/L using any of the equations listed in Description is considered normal.

Reference: <http://emedicine.medscape.com/article/2087291-overview>

84- Calculate anion gap with corrected NA 138? Not clear

Answer: anion gap = Na - (Cl + HCO₃)

Explanation: physicians often correct the sodium level in the face of hyperglycemia by adding 1.6 mEq/L to the sodium concentration for each 100-mg/dL increment in glucose levels above 100 mg/dL. This correction does not apply to the calculation of the anion gap in patients with acidosis and hyperglycemia because the water moving from the intracellular compartment to the extracellular compartment as a result of the hyperglycemia equally dilutes all electrolytes, including the chloride and bicarbonate.

smle ,2016

Reference: <http://emupdates.com/2009/11/25/calculating-the-anion-gap-for-patients-with-acidosis-and-hyperglycemia/>

85 -Case with acid base imbalance (Low ph, bicarb, co2) ,including values Dx?

A. Compensated metabolic acidosis

Answer: Go to Q 78

86-Post infection the abx was formed (low c3)

Explanation: Theoretically, the complement (or C3) levels should be decreased in all such patients; however, the duration of low values may be quite brief and, therefore, missed, even when examined serially. When the serum level is low in individuals with APSGN, a depressed level for longer than 6-8 weeks is unusual. Thus, if the value remains low after this period of time, thinking of some other nephritic process, such as membranoproliferative glomerulonephritis (MPGN), is wise

Reference: <http://emedicine.medscape.com/article/980685-workup>

!! 87-Tx of SLE pt with URTI***

The majority of reported infectious complications in patients with SLE are bacterial. The most frequent types of infections are respiratory, urinary tract and soft tissue infections.

Around thirty per cent of people with lupus will have an allergic reaction to sulpha antibiotics, which may cause increased photosensitivity, skin rashes and lower white blood cell counts. This type of antibiotic should be avoided wherever possible.

The medical treatment required to treat infection in a person with lupus may be more prolonged than that needed for other people. Treatment depends on the type of infectious agent:

- Bacterial infections are treated with antibiotics. This may include intravenous antibiotics and hospital admission in the case of more serious infections, particularly if the person is using immunosuppressive drugs as part of their lupus therapy.
- Fungal infections are treated with antifungal medications. They may be in the form of creams, suppositories or oral medications.
- Viral infections. Many viral infections (such as sinus infections, bronchitis and colds) don't respond to treatment, and shouldn't be treated with antibiotics. (Overuse of antibiotics leads to bacteria becoming resistant to antibiotics and harder to treat.) In these situations your doctor may recommend that you use over-the-counter treatments to help you feel better for the duration of the infection (for example, pain relievers for pain, short term use of nasal sprays for a blocked or runny nose). Antiviral medication may be used in the case of some viral infections (for example, herpes zoster).

Reference: <http://www.medscape.com/viewarticle/745235>

<https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/lupus-and-infections>

88- Minimal change nephrotic syndrome, histopathological finding?

Explanation: Minimal change disease (MCD) which is characterized by effacement of the epithelial cell (podocyte) foot processes and loss of the normal charge barrier such that albumin selectively leaks out and proteinuria ensues. By light microscopy, the glomerulus is normal with MCD. In this electron micrograph, the capillary loop in the lower half contains two electron dense RBC's. Fenestrated endothelium is present, and the basement membrane is normal. However, overlying epithelial cell foot processes are effaced.

Reference: <https://library.med.utah.edu/WebPath/RENAHTML/RENAL102.html>

smle ,2016

89- what is the effect of high blood pressure on the kidney? Repeated see q 79

Explanation: High blood pressure can damage blood vessels in the kidneys, reducing their ability to work properly. When the force of blood flow is high, blood vessels stretch so blood flows more easily. Eventually, this stretching scars and weakens blood vessels throughout the body, including those in the kidneys.

If the kidneys' blood vessels are damaged, they may stop removing wastes and extra fluid from the body. Extra fluid in the blood vessels may then raise blood pressure even more, creating a dangerous cycle.

Hypertensive nephrosclerosis is characterized histologically by vascular, glomerular, and tubulointerstitial involvement

Reference: <https://www.niddk.nih.gov/health-information/kidney-disease/chronic-kidney-disease-ckd/high-blood-pressure>

<http://www.uptodate.com/contents/overview-of-hypertension-in-adults#H10>

[https://www.uptodate.com/contents/clinical-features-diagnosis-and-treatment-of-hypertensive-nephrosclerosis?source=see link#H2](https://www.uptodate.com/contents/clinical-features-diagnosis-and-treatment-of-hypertensive-nephrosclerosis?source=see_link#H2)

90- early sign of hypomagnesemia? Repeated

Explanation: Neuromuscular manifestations, including neuromuscular hyperexcitability (eg, tremor, tetany, convulsions), weakness, apathy, delirium, and coma.

Cardiovascular manifestations, including widening of the QRS and peaking of T waves with moderate magnesium depletion, and widening of the PR interval, diminution of T waves, and atrial and ventricular arrhythmias with severe depletion.

Neuromuscular manifestations of hypomagnesemia may include the following¹:

- Muscular weakness
- Tremors
- Seizure
- Paresthesias
- Tetany
- Positive Chvostek sign and Trousseau sign
- Vertical and horizontal nystagmus

Cardiovascular manifestations may include the following electrocardiographic abnormalities and arrhythmias:

- Nonspecific T-wave changes - U waves
- Prolonged QT and QU interval
- Repolarization alternans
- Premature ventricular contractions - Monomorphic ventricular tachycardia
- Torsade de pointes
- Ventricular fibrillation
- Enhanced digitalis toxicity

Reference: https://www.uptodate.com/contents/clinical-manifestations-of-magnesium-depletion?source=search_result&search=hypomagnesemia&selectedTitle=3~150#H1625844
<http://emedicine.medscape.com/article/2038394-clinical>

91- Repeated Q 70

smle ,2016

HEMATOLOGY

1- In hemolytic anemia which enzyme will be noticed?

- A. erythropoietin
- B. bilirubin

Answer: B

Explanation:

-Degradation of RBC as a result of the hemolytic process, will lead to the appearance of indirect bilirubin in the blood stream.

Hemolytic anemia findings: high LDH, high indirect bilirubin, high reticulocyte count and low haptoglobin.

-Erythropoietin is an enzyme released by the kidney to increase RBC count in response to low blood oxygen level e.g. anemia.

FYI:

There are 2 concepts in hemolysis:

Extravascular: In extravascular hemolysis RBC's are destroyed in the reticuloendothelial system, in which macrophages degrade Hb into heme and globin. Heme is further degraded into iron (which will be recycled) and protophyrin (which is converted into bilirubin).

Findings: High LDH, high indirect bilirubin

Intravascular: Here the RBC's are destroyed within the blood vessels and thus hb will be released into the blood, in which it will bind haptoglobin until it saturates the haptoglobin and become free in the blood.

Findings: high LDH, hemoglobinemia and hemoglobinuria, low haptoglobin.

Reference First Aid Step 2 (p.176), First Aid step 1 (p.393)

2- factor VII deficiency what is the Lab abnormality we will detect?

- a- increased pt
- b- increased ptt

Answer: A

Explanation: Prothrombin time (pt) is used to measure extrinsic pathway (factor VII)

PTT (partial thromboplastin time) is used to measure intrinsic pathway factor (VIII, IX, XI, XII)

Common Pathway (I, II, V, X) if any one of those is deficient then both PTT and PT will rise.

Reference:

http://departments.weber.edu/chpweb/hemophilia/mechanisms_of_blood_coagulation.htm

3- Best diagnosis tool for thalassemia is :

A- Haemoglobin electrophoresis.

Answer: A

Explanation: Iron studies will be normal

Peripheral blood smear will show target cells

smle, 2016

Reference : Master the boards step 2 P.232

4-Patient with osteoarthritis, you found that he developed anemia which type it would be:

- a- normochromic normocytic
- b- microcytic hypochromic (if with NSAid)
- c- macrocytic hyperchromic

Answer:A

Explanation: The corrected form of this question is in Q34.(Refer to Q34 for details)
There is no clear association between osteoarthritis and anemia , so I think it is mistaken with rheumatoid arthritis.

6- What factor cause thrombosis ?

answer :

Explanation:

-The question is incomplete and not clear. However they maybe referring to factor V Leiden deficiency, which is the most common cause of hereditary thrombophilia.

-Factor V Leiden Mutation: Protein C inactivate factor V-but only in its normal form. If factor V has a mutation, protein C will not inhibit it. Factor V mutation functions like protein C deficiency.

-Other causes of hypercoagulable states: A- hereditary: Protein C deficiency , protein S deficiency m hyperhomocysteinemia, Anti-thrombin III deficiency.

B- Acquired : Surgery , Trauma , malignancy , antiphospholipid syndrome , nephrotic syndrome , immobilization , OCP/HRT.

Physiologic: Pregnancy , Age

Reference : MTB step 3 (p.211)

7- ITP case management

Answer : Glucocorticoids (Prednisone)

Explanation :

Treatment	
Presentation	Management
No bleeding, count >30,000	No treatment
Mild bleeding, count <30,000	Glucocorticoids
Severe bleeding (GI/CNS), count <10,000	IVIg, Anti-Rho (anti-D)
Recurrent episodes, steroid dependent	Splenectomy
Splenectomy or steroids not effective	Roniplostim or eltrombopag, rituximab, azathioprine, cyclosporine, mycophenolate

Reference: MTB step 2 CK 258

7-Patient with past history of Hodgkin lymphoma treated with chemotherapy and radiation; and now in remission for 10 years. Presented now with back pain. Examination and evaluation

smle ,2016

showed paraspinal edema and fluid collection. She tested negative for Brucella titer and tuberculin skin test was negative. What is the most likely cause?

- A. Brucellosis
- B. BREAST CANCER
- C. Recurrent Hodgkin lymphoma

CORRECT ANSWER: B

EXPLANATION:

Long term complication of Hodgkin lymphoma is solid tumor (breast, thyroid or lung cancer) due to radiotherapy. Breast cancer may metastasize to the bone.

REFERENCE: Toronto Note 2016 – Hematology Section P. 45 , MTB STEP 2 CK P.252

8 - Pt with high aPTT what mechanism of action of that drug?

"unfractionated heparin" Antithrombin

Answer:

Explanation: low dose heparin : inactivates factor Xa and inhibits conversion of prothrombin to thrombin high dose heparin : inactivates factors IX , X , XI , XII and thrombin and inhibit conversion of fibrinogen to fibrin .

Aspirin inhibit which product formation Thromboxane A2

Reference:

9- pt with low hemoglobin and low MCV, which of the following will confirm the dx?

A. Iron level and TIBC

Answer: A

Explanation : best initial test in microcytic anemia is iron studies

References : MTB step 2 ck P.231

10-A case of low platelets, low RBCs and low WBCs. What is the diagnosis?

- a-.Iron def anemia
- b-.Aplastic anemia

Answer: B

Aplastic anemia (AA) is characterized by diminished or absent hematopoietic precursors in the bone marrow, most often due to injury to the pluripotent stem cell (Decrease RBCs, WBCs, Platelets).

Reference: Uptodate.

11-A patient with decrease in factor Va. The etiology is due to:

- a. Inherited
- b. Immune
- c. Infection

Answer: A

Explanation :Factor V Leiden deficiency is the most common cause of hereditary thrombophilia.

Reference: MTB step 3 p.211

12- Asymptomatic patient, known case of chronic gastritis, has positive occult blood stool and his Hb=9. You will manage him by?

- a. IM iron

smle ,2016

- b.Oral iron
- c.Erythropoietin
- d.Blood transfusion

Answer: A

Explanation: Oral iron supplements should be avoided in case of gastritis because one of the side effects.

Gastrointestinal side effects are extremely common with oral iron administration. These include metallic taste, nausea/ vomiting , flatulence, constipation, diarrhea, stomach pain and dark stool. Use of IV or IM iron eliminates all of the gastrointestinal side effects of iron, which are due to direct effects of iron on the intestinal mucosa.

Reference: <https://www.uptodate.com/contents/treatment-of-iron-deficiency-anemia-in-adults>

13-a known case of sickle cell disease presented with unilateral lower limb pain since (short period:acute) . Vital signs: Tachycardia . Fever 38.3 . the range of movement is intact with no signs of inflammation over the limb. what is the diagnosis:

- a:Vaso-occlusive Crisis
- b_ Osteomyelitis

Answer: A

Explanation:

-Pain , fever and leukocytosis in Known case of sickle cell suggest vaso-occlusive crisis.

-Osteomyelitis often presents with vague ,non-specific pain and low grade fever gradually progressing over several days. Acute osteomyelitis often presents with pain with or without limb movements , signs of local inflammation (tenderness , swelling , warmth). In Osteomyelitis usually there will be a risk factors like diabetes , HIV infection , IV drug use , history of penetrating injury..etc.

Reference : BMJ(osteomyelitis), Toronto notes/ Hematology/ P.21

14-hemolytic anemia , comb positive , what type of hypersensitivity ?

answer: Type 2

Explanation:

Type	Name	Mechanism	Disease examples
Type I	Immediate hypersensitivity	IgE-mediated degranulation of mast cells following antigen binding and cross-linking of IgE	Allergic asthma, allergic rhinitis, anaphylaxis
Type II	Antibody-mediated hypersensitivity	IgM/IgG antibody:antigen interactions on target cell surfaces	Drug-induced thrombocytopenia, myasthenia gravis, Graves disease, haemolytic anaemia of newborn
Type III	Immune complex-mediated hypersensitivity	Immune complex formation and deposition in tissues leading to local or systemic inflammatory reactions	Rheumatoid arthritis, SLE, Goodpasture's syndrome, Arthus reaction, serum sickness
Type IV	Delayed-type hypersensitivity	Sensitized T _H 1 cells activated to release cytokines upon binding to antigen, resulting in macrophage and cytotoxic T cell accumulation	Contact dermatitis, chronic transplant rejection



Reference: First Aid Step 1 p.211

15-Patient has been diagnosed with Lymphoma in the past and has received full course of chemotherapy. Now complaining of painless facial swelling, cough and flushing, what is the diagnosis?
smle ,2016

- A. Superior vena cava obstruction
- B. Inferior vena cava obstruction
- C. Some type of facial tumor

Answer: A. SVC obstruction

Explanation : Superior vena cava (SVC) obstruction can occur from extrinsic compression, intrinsic stenosis or thrombosis. Malignancies are the main cause and is considered an oncologic emergency.

Clinical features of acute superior vena cava obstruction include: facial and neck swelling, facial flushing, bilateral upper extremity swelling, neurological signs, dyspnoea, headache and cough.

Reference: <http://radiopaedia.org/articles/superior-vena-cava-obstruction>

16-Long case of boy bleeding epistaxis and ecchymosis with long lab results showing anemia thrombocytopenia and leukopenia, what is the diagnosis:

- a- IDA
- b- aplastic
- c- hypoplastic
- d- hemolytic

answer: B

Explanation: Aplastic anemia is pancytopenia of unclear etiology. Presentation is fatigue because of anemia, infection (low Wbc count) and bleeding due to thrombocytopenia. Aplastic anemia is diagnosed after excluding all the causes of pancytopenia

Reference: MTB step 2 CK p.243

17-SCA patient presents with bloody urine. What is the cause?

- a.Recurrent UTI

Answer: The question and answers are not complete.

Explanation: Probably renal papillary necrosis is the answer.

Renal papillary necrosis presents with painless gross hematuria and may be complicated by urinary tract infection.

Less often, membranoproliferative glomerulonephritis (MPGN) with mesangial expansion and basement membrane duplication may be seen, either as an isolated finding or in association with FSGS

References: Step up to medicine p.335 and

<http://www.uptodate.com.ololo.sci-hub.io/contents/renal-manifestations-of-sickle-cell-disease>

18-Pt with vit b 12 deficiency what gastric cell type will be affected

- A.Cheif cell
- B.Parietal cell

Answer:

Explanation: Parietal cell deficiency as it's responsible for intrinsic factor synthesis which required for vit. B12 to be absorbed in terminal ileum

"Autoimmune metaplastic atrophic gastritis – A major component of PA (pernicious anemia) is chronic atrophic gastritis, which is associated with autoantibodies directed against gastric parietal cells in approximately 90 percent of patients with PA."

Reference: <http://www.uptodate.com/contents/etiology-and-clinical-manifestations-of-vitamin-b12-and-folate-deficiency?source=machineLearning&search=megaloblastic+anemia&selectedTitle=3~91§ionRank=1&anchor=H2125777#H2125777>

19-Elderly came with leukocytosis... What supports the diagnosis of CML

Answer:

Explanation: The diagnosis of CML is suspected based on the results of a simple blood test The test may show an abnormally high white blood cell count that is all neutrophils, pruritus, splenomegaly and constitutional symptoms may also be present.

on CML---- increase WBC and decreased Leukocyte alkaline phosphatase

on Leukemoid reaction -----increase WBC and Increase Leukocyte alkaline phosphatase

Reference: MTB step ck p.247

smle ,2016

20-patient has splenomegaly and teardrop RBC on blood film:

A. ITP

B. Myelofibrosis

Answer: Myelofibrosis

Explanation: Myelofibrosis is a disease of older persons with a pancytopenia associated with a bone marrow showing marked fibrosis. Blood production shifts to the spleen and liver, which become markedly enlarged. Look for teardrop-shaped cells and nucleated red blood cells on blood smear.

Reference: MTB step 2 CK p.245

21-Sickle cell disease patient with multiple gallbladder stones. what is the Best thing to do:

A:hydroxyurea

B:Cholecystectomy

Answer: B

Explanation: If the patient does not have symptoms, no treatment is usually necessary. If there is recurrent or severe pain from gallstones, the gallbladder may need to be removed. Minimally invasive procedures (using laparoscopy) reduce possible complications

Reference: <https://umm.edu/health/medical/reports/articles/sickle-cell-disease>

Elective removal of asymptomatic gallstones, diagnosed by chance, is a controversial matter.^{7, 8} Most experts, similar to in the hematology service at UFTM, do not recommend surgery before symptoms appear. There is evidence that this profile can be clinically managed for long periods,^{8, 14} so the medical team usually prescribe antispasmodic agents for minor pain and recommend preventative measures such as a low-fat diet for these patients.

Episodes of acute cholecystitis ought to be treated conservatively with antibiotics, analgesia, and general care until the crisis is over. Cholecystectomy should then be performed

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5339364/>

Elective LC should be the gold standard in children with SCD and asymptomatic cholelithiasis to prevent the potential complications of biliary colics, acute cholecystitis, and choledocholithiasis, which lead to major risks, discomfort, and longer hospital stay.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1867953/>

Our findings of cholelithiasis in 134 of the 306 of sickle cell disease patients scanned, is similar to incidence reported in the literature. Notably, we documented a high incidence of complications associated with cholelithiasis. Furthermore, there were higher than expected rates of surgical complications in cholecystectomy undertaken following the development of a complication relating to gallstones. These findings make routine screening for cholelithiasis followed by elective cholecystectomy for positive cases an attractive approach.

<http://www.bloodjournal.org/content/124/21/4939?sso-checked=true>

22-to increase the HbF in sicklers, give:

A- Deferoxamine

B- Penicillamine

C- Folic acid

smle ,2016

Answer: hydroxyurea

Explanation: Hydroxyurea enhance the production of HbF in sickle cell patients.

Reference: Toronto notes/Hema/P.22

23-70 years old man complaining of back pain. Calcium: High, IgA,IgM and IgG: Low (i.e. three types of immunoglobulins are low). What is the diagnosis? (They didn't give any other details)

Answer: Multiple myeloma

Explanation: The scenario is not complete. And the answer does not correlate with the scenario. Multiple myeloma is neoplastic proliferation of plasma cells that results in increased production of useless immunoglobulin mostly IgG or IgA. CRAB is a useful mnemonic to remember the signs of multiple myeloma (C: hypercalcemia, R: Renal failure, A: Anemia, B: bone lytic lesion). The most accurate test to diagnose multiple myeloma is bone marrow biopsy.

Reference: MTB Step 2 ck p.255 and step up to medicine p.351

24- Patient with past history of Hodgkin lymphoma treated with chemotherapy and radiation; and now in remission for 10 years. Presented now with back pain. Examination and evaluation showed paraspinal edema and fluid collection. She tested negative for Brucella titer and tuberculin skin test was negative. What is the most likely cause?

A. Brucellosis

B. BREAST CANCER

C. Recurrent Hodgkin lymphoma

CORRECT ANSWER: B

EXPLANATION:

Long term complication of Hodgkin lymphoma is solid tumor (breast, thyroid or lung cancer) due to radiotherapy. Breast cancer may metastasize to the bones.

REFERENCE: Toronto Note 2016 – Hematology Section P. 45, MTB STEP 2 CK P.252

25- Patient with lab result showing increased aPTT and prolonged bleeding time. What is the most likely factor deficient?

A. Factor VII (7)

B. Factor VIII (8)

C. Factor IX (9)

D. VON WILLEBRAND (VWF)

ANSWER: D

EXPLANATION:

In patients with factor VII deficiency, the PT is increased (designating abnormality in the extrinsic pathway), while aPPT (which used to measure intrinsic pathway) is normal. Both hemophilia A (factor VIII deficiency) and hemophilia B (factor IX deficiency) have increased aPPT and normal bleeding time.

von Willebrand disease (vWD), which results from deficiency in vWF will have increased aPPT and prolonged bleeding time.

REFERENCE: Toronto Note 2016 – Hematology Section P.30-31

26- Hodgkin lymphoma with no fibrosis and eosinophils, Reed Sternberg cell, histiocytes. Which type of HL is this?

A. Nodular sclerosing Hodgkin lymphoma (NSHL)

B. MIXED-CELLULARITY HODGKIN LYMPHOMA (MCHL)

C. Lymphocyte-depleted Hodgkin lymphoma (LDHL)

D. Lymphocyte-rich classical Hodgkin lymphoma (LRHL)

ANSWER: B

smle, 2016

EXPLANATION:

- Nodular sclerosing HL (NSHL) is the most common subtype of HL. Morphologically, it shows nodular pattern. There is also fibrosis that divides the LN in nodules. There is thickening in the capsule. Reed-Sternberg cells is present.
- Mixed cellularity HL (MXHL) is the second most common subtype of HL. Reed-Sternberg cells is also present here, where they have large, with bilobate, double or multiple nuclei, and a large, eosinophilic nucleolus. Typical Hodgkin Reed-Sternberg cells in a variable inflammatory background (eosinophils, histiocytes, neutrophils, plasma cells). It is the most common histological type found in HIV patients.
- Lymphocytic-depleted HL (LDHL) is the least common subtype of HL. The infiltrate in LDHL is diffuse and often appears hypocellular. Large numbers of Reed-Sternberg cells and bizarre sarcomatous variants are present.
- Lymphocytic-rich classical HL (LRHL) Reed-Sternberg cells of the classical or lacunar type are observed, with a background infiltrate of lymphocytes.

REFERENCE: Medscape +

<http://atlasgeneticsoncology.org/Anomalies/LymphoDepletClassicHodgkinID1568.html>

<http://www.pathologyoutlines.com/topic/lymphomanonBmixed.html>

<http://www.lymphoma.org/site/pp.asp?c=bkLTkaOQLmK8E&b=6293111>

27- Which type of anemia is associated with hyposplenism (Functional Asplenia)?

- A. Beta Thalassemia
- B. Spherocytosis
- C. SICKLE CELL ANEMIA
- D. Glucose-6-phosphate dehydrogenase deficiency (G6PD Def.)

ANSWER: C

EXPLANATION:

Repeated episodes of splenic infarction leads to autosplenectomy. Functional asplenia results in susceptibility to overwhelming infection with encapsulated bacteria.

Reference Step up to medicine (P.334)

28- What is genetic defect (mutation) in Beta Thalassemia?

- A. Insertion mutation
- B. MISSENSE OR NONSENSE MUTATION
- C. Deleting mutation
- D. Frameshift mutation

ANSWER: B

Explanation : the genetic defect usually is a missense or nonsense mutation in the beta-globin gene, although occasional defects due to gene deletions of the beta-globin gene and surrounding regions also have been reported.

Reference: <http://emedicine.medscape.com/article/206490-overview>

29- How to differentiate between hypersplenism and aplastic anemia?

Answer:

Explanation: aplastic Anemia is characterized by diminished or absent hematopoietic precursors in the bone marrow, most often due to injury to the pluripotent stem cell. causes include radiation , chemotherapy , infections(HIV,EBV, CMV), thyroid-inhibiting medications.

smle ,2016

Hypersplenism:

It is a condition in which the spleen becomes increasingly active and then rapidly removes the blood cells. It can result from any splenomegaly. It is most common with splenomegaly secondary to portal hypertension and hematological disorders

Causes: cirrhosis, malaria, hemolytic anemia, polycythemia, lymphoma, leukemia, etc

Reference: http://www.researchgate.net/publication/237841754_Hypersplenism_Review_article

References: MTB step 2 ck P.243 +

<https://radiopaedia.org/articles/hypersplenism>

30-A patient working in a new place up the hill. Recently, he had raised hemoglobin. No past medical history. What is the reason?

- A. Sleep apnea
- B. INCREASED PRODUCTION OF ERYTHROPOIETIN.
- C. Carbon monoxide poisoning
- D. Polycythemia Vera

ANSWER: B

EXPLANATION:

One of the causes of erythrocytosis is high altitude, which is a normal physiological reaction to poor tissue oxygenation from high altitude.

REFERENCE: Toronto Notes 2016 – Hematology Section

30- Patient has HbF(5%) and HbA2 (5%) are present. What is the diagnosis?

- A. BETA THALASSEMIA MINOR
- B. Beta Thalassemia major.
- C. Alpha Thalassemia.
- D. Sickle cell anemia

ANSWER: A

EXPLANATION:

Beta thalassemia minor (trait):

-HbF non-specific: 50% have slight increase.

-HbA2 specific: increased to 3.5-5% (normal 1.5-3.5%)

Beta thalassemia major

-HbA< 0-10% (normal >95%)

-HbA2 >2.5%

-HbF 90-100%

REFERENCE: Toronto Notes 2016 – Hematology Section

31- Which condition has increased osmotic fragility?

A. Hereditary elliptocytosis

B. HEREDITARY SPHEROCYTOSIS

C. Glucose-6-phosphate dehydrogenase deficiency (G6PD Def.)

D. Autoimmune hemolytic anemia

ANSWER: B

EXPLANATION:

The most accurate test for HS is osmotic fragility. When cells are placed in a slightly hypotonic solution, the increased swelling of the cells leads to hemolysis.

References: Step 2 CK MTB p.239

32- A patient with vit B12 deficiency. what is the type of gastric cell that will be affected?

A. Chief cell

B. Parietal cell

Answer: B

Patient with pernicious anemia is usually directed against the intrinsic factor or parietal cell themselves.

“repeated”

33- Which of those diseases is most common in the Mediterranean Sea Area?

A. BETA THALASSEMIA

B. Alpha Thalassemia

C. Sickle cell anemia

D. Glucose-6-phosphate dehydrogenase deficiency (G6PD Def.)

ANSWER: A

EXPLANATION:

Beta thalassemia is more common in Mediterranean Sea Area; whereas Alpha Thalassemia is more common in South East Asia & Africa.

Sickle cell anemia, although common in Mediterranean Sea Area, is most common in sub-Saharan Africa and India.

REFERENCE: Toronto Notes 2016 – Hematology Section & Medscape

34- What type of anemia is associated with rheumatoid arthritis?

A. Normocytic normochromic anemia

B. MICROCYTIC HYPOCHROMIC ANEMIA

C. Macrocytic hypochromic anemia

D. Aplastic anemia

ANSWER: A

smle ,2017

Explanation: Rheumatoid arthritis is commonly associated with anemia of chronic disease, which is normocytic normochromic anemia

REFERENCE: MTB step 2 ck p.201
“repeated”

35- What is the most common symptom of factor 8 deficiency?

- A. Bleeding from gum and tongue
- B. Iliopsoas bleeding
- C. HEMARTHROSIS
- D. Hematuria

ANSWER: C

Explanation : coagulation factor deficiencies lead to joint and muscles bleeding while platelets dysfunction lead to mucosal bleeding.

REFERENCE: https://www.ucsfhealth.org/conditions/hemophilia/signs_and_symptoms.html

36- Chemotherapy can cause which type of anemia?

- A. Normocytic normochromic anemia
- B. Microcytic hypochromic anemia
- C. Macrocytic hypochromic anemia
- D. APLASTIC ANEMIA

ANSWER: D

EXPLANATION:

Chemotherapeutic agents will suppress the bone marrow, leading to failure of hematopoiesis and anemia.

REFERENCE: Toronto notes 2016 – Hematology Section & Master the Board step 2 Ck p.243

37- Elderly patient presented with typical symptoms of multiple myeloma. X-ray showed lytic lesions. Serum protein electrophoresis (SPEP) showed positive M protein and hypercellular bone marrow. What other findings can be found in the blood?

- a. Increase peripheral blood B cell
- B. ROULEAU FORMATION
- C. Reticulocytosis
- D. Lymphocytosis

ANSWER: B

EXPLANATION:

Perform a complete blood count (CBC) to determine if the patient has anemia, thrombocytopenia, or leukopenia. The CBC and differential may show pancytopenia. The reticulocyte count is typically low. Peripheral blood smears may show rouleau formation

REFERENCE: Toronto Notes 2016 – Hematology Section & Medscape

38- Elderly man on NSAIDs developed dyspepsia. Endoscopy showed gastritis. Labs: iron deficiency anemia with Hb= 9. What is the treatment?

- A. IV IRON
- B. IM iron
- C. Erythropoietin
- D. Oral Iron

ANSWER: A

smle ,2017

EXPLANATION:

Oral iron supplements should be avoided in case of gastritis because one of the side effects. Gastrointestinal side effects are extremely common with oral iron administration. These include metallic taste, nausea/ vomiting, flatulence, constipation, diarrhea, stomach pain and dark stool. Use of IV or IM iron eliminates all of the gastrointestinal side effects of iron, which are due to direct effects of iron on the intestinal mucosa.

Once it is decided to replace iron parenterally, it must be determined whether to give iron via the IV or IM route. Iron dextran was originally intended for IM use, however there are several disadvantages to give it by small repetitive im doses. The dose that can be administered as IM is limited to 2mL and up to 20 injections maybe needed for a single course therapy. Not uncommonly, patients experience considerable discomfort secondary to the multiple injections. In view of the numerous problems associated with IM administration, the iv route is generally preferred whenever possible.

Refernce: <http://williams.medicine.wisc.edu/iviron.pdf>
<https://www.uptodate.com/contents/treatment-of-iron-deficiency-anemia-in-adults>

39- How to monitor the response to iron treatment?

- A.Ferritin
- B.Hematocrit C.RBC
- D.RETICULOCYTE COUNT

ANSWER: D

EXPLANATION:

Monitoring response:

Reticulocyte count will begin to increase after one wk

The therapeutic goal of oral iron therapy is to induce reticulocytosis within days and raise serum hemoglobin by 1–2 g/dl every 2 weeks, ultimately restoring iron stores in approximately 3–4 months. In light of the foregoing considerations, decreasing the dose of oral iron preparations if adverse effects develop should be tried; if reticulocytes or RDW increase within 4 weeks, the dose is probably adequate.

REFERENCE: Toronto notes 2016 – Hematology Section
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2822907/>

40- Acquired malabsorption for iron with autoimmune atrophic gastritis or Helicobacter pylori infection?

Explanation: Autoimmune metaplastic atrophic gastritis is an inherited autoimmune disease that attacks parietal cells, resulting in hypochlorhydria and decreased production of intrinsic factor. Consequences include atrophic gastritis, B12 malabsorption, and, frequently, pernicious anemia. Risk of gastric adenocarcinoma increases 3-fold. Diagnosis is by endoscopy. Treatment is with parenteral vitamin B12.

Gastric H. pylori infection is a frequent cause of iron-refractory or iron-dependent anaemia of smle ,2017

previously unknown origin in adult patients.

As I understand , atrophic gastritis may occur with H.pylori (iron def anemia) or with autoimmune atrophic gastritis (vitamin B 12 def – pernicious anemia)

Reference:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3710418/>

<http://surgpathcriteria.stanford.edu/gi/autoimmune-atrophic-gastritis/printable.html>

<http://www.merckmanuals.com/professional/gastrointestinal-disorders/gastritis-and-peptic-ulcer-disease/autoimmune-metaplastic-atrophic-gastritis>

41-A male patient presented with symptoms. Labs showed 80% blasts with 20% auer rods.

What is the diagnosis?

- A.Chronic myeloid leukemia (CML)
- B.Acute myeloid leukemia (AML)
- C.Chronic lymphocytic leukemia (CLL)
- D.Acute lymphocytic leukemia (ALL)

ANSWER: B

EXPLANATION:

Circulating blasts with Auer rods (azurophilic granules) are pathognomonic for AML.

REFERENCE: Toronto notes 2016 – Hematology Section

42-Patient on warfarin 7 mg presented with melena. INR was very high.

What will you do?

Answer:?

Explanation :

Chronic toxicity: If the INR is higher than therapeutic levels but less than 5 and the patient is not bleeding, withhold warfarin for 2-3 days and restart when the INR approaches the therapeutic range. If the patient requires more rapid reversal (eg, elective surgery), administer 1-2.5 mg of vitamin K1 orally with the expectation that the INR will begin to fall within 8 hours, with a maximal effect in about 24 hours.

If significant bleeding has occurred and the patient is unstable, be prepared to treat the patient with fresh frozen plasma (FFP), and IV/oral vitamin K1 as first-line therapy.

<http://emedicine.medscape.com/article/821038-treatment#d10>

43-A patient known case of anemia on medications. Later he came complaining of dark stools.

What is the medication?

- A.FERROUS SULFATE
- B.Folic acid
- C. Iron dextran

ANSWER: A

Explanation: one of the known side effects of oral iron supplements is dark stool.

REFERENCE:Toronto notes 2016 – Hematology Section

<http://reference.medscape.com/drug/slow-fe-fer-in-sol-ferrous-sulfate-342161#4>

44- What is the diagnostic test for Sickle cell anemia?

- A.Complete blood count (CBC)
- B.Peripheral blood smear

smle ,2017

C.HB ELECTROPHORESIS

D.Bone marrow aspiration

ANSWER: C

EXPLANATION:

Hemoglobin electrophoresis differentiates individuals who are homozygous for HbS from those who are heterozygous. It establishes the diagnosis of SCD by demonstrating a single band of HbS (in HbSS) or HbS with another mutant hemoglobin in compound heterozygotes.

In children with normocytic hemolytic anemia, if results of electrophoresis show only HbS with an HbF concentration of less than 30%, the diagnosis is sickle cell anemia. If HbS and HbC are present in roughly equal amounts, the diagnosis is HbSC disease

REFERENCE: Toronto notes 2016 – Hematology Section & Medscape

46-68 old guy with painless, palpable cervical lymph nodes and B-symptoms. Microscopically, the biopsied lymph nodes showed Reed-Sternberg cells. What is best management for this patient?

- A. CHOP
- B. CHOP-R
- C. ABVD
- D. ABVD+XRT

ANSWER: D

REFERENCE: Toronto notes 2016 – Hematology Section

EXPLANATION:

The painless, palpable cervical lymph nodes, alongside the microscopic findings of Reed-Sternberg cells, all indicate the diagnosis of HODGKIN LYMPHOMA. There is only one lymph nodes group involved, so it is stage I (Please refer to the table below). Treatment is ABVD+XRT. B symptoms < 1) Fever || 2) Night sweats || 3) Weight loss

■ NHL:

Local disease (stage I and II): local radiation and small dose/course of chemotherapy
Advanced disease (stage III and IV, OR any "B" symptoms): combination chemotherapy with CHOP-R.

■ HL:

Stage I and II: small course of chemotherapy followed by local radiation (ABVD+XRT).

Stage III and IV OR anyone with "B" symptoms: ABVD

C = Cyclophosphamide

H = Hydroxydaunorubicin (Doxorubicin, or Adriamycin <

Antibiotics) O = Oncovirin (Vincristine, < Vinca-alkaloids)

P = Prednisone

R = Rituximab (< antibody against CD20)

A = Adriamycin (Doxorubicin, or

Hydroxydaunorubicin) B = bleomycin (< Antibiotics)

V = Vinblastine (< Vinca-alkaloids)

D = Dacarbazine (< Alkylating

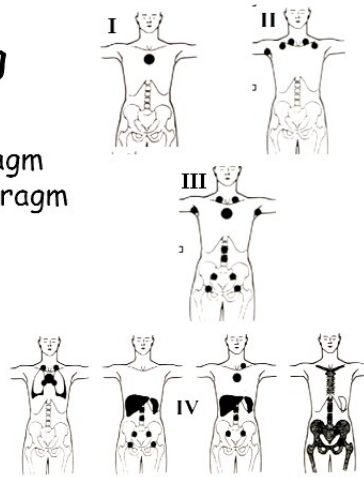
agent) XRT = Radiotherapy

Ann Arbor Staging

- I Single LN region
- II One side of diaphragm
- III Both sides of diaphragm
- IV Disseminated

- A No systemic symptoms
- B Fever, night sweats, weight loss

- E Extralymphatic site
- S Splenic disease



47-Reed-Sternberg cells is found in which malignancy?

- A. Multiple myeloma
- B. Hodgkin lymphoma
- C. Acute myeloid leukemia
- D. Myelodysplastic syndrome

ANSWER: B

REFERENCE: Toronto notes 2016 – Hematology Section EXPLAN, First Aid

The histological hallmark of HL is the presence of Reed–Sternberg cells, large malignant lymphoid cells of B cell origin with bipolar nuclei and huge, eosinophilic nucleoli which create an “owl’s eye” appearance.

48- Sickle cell anemia false positive test because:

A.HIGH PROTEIN LEVEL

B.Protein c

C.Protein d

ANSWER: A

REFERENCE:<http://education.questdiagnostics.com/faq/FAQ99>,

<https://shp.utmb.edu/cls/NursePractitioners/SickleCell.PDF>

EXPLANATION:

The sickle cell solubility test is the most common screening test for sickle cell or presence of HbS. It is based on the relative insolubility of HbS when combined with a reducing agent such as sodium dithionite.

A positive test is consistent with sickle cell trait (hemoglobin A/S), sickle cell anemia (hemoglobin S/S), hemoglobin S in combination with another hemoglobin variant, or hemoglobin C Harlem.

SOURCES OF ERROR:

1. A patient with an exceptionally high hematocrit may give a false positive result, while an individual with a very low hemoglobin may give a falsely negative result.
2. Unstable hemoglobins may give a false positive result.
3. False positives can occur with elevated plasma proteins and lipids.

49-Patient known case of sickle cell anemia came with hepatosplenomegaly and low platelets.

What is the treatment?

A.Splenectomy

B.BLOOD

TRANSFUSION

ANSWER: B

REFERENCE:

Medscape, master the board step 2ck

EXPLANATION:

Transfusions are not needed for the usual anemia or episodes of pain associated with SCD.

Urgent replacement of blood is often required for sudden, severe anemia due to *acute splenic sequestration*, parvovirus B19 infection, or hyperhemolytic crises.

Transfusion is helpful in acute chest syndrome, perioperatively, and during pregnancy. Acute red cell exchange transfusion is indicated in the following situations:

For anemic crisis with splenic sequestration, give early red cell transfusions because the process can rapidly progress to shock. Do not allow hemoglobin (Hb) levels to rise to more than 10 g/dL, since the spleen may disgorge trapped cells, which can create a relative polycythemia and increased blood viscosity.

Children who experience a single sequestration event frequently have recurrences. Surgical splenectomy or a short-term transfusion regimen has been suggested for this complication.

Exchange transfusion is used when there is:

- 1- Acute chest syndrome
- 2- Priapism
- 3- Stroke
- 4- Visual disturbance from retinal infarction

50- What is HELLP syndrome?

A. Hemolysis + Elevated Liver enzymes + Low Platelets ANSWER: A

REFERENCE:

Medscape

EXPLANATION:

HELLP syndrome, named for 3 features of the disease (Hemolysis, Elevated Liver enzyme levels, and Low Platelet levels), is a life-threatening condition that can potentially complicate pregnancy.

Although the idea is controversial, some propose that HELLP is a severe form of preeclampsia, which, in turn, is defined as gestational hypertension accompanied by proteinuria after the 20th week of gestation. Others believe that HELLP syndrome is an entity of its own. Although the cause of HELLP syndrome is unknown, certain risk factors, including a maternal age of older than 34 years, multiparity, and European descent, have been described.

51-A patient present with fatigue, palpitation, SOB and pallor, Hgb 9. Shown is the peripheral film. What is the type of anemia?

A. MEGALOBLASTIC ANEMIA

B. Hypochromic microcytic

C. Sickle cell

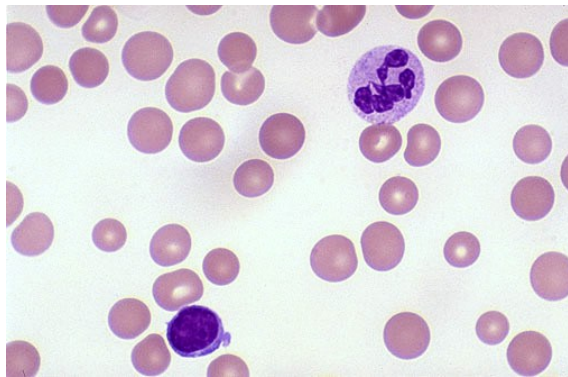
D. G6PD deficiency

ANSWER: A

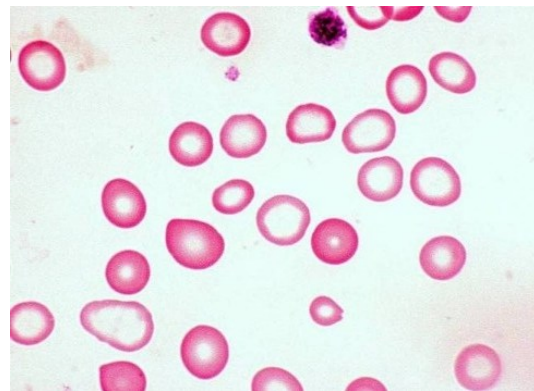
REFERENCE: Toronto Notes 2016 – Hematology Section

EXPLANATION:

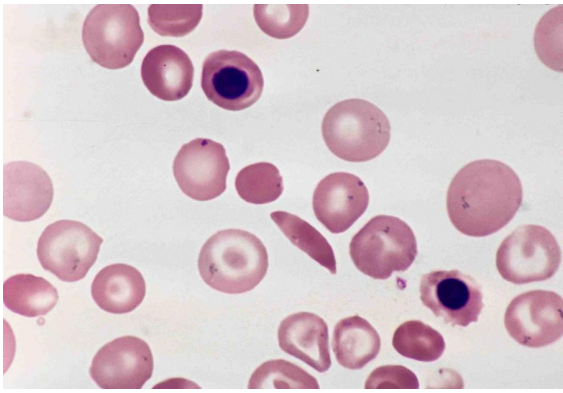
Note that RBCs are as large as the neutrophil and lymphocyte. In sickle cell anemia, the RBCs will be sickled. In G6PD deficiency, blood film will show bite cells and Heinz bodies.



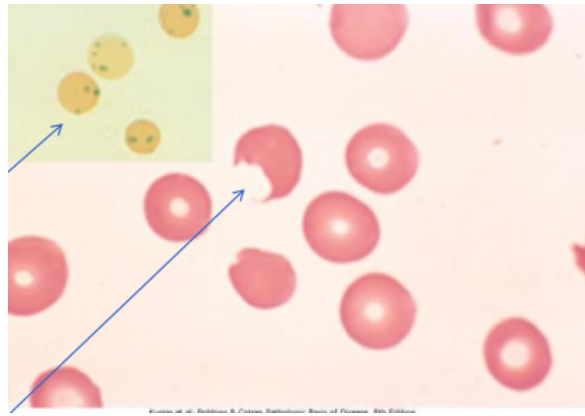
- A. Note the presence of hypersegmented Neutrophil and the large RBCs when compared With the lymphocytes.



- B. Hypochromic microcytic RBCs



C. Sickled RBCs with Howell Jolly bodies (basophilic nuclear remnants due to auto-splenectomy)



D. Bite cells (large picture) and Heinz bodies (small picture)

52-post-transfusion fever how to prevent?

- A. Transfusion filter Depleted leukocyte
- B. Premedication with antipyretics
- C. REMOVAL OF PLASMA

ANSWER: A

REFERENCE: Toronto Notes 2016 – Hematology Section, pubmed: febrile non-hemolytic transfusion reaction to platelets, UWorld, BMJ

EXPLANATION:

When red cells and plasma are separated from whole blood, small amounts of residual plasma and/or leukocyte debris may remain in the red cell concentrate. During blood storage, these leukocytes release cytokines that when transfused can cause transient fevers, chills, and malaise (without hemolysis) within 1-6 hours of transfusion. This state is called febrile non-hemolytic transfusion reaction (FNHTR).

Although prophylactic paracetamol is often administered to prevent FNHTRs, there is little evidence in the literature to support this practice

A small fraction of FNHTRs are not eliminated by third generation filtration (post-storage). Cytokine accumulation during storage may play a primary role in this setting, since it has been demonstrated that the risk of a transfusion reaction increases with the age of the unit transfused, and that *removal of plasma is more effective than post-storage leukoreduction in preventing reactions*, especially severe reactions to platelets.

53-45-year-old patient presented with abdominal pain and fatigue. He has a family history of hemochromatosis. What is the next step in investigation?

- A. Ferritin
- B. TRANSFERRIN SATURATION
- C. Genetic testing < HFE mutations

D.Liver biopsy

ANSWER: B

REFERENCE: Toronto Notes 2016 – Hematology Section, BMJ

EXPLANATION:

Transferrin saturation corresponds to the ratio of serum iron and total iron-binding capacity (TIBC). The screening threshold for hemochromatosis is a fasting transferrin saturation of 45-50%. If transferrin saturation is greater than 45%, the presence of the C282Y or H63D mutation may be evaluated to confirm the diagnosis of hemochromatosis.

Hemochromatosis is suggested by a persistently elevated transferrin saturation in the absence of other causes of iron overload. This is the initial test of choice.

Liver biopsy is the most sensitive and specific test for measuring liver iron content and has the added benefit of assessing liver damage due to iron but it is not the first test to be done for patient with suspected hemochromatosis.

54-

55- 40 years old man, Hb: low, MCV: high, No megaloblast. He has no past medical history. What is the most likely diagnosis?

A.ALCOHOLIC ANEMIA

B.Lead poisoning

C.Vitamin B12 deficiency

D. Anemia of chronic disease

CORRECT ANSWER: A

REFERENCE: Toronto Notes 2016 – Hematology Section, Step-Up

EXPLANATION:

Macrocytic hypochromic non-megaloblastic anemia Differentials:

- 1.Liver disease
- 2.Alcoholism
- 3.Reticulocytosis
- 4.Hypothyroidism
- 5.Myelodysplasia.

Lead poisoning can cause microcytic anemia.

Exposure to lead can also lead to sideroblastic anemia.

Vitamin B12 deficiency causes megaloblastic anemia

Anemia of chronic disease microcytic or normocytic anemia but not macrocytic anemia.

56- What the hematological parameter should be investigated before performing lumbar puncture?

A.Hemoglobin level

B.WBC with
differentials

C.PLATELETS

D.Hematocrit

ANSWER: C

REFERENCE: Toronto Notes 2016 – Neurology

Section EXPLANATION:

Lumbar puncture is CONTRAINDICATED in:

- Mass lesion causing increased ICP - Brain CT should be done when suspecting brain mass
- Infection over LP site
- Suspected epidural abscess
- LOW PLATELETS (<50,000)
- Treatment with anticoagulants (↑ INR or prolonged aPPT)
- Uncooperative patient

57-Which of the following can be found on smear in sickle cell disease?

- A. Bite cells
- B. Howell-Jolly bodies
- C. Acanthocyte
- D. Spherocyte

Answer: B

Reference: Master the Boards

Bite cells, heinz bodies :

G6PD

Howell-Jolly bodies : SCD, post splenectomy, neonate, megaloblastic anemia
Acanthocyte : Severe liver disease, anorexia, post splenectomy

Spherocyte : hereditary spherocytosis, immune hemolytic anemia, post transfusion.

Ref: TORONTO NOTES.

Please refer to Q 51 for more illustration.

?Old female live alone change her dietary habit what is the cause of anemia-58

A. Fe deficiency

Ref: TORONTO

NOTES.

59-about. Old lady with forgetfulness and numbness?

A. B12 deficiency

Ref: Step-up

Vitamin B12 deficiency can lead to Neuropathy which can lead to different clinical entities:

- A- Demyelination in the posterior column (Loss of position and vibratory sensation, Ataxia, UMNL signs)
- B- Urinary and fecal incontinence, impotence
- C- Dementia (as in this case)

60-patient with anemia, thrombocytopenia, splenomegaly and hepatomegaly investigation ?

A. Bone marrow biopsy

Please pay attention to the phrases of any question in the exam. This question needs more details. It is not written whether they want the initial investigation or the investigation that leads to the

diagnosis (presumably Leukemia in this case). However, one should always study the idea of the question rather than the question itself.

61-pt known case of g6pd low hg what will u do?

A-blood transfusion

B-folic acid

C-reassure (may be the answer)

Reference: Toronto notes

Most individuals with (G6PD) deficiency do not need treatment. hemolysis is self-limited and often resolves in 8 to 14 days. Transfusions Are rarely indicated. Splenectomy is usually ineffective

NOTHING REVERSES THE HEAMOLYSIS , avoid oxidant stress The ttt of G6PD :

Folic acid, avoid triggers, maintain hydration, blood transfusion in severe cases.

62-Patients with chronic hemolysis or non-spherocytic anemia should be placed On

A. daily folic acid supplements

Roughly, treatment of hemolytic anemias should be based on the following three principles:

A- Treatment the underlying cause.

B- Transfusion of PRBCs if severe anemia is present or patient is hemodynamically unstable.

C- Folate supplementation (folate is depleted in hemolysis)

63-Pt was anemic, being given blood transfusion. Developed fever, chills, burning at site of IV line, what to do:

A.stop transfusion and give crystalloids

Answer:A

Ref: TORONTO NOTES

64-what vitamin increase metabolize or absorption of iron :

A. vitamin c

B. vitamin B

C. vitamin

D answer :A

Please note the following:

- Although the supplements work best on an empty stomach, you may want to take them with food so that they don't upset your stomach.
- You shouldn't take iron supplements with milk, caffeine, antacids, or calcium supplements. These can decrease the amount of iron that is absorbed.
- Try to take your iron supplement with vitamin C (for example, a glass of orange juice) to increase absorption.

https://my.clevelandclinic.org/health/diseases_conditions/hic_Anemia/hic_oral_iron_supplementation

Absorption is 5-10% enhanced by citric acid , ascorbic acid , vit C , Reduced by polyphenols , phytate , calcium , soy protein .

65-Sickler with VOC dehydrated and his hemoglobin is 3.5 what the next step in management ?

A- PRBCs transfusion

B- analgesia and IV

fluids Answer : B

Ref: Step-up

In VOC the first thing you should do is Hydration (with normal saline) and pain control. "Base the need of blood transfusion on the patient's clinical condition and not on the Hb level."

66-which is feature of VWD:

Answer: prolonged Bleeding time

Ref: TORONTO NOTES.

67-Most common Mendelian inheritance ?

A. Thalassemia

<https://en.wikipedia.org/wiki/Thalassemia>

Not sure about the right answer.

68-High d-dimer ..acute case What would you give this pregnant woman?

A. Unfractionated heparin and warfarin

B. LMWH

C. Warfarin

D. Aspirin

ANSWER IS b

<http://emedicine.medscape.com/article/2056380-medication>

Ref: BMJ

From the context, this is probably a case of PE in a pregnant women.

In pregnant women, LMWH instead of unfractionated heparin is recommended for prevention and treatment. For pregnant women with acute PE, it is suggested that anticoagulants be continued for at least 6 weeks postnatal (for a minimum duration of therapy of 3 months).

Warfarin is contraindicated in pregnancy and aspirin does not play a role in the management of acute PE.

FYI: LMWH is also recommended in patient with PE and active malignancy.

69-women (complain) lab .. high platelets. .Treatment

A. Plateletpheresis ??

Plateletpheresis is the process of removing the platelets from the donor's blood.

Therapeutic Plateletpheresis achieves rapid reduction of platelet count, and is usually reserved for patients with acute serious thrombotic or hemorrhagic events, or high risk patients with very high platelet counts ($> 1,000,000/\mu\text{L}$).

which type of anemia associated with chemotherapy and Radiotherapy-70

Answer: Aplastic anemia
Ref : MASTER THE BOARD

71-cavernous sinus thrombosis sinus more common? (What is the most common sinus involved as a cause of Cavernous sinus thrombosis)

- A- ophthalmic
- B- maxillary
- C- sphenoid

Answer: C Most commonly with ethmoid

https://en.wikipedia.org/wiki/Cavernous_sinus_thrombosis

CST most commonly results from contiguous spread of infection from a nasal furuncle (50%), sphenoidal or ethmoidal sinuses (30%) and dental infections (10%).^[3] Less common primary sites of infection include tonsils, soft palate, middle ear, or orbit (orbital cellulitis).

Ref: BMJ

Sinusitis is one of the most common predisposing conditions for CST. The most common site of primary infection is the sphenoid sinus, followed by the ethmoid sinuses.

72-Child with mild jaundice ,splenomegaly and echogenicity in the gallbladder .what is the type of anemia?!

- A.Sickle cell anemia
- B.Thalassemia

Answer: A Toronto notes

Sickle cell anemia is a hemolytic anemia that can cause jaundice, splenomegaly, and gallstones due to bilirubin pigments.

73-Cervical LN enlargement, hepatosplenomegaly, circumoral edema, acute presentation..what is the diagnosis?

- A.Lymphoma
- B.Angioedema

Answer : A ?

<https://en.wikipedia.org/wiki/Angioedema>

<http://emedicine.medscape.com/article/135208-clinical#b2>

This question is not very clear. It has a mixture of both A and B. Please focus on the real question in the exam to answer it correctly.

74- Polycythemia vera with blurred vision And headache What the cause of these sx?

- a) Hypovolemia
- b) Hyperviscosity

y Answer: B

Ref: MASTER THE BOARD

FYI

Hyperviscosity syndrome is a group of symptoms triggered by increase in the viscosity of the blood. Symptoms of high blood viscosity include spontaneous bleeding from mucous membranes, visual disturbances due to retinopathy, and neurologic symptoms ranging from headache and vertigo to seizures and coma.

Hyperviscosity occurs from pathologic changes of either cellular or protein fractions of the blood such as is found in polycythemia, multiple myeloma, leukemia and monoclonal gammopathies such as Waldenström macroglobulinemia

75-Case of iron deficiency anemia lab showed typical microcytic with high TIBC , mechanism :

Decrease RBCs more than serum volume (حاجة زي كذا مني ناكر بالزبط بس كان سهل)

This Q is not clear

76-Burkitt's lymphoma associated with ?

A- Epstein Barr Virus "EBV

B- T Lymphocyte Infiltration

Answer : A

Associated with EBV ,

HIV Ref: TORONTO

NOTES

77-Scenarios about vegetation with lap showing microcytic hypochromic anemia what's the dx

Answer : IDA (Iron deficiency anemia)

Differential Diagnosis of Microcytic, Hypochromic Anemias

	RDW	Serum Iron	TIBC	Serum Ferritin	FEP
Iron Deficiency	Inc	Dec	Inc	Dec	Inc
Alpha Thal	Norm	Norm	Norm	Norm	Norm
Beta Thal	Norm	Norm	Norm	Norm	Norm
Hgb E Disease	Norm	Norm	Norm	Norm	Norm
Anemia of Chronic Disease	Norm	Dec	Dec	Inc	Inc
Sideroblastic Anemia	Inc	Inc	Norm	Inc	Dec
Lead Poisoning	Norm	Norm	Norm	Norm	Inc

78-Long history about DIC, lab showing fragmented RBC, low platelets. which antibodies is target:

- A. Cardiolipins
- B. ADAMTS13
- C. Glycoproteins

Answer : B

Autoantibodies against ADAMTS13 were present in majority idiopathic TTP and ticlopidine and clopidogrel associated TTP

Ref: Uworld

Thrombotic thrombocytopenic purpura (decreased ADAMTS13 activity) can present with fever, microangiopathic hemolytic anemia, thrombocytopenia with non-palpable purpura, kidney injury, and neurologic findings (eg, confusion, stroke).

Antiphospholipid antibody syndrome can be due a number of antibodies, including anticardiolipin antibodies.

79-16 years old boy known case of sickle cell anemia presented with painful right hip pain for several weeks (this was the scenario and it was for several weeks). what is the most likely diagnosis:

- A. avascular necrosis
- B. still's disease
- C. tumor

.....osteomyelitis was not in the choices The answer is A

Patients with sickle cell disease are prone to have avascular necrosis.

Still's disease or juvenile rheumatoid arthritis is a rare systemic autoinflammatory disease characterized by the classic triad of persistent high spiking fevers, joint pain, and a distinctive salmon-colored bumpy rash.

80-Pts take methotrexate for something present with tiredness with lab result, High MCV , What to give?

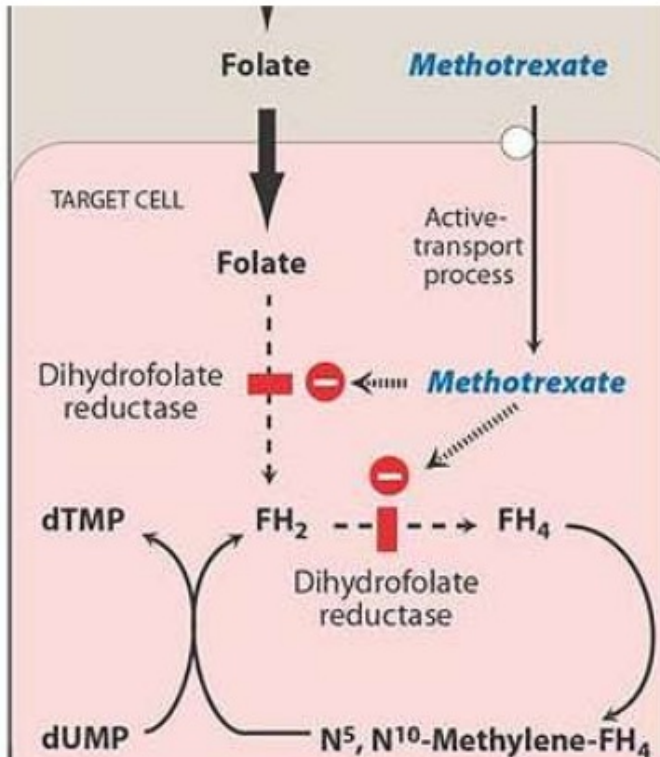
- A. Iron
 - B. Folinic acid
 - C. Folic acid
- ANSWER : C

Patients taking methotrexate (a folic acid antagonist) are expected to show signs of folate deficiency and therefore are recommended take folic acid supplements.

Folinic acid is the active form of folic acid and is the antidote for methotrexate toxicity and is not required in this case.

Please see the figure below for more details.

Methotrexate



Folic acid not useful in toxicity

Folinic acid N⁵ formyl FH₄ should be given which is converted to N⁵,N¹⁰-Methylene-FH₄ and bypasses the inhibited reductase

Adenine, guanine, thymidine, methionine, serine

28

81-Elderly, asymptomatic, with 90% lymphoblast.. what to do for him?

- A- Observation
- B- Chemo

Answer : B

Ref : TORONTO NOTES, BMJ

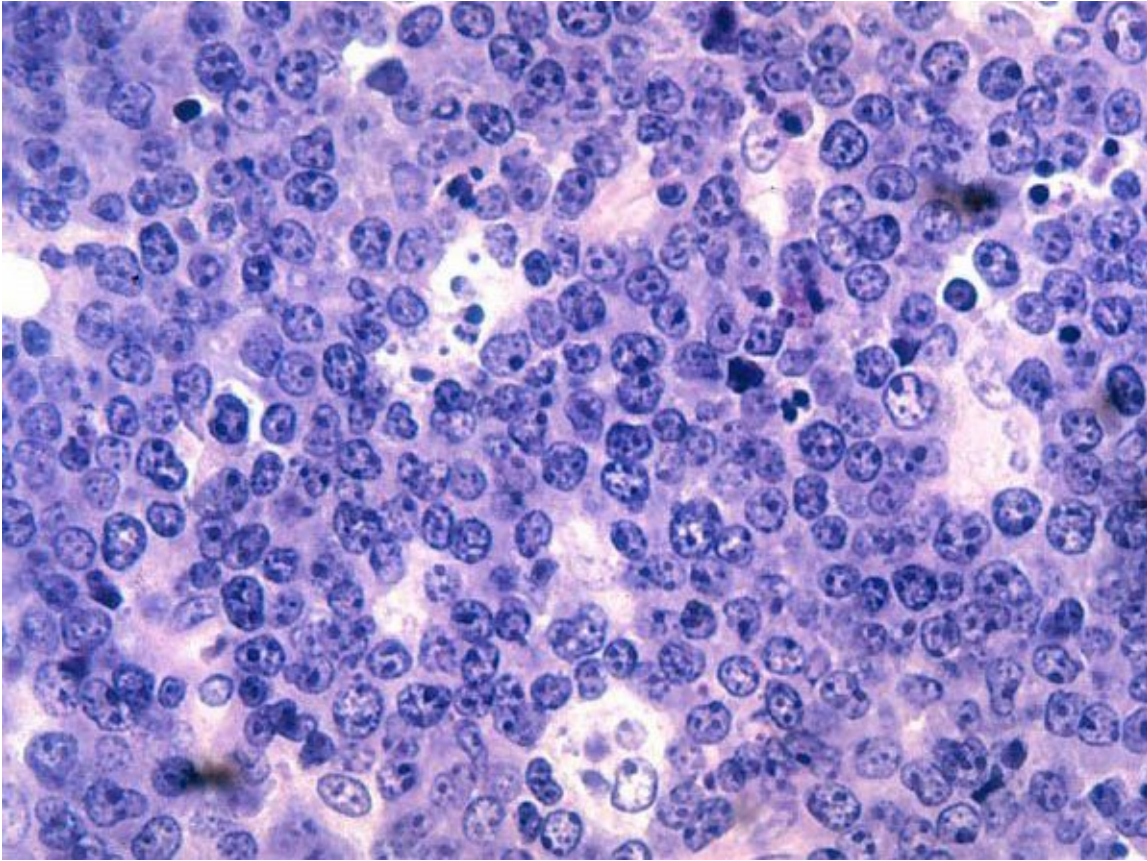
Generally, Patients with acute lymphocytic leukemia should undergo induction chemotherapy followed by consolidation therapy. Observation is the answer for Chronic lymphocytic leukemia that is asymptomatic and in early stage.

82-male patient from ghenea with a neck mass they took biopsy and it shows starry appearance

A.Burkitt lymphoma

Ref: <http://www.pathologystudent.com/?p=2283>

Burkitts lymphoma is an aggressive, rapidly growing B-cell tumor that gives a starry sky appearance under the microscope. It is usually due to translocation t(8;14) (image below)



A- 60-year-old male with history of lower back pain , constipation thirst Low hemoglobin , Low WBC , Low PLT , High caand Lower spinal X-ray pic was attached What is the next appropriate to be ordered:

- A. DEXA
- B. Protein electrophoresis
- C. parathyroid

hormone **Answer: B**

Ref: MASTER THE BOARD

This scenario probably is a case of multiple myeloma where there is bone pain from pathological fractures, high calcium levels and low Hgb, platelets, WBC due to bone marrow infiltration.

Serum protien electrophoresis shows an IgG60% , igA 25%

84- which type of anemia have high A2 :

- a) SCD
- b) Thalassemia
- c) Spherocytosis

Answer: b

Ref : https://en.wikipedia.org/wiki/Hemoglobin_A2

hemoglobin A2 consists of two alpha and two delta chains ($\alpha_2\delta_2$) and is found at low levels in normal human blood. Hemoglobin A2 may be increased in beta thalassemia.

85- Craving ice pt with anemia?

a) Pagophagia WITH iron deficiency anemia

Answer: A

Source: <http://www.mayoclinic.org/diseases-conditions/iron-deficiency-anemia/expert-answers/chewing-ice/faq-20057982>

Pica is characterized by an appetite for substances that are largely non-nutritive, such as ice (pagophagia); hair (trichophagia); paper (xylophagia)^[1]; drywall or paint; metal (metallophagia); stones (lithophagia) or soil (geophagia); glass (hyalophagia); or feces (coprophagia); and chalk. Iron deficiency anemia is well-known to cause Pica

86- microcytic normochromic result in patient with pallor

a-IDA

b- hemolytic

c-folate

Answer : A MASTER THE BOARD

87- purpura (immune,, hench purpura)

A.lesion in MM

88- patient with multiple blood transfusion and jaundice + osmotic fragility test

A. spectrin-ankyrin binding deficiency (spherocytosis)

Ref: Wikipedia

In hereditary spherocytosis, the integrating protein that is most commonly defective is ankyrin which is responsible for incorporation and binding of spectrin, thus in its dysfunction cytoskeletal instabilities ensue.

89-75 years old male, asymptomatic, BM report: increased lymphocytes, Immunohistochemistry: Positive CD19, CD56 .. Treatment?

A.No treatment

B.Rituximab + CVB

C.Rituximab + Prednisolone* (my answer)

D.Cyclophosphamide

Answer : ??

90-65 years old male, presenting with peripheral neuropathy which progressed to weakness (Subacute combined degeneration), labs shows Macrocytic anemia, Diagnosis?

A- Vit. B12 Deficiency

Please refer to Q59

91- young pt presents with cough and chest pain, cxr showed infiltrate, CBC: anemia with high retic (10%) and leukocytosis, Dx?

A. sickle cell anemia

answer: A (sickle cell anemia presenting with acute chest syndrome supported by clinical and radiological evidence)

92-young pt with continuous bleeding post-op, coagulation showed high APTT, otherwise normal, which factor is deficient?

A. factor VIII

https://en.wikipedia.org/wiki/Haemophilia_A

Table 6. Common Bleeding Disorders and Basic Laboratory Findings

DISORDER	PLATELET COUNT	PT	APTT
Thrombocytopenia	Low	Normal	Normal
Platelet dysfunction	Normal	Normal	Normal
Hemophilia	Normal	Normal	Prolonged
FVII deficiency	Normal	Prolonged	Normal
vWD	Usually normal	Normal	Normal to prolonged
Vitamin K deficiency	Normal	Prolonged	Prolonged
Liver disease	Low to normal	Prolonged	Prolonged
DIC	Low	Prolonged	Prolonged
Vascular anomaly	Normal	Normal	Normal

Key: DIC – disseminated intravascular coagulation; PT – prothrombin time; aPTT – activated partial thromboplastin time

93-young male patient, asymptomatic, for routine check up, lab showed microcytic hypochromic anemia, Dx?

A: thalassemia trait

?Iron def. anemia (since he is young, not female, I excluded it)

Please refer to the table in Q 77 for more details about microcytic hypochromic anemias.

94-Most common cause of death in sickle cell anemia?

- a) Aplastic crises
- b) Sequestration crises
- c) Acute chest syndrome
- d) Parvovirus b19

Answer: C Acute chest syndrome

Ref: Step-up, master the board, BMJ

Acute chest syndrome is a frequent cause of death in both children and adults. It can be indistinguishable from pneumonia. The patient presents with chest pain, fever, dyspnea, hypoxemia, and a new pulmonary infiltrate on CXR.

Some high yield information about SCA.

Aplastic anemia is usually provoked by a viral infection such as human parvovirus B19, which reduces the ability of the bone marrow to compensate.

Acute painful vaso-occlusive crisis is caused by:

- Hypoxia
- Dehydration/hypertonic contrast
- Infection/fever
- Cold temperatures

Common Manifestations of Sickle Cell Disease:

Bilirubin gallstones from chronically elevated bilirubin levels
Increased infection from auto-splenectomy, particularly encapsulated organisms
Osteomyelitis, most commonly from Salmonella
Retinopathy
Stroke
Enlarged heart with hyperdynamic features and asystolic murmur
Lower extremity skin ulcers
Avascular necrosis of the femoral head

95-long scenario with paragraph pt have low hemoglobin and macrocytic anemia he treat- ed now what does brown line mean if the blue are hemoglobins ?

- a-reticulocyte
- b-hematocrit
- c-RBCs
- d-MCHC

((look like picture in attachment ??))

Ref: [Wikipedia](#)

This Question could be a graph showing the two lines: one is Hgb (blue line) and the other unknown brown line in relation to the blue line. The question could be answered if one knows what is the relation between Hgb and the different variables in the choices. Please note the following:

In megaloblastic anemia there is:

- Decreased red blood cell (RBC) count and hemoglobin levels
- Increased mean corpuscular volume (MCV, >100 fL) and mean corpuscular hemoglobin (MCH)
- Normal mean corpuscular hemoglobin concentration (MCHC, 32–36 g/dL)
- The reticulocyte count is decreased due to destruction of fragile and abnormal megaloblastic erythroid precursor.

So, if after the correction the blue line goes up there are three possibilities:

- 1- The brown line goes up if it is hematocrit or RBCs line or less likely reticulocyte count.
- 2- The brown line stays horizontal if it is MCHC
- 3- The brown line goes down if it is MCV or MCH

96-What is the reliable method to diagnose ALL:

- A/ lymph node involvement
- B/anemia and thrombocytopenia
- C/ bone marrow blast cell

The answer is C (MORE THAN 20% LAST IS DIAGNOSTIC FOR LEUKEMIA)

Ref: BMJ

The diagnosis of ALL is made when at least 20% lymphoblasts are present in the bone marrow and/or peripheral blood according to WHO classification.

97-Patient with fatigue and weakness , lab results showing :

Hemoglobin : decreased
MCH : decreased
RDW : 13:

reference OM ALQORA

Ref: Toronto notes

This question is incomplete but probably wants to ask about the diagnosis of the provided lab results. Worth to note that RBC Distribution Width (RDW), which measures the variance in RBC size is normally 11.0%-15.0%. It is increased in case of iron deficiency anemia, and in cases of dual RBC populations (combined iron plus megaloblastic anemias)

98-ttt of plummer vinson? Treatment has been expanded.

Taking iron supplements may improve the swallowing problems.
If supplements do not help, the web of tissue can be widened during upper endoscopy. This will allow you to swallow food normally

Ref:

Toronto notes:

Plummer-Vinson Syndrome is a Triad of:

- Iron deficiency anemia
- Dysphagia
- Esophageal webs

It is associated with increased risk of squamous cell carcinoma of the esophagus

Treatment is as mention above

99-pt from africa presented with symptoms of burkitt lymphoma what gene associated with ??:

A.ABL

Burkitt lymphoma overview:

Relatively mature B-cell tumor

Three subtypes:

- 1- African (endemic), EBV-associated (involvement of **mandible**, kidneys, ovaries, adrenal)
- 2- Sporadic (nonendemic), no EBV (involvement of ileocecum, peritoneum)
- 3- HIV-associated neoplasm

On microscopy: “**Starry sky**” appearance

Genetics:

Translocation of **c-myc** gene:

t(8;14) , t(2;8) , t(8;22)

Prognosis: Generally aggressive tumor, but responds well to therapy

100-24 years old female, has 3 LAN at the same side of diaphragm with no distant metastasis, Diagnosed with Hodgkin's Lymphoma. What's the stage?

A- 4

B- 3

C- 2

D- 1 * (not sure but it's not 3 or 4)

The answer is C

Please refer to the picture in Q46 for details about staging using Ann-arbor staging system.

101- Crescentic cell cause

A.Hemolytic anemia

102- patient referred from cardiac unit due to severe decrease in platelets < 10,000. (case of heparin induced thrombocytopenia) What is the treatment:

A.Platelets transfusion .

B.Argatroban

C.IVIG

D.Steroid.

Answer: B

Others treatment also can be: lepirudin

Treatment of HIT :

Discontinue and avoid all heparin products immediately

Platelet transfusions should be avoided in HIT, as they may increase the thrombogenic effect

Patients with HIT are at high risk for thrombotic events and should be treated with alternative anticoagulants, typically a direct thrombin inhibitor (DTI).

Direct thrombin inhibitor (DTI) argatroban (Acova) for prophylaxis and treatment of thrombosis in patients with HIT. DTI bivalirudin is approved for use in patients who are undergoing percutaneous coronary intervention (PCI) and have, or are at risk for, HIT or HIT with thrombosis (HITT).

Reference : Medscape

Ref: Toronto notes

This is a high yield subject in all exams. For that reason, here is a little detailed information about HIT. (please see the table below)

Heparin-induced thrombocytopenia (HIT):

- heparin-induced thrombocytopenia (previously known as HIT type II): immune-mediated reaction following treatment with heparin leading to coagulation activation
- heparin-associated thrombocytopenia (previously known as HIT type I): transient thrombocytopenia following administration of heparin

Table 22. Heparin-Induced Thrombocytopenia (HIT)

Pathophysiology	Immune mediated Ab recognizes a complex of heparin and platelet factor 4 (PF4) leading to platelet activation via platelet Fc receptor and activation of coagulation system
Diagnosis	50% reduction in platelets while on heparin within 5-15 wk of initiation
Onset of Decreased Platelets	5-15 wk (if previously exposed to heparin, HIT can develop in hours)
Risk of Thrombosis	~30% (25% of events are arterial)
Clinical Features	Bleeding complications uncommon Venous thrombosis: DVT, PE, limb gangrene, cerebral sinus thrombosis Arterial thrombosis: MI, stroke, acute limb ischemia, organ infarct (mesentery, kidney) Heparin-induced skin necrosis (with LMWH) Acute platelet activation syndromes: acute inflammatory reactions (e.g. fever/chills, flushing, etc.) Transient global amnesia (rare)
Specific Tests	Pre-test clinical scoring models can help rule-out HIT: 4-Ts (see Table 23) and the HIT Expert Probability (HEP) score ¹⁴ C serotonin release assay (uses donor platelets with ¹⁴ C serotonin and heparin with patient's plasma) ELISA for HIT-Ig (more sensitive, less specific than serotonin assay) Ultrasound of lower limb veins for DVT
Management	Clinical suspicion of HIT should prompt discontinuation of heparin and LMWH (specific tests take several days) Initiate anticoagulation with a non-heparin anticoagulant: e.g. argatroban, danaparoid, fondaparinux, bivalirudin unless there is a strong contraindication (duration of treatment at least 2-3 mo if no thrombotic event, and at least 3-6 mo if thrombotic event has occurred) Warfarin should only be restarted when platelet count > 100 x 10 ⁹ /L Allergy band and alert in patient records

103-CML associated with which translocation :

- A- t (14; 18)
- B- t (11;14)
- C- t (8; 14)
- D- t (9; 22).

Answer : D

CML is almost invariably associated with an abnormal chromosome 22 known as the Philadelphia chromosome, often abbreviated as Ph, Ph(1), or Ph1[1,2]. The Philadelphia chromosome t(9;22)(q34;q11) results in the formation of a unique gene product (BCR-ABL1)

104-Vegetarian with numbness and sock and glove distribution

- A. B6 deficiency
- B. B12 deficiency

Answer: B

Ref: <https://www.dietitians.ca/Your-Health/.../Vitamins/Food-Sources-of-Vitamin-B12.aspx>

The best **sources** of **Vitamin B₁₂** include: eggs, milk, cheese, milk products, meat, fish, shellfish and poultry.

For someone vegetarian, vitamin B12 will be expected.

105-for Hodgkin lymphoma What the gene response

A.BRC-A

Answer:

Activation of the transcription factor NF- κ B is common in classical

HL. REF : goljan : Rapid Review Pathology

106. case of pt with hemochromatosis what will be increased

A.Ferritin

B.Ceruloplasm

in C.Irrelevant

Answer: A

Hemochromatosis:

is a genetic disorder leading to **overabsorption of iron in the duodenum**. The mutation is the C282Y gene. Men present earlier than women because **menstruation delays the onset** of liver fibrosis and cirrhosis.

Presentation:

Look for a patient in his 50s with mild increases in AST and alkaline phosphatase and:

- Fatigue and joint pain (pseudogout)
- Erectile dysfunction in men, and amenorrhea in women (from pituitary involvement)
- Skin darkening
- Diabetes
- Cardiomyopathy

Diagnostic tests:

the best initial test is iron studies that show:

- Increased serum iron and ferritin
- Decreased iron binding capacity

The most accurate test is a liver biopsy for increased iron. The EKG may show conduction defects and the echocardiogram can show dilated or restrictive cardiomyopathy.

Ceruloplasmin will be low in case of Wilson disease

107. In thalassemia

- A. 4 abnormal beta chain genes, normal 2 alpha chain genes
- B. 4 normal beta chain genes, abnormal 2 alpha chain genes
- C. 2 abnormal beta chain genes, normal 4 alpha chain genes
- D. 2 normal beta chain genes, abnormal 4 alpha chain genes

- normally 4 alpha genes in total; 2 on each copy of chromosome 16
- normally 2 beta genes in total; 1 on each copy of chromosome 11

In beta thalassemia minor, there is defect in a single allele of beta gene (heterozygous)
In beta thalassemia major, there is defect in both alleles of beta gene (homozygous, autosomal recessive).

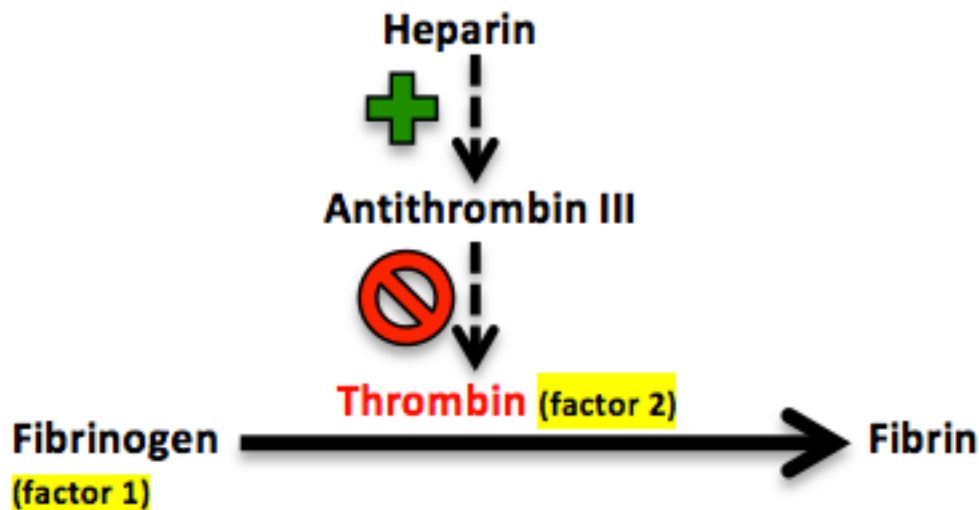
In alpha thalassemia, there is/are defect(s) in alpha genes.

- 1 defective alpha gene (aa/a-): clinically silent; normal Hb, normal MCV
- 2 defective alpha genes (cis: aa/-- or trans: a-/a-): decreased MCV, normal Hb
- 3 defective alpha genes (a/--): HbH (β_4) disease; presents in adults, decreased MCV, decreased Hb, splenomegaly.
- 4 defective alpha genes (--/--): Hb Barts (γ_4) disease (hydrops fetalis); usually incompatible with life.

So, in that sense, choice A and B are wrong sense there are only two beta chains. Choice C point towards beta thalassemia major and choice D points towards Hb Barts disease. This may mean that the intended right answer is C.

108-mechanism of action of heparin is

Heparin binds to the enzyme inhibitor antithrombin III (AT) and activate it which inactivates thrombin, factor Xa and other proteases.



109-14 year old girl patient ectric (jaundice) sore throat , there is blood film shows (spherical shape RBC) what is your diagnosis?

- A.G6PD deficiency
- B.spherocytosis
- C.c-sickle cell anemia

Answer: B

Explanation: Hereditary spherocytosis(HS) is an autosomal dominant inheritance pf a defect in the gene coding for spectrin. In HS, there is loss of RBC membrane surface area without a reduction in RBC volume, necessitating a spherical shape. Other findings include: jaundice, splenomegaly and gallstones.

Reference: step up to medicine p.336

110-case of lymphoma , treatment :

- a-Chop r
- b-Abvd

Explanation: the question is not complete. The chemotherapy used in treatment of non-hodgkin lymphoma is abbreviated as CHOP and the treatment used in Hodgkin lymphoma is ABVD.

Reference: MTB Step 2 CK p.251-252

108. How to stop bleeding in VWD ?

- A- Fresh frozen plasma
- B- Vit. K
- C- Platelets Transfusion
- D- something irrelevant !!

Explanation: the treatment used in VWD is desmopressin as a first line or factor 8 concentrate as alternative.

Platelet transfusions may be helpful in some patients with vWD (eg, type 3) to control bleeding that is refractory to other therapies.

In patients with bleeding refractory to plasma replacement therapy. Platelets are useful source of VWF. It can be also used as adjunct to VWF-containing concentrate.

Reference : step up to medicine P.342,, <http://emedicine.medscape.com/article/206996-treatment,,> (BMJ-vWD)

111-Hx of infection, Hb low, WBC high what is the investigation :

- a. Bone marrow biopsy
- b. Hb elect

Answer: B (SCA)

Explanation: the scenario is incomplete, assuming that the case was sickle cell then the investigation of choice would be Hb electrophoresis. However, this same may also occur in leukemia in which the appropriate investigation would be BM biopsy.

Reference: MTB Step 2 Ck p.236 , 247.

112-case scenario of young pt has sudden onset of dyspnea, decreased MCV , Normal WBC , Increased Platelets , peripheral smear shows Microcytic hypochromic anemia :

- A.Iron deficiency anemia-
- B.thalassemia

the answer: is IDA

Explanation: microcytic hypochromic anemia, we mainly think of IDA , thalassemia and anemia of chronic disease as a differential of hypochromic microcytic anemia. Increased platelets count goes more with iron deficiency anemia.

Reference : MTB Step 2 CK p.231

113-sickle cell disease with hip pain?

answer: AVN

Explanation:

Avascular necrosis is one of the well recognized complications of sickle cell, the most common site affected is the hip and the shoulder.

Reference: Step up to medicine p.334

114-question about splenic sequestration (with lobar infiltrate in lung) probably a combined splenic sequestration + acute chest syndrome ?

(incomplete Question.)

115-Blood film attached, asking for diagnosis:

a- leishmaniasis

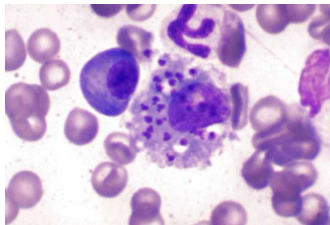
b- malaria

c-lymphoma

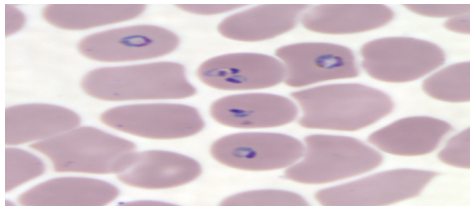
d- leukemia

answer: according to the slide

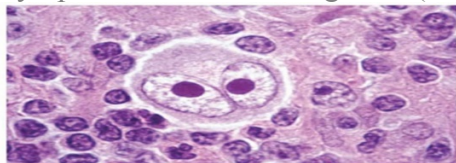
Lesihmania:



Malaria



Lymphoma reed Sternberg cells (assuming it is hodgkins)



Leukemia (Different histopathological pictures depending on the type of luekeima

References: <https://www.cdc.gov/dpdx/malaria/index.html>

<http://www.microbiologybook.org/parasitology/blood-proto.htm>

<http://telemedicina.med.muni.cz/pediatric-oncology/index.php?pg=special-section--hodgkin-lymphoma>

116-Leukemia bleeding is characterized by: Multiple choices about abnormal bleeding test results.

Answer:?!

Explanation: Acute Leukemia :Patients present with signs of pancytopenia (fatigue, infection, bleeding) even though the white blood cell count is normal or increased in many patients. Despite an increase in white cell count, infection is a common presentation because leukemic cells (blasts) do not function normally in controlling infection. (BT is usually elevated because of the low platelets counts.)

The most frequently tested type of acute leukemia is M3 or acute promyelocytic leukemia. This is because promyelocytic leukemia is associated with disseminated intravascular coagulation (DIC). (This could present with High Pt , Ptt and Bt + low platelets count).

Reference: MTB step 2 CK p.342

117-B6 & B12 deficiency

Explanation: Since there is no clear question, here is some useful information about Vit B6 and vit B12.

B6 deficiency:

Vitamin B6 involved in several biochemical reactions like neurotransmitters synthesis (NE, epinephrine, serotonin), heme synthesis..etc. Deficiency can be induced by isoniazide and oral contraceptive pills. Deficiency will lead to convulsions, hyperirritability, peripheral neuropathy and sideroblastic anemia.

Vitamin B12 deficiency: The findings of Vitamin B.12 deficiency include, Macrocytic megaloblastic anemia with hyper segmented PMNs, paresthesia and subacute combined degeneration, can also be present. Lab finding include increased levels of homocysteine and methylmalonic acid.

Reference: First Aid Step 1 P.90,92

118-spoon shaped nail
?

Answer: iron deficiency

Explanation: Koilonychia (Spoon shaped nails is one of the physical finding that can be found in iron deficiency anemia patients.

Reference: First aid
step 2 Ck P.174

119-Scenario about hereditary spherocytosis and its lab findings ?

Answer:

Hereditary spherocytosis is an autosomal dominant defect or deficiency in spectrin or Ankyrin, an RBC membrane protein resulting in a loss of RBC membrane surface area → RBC are forced to

take spherical shape and subsequently destroyed by spleen. Clinically presents as an extravascular hemolytic anemia. Best initial test is CBC with blood smear showing spherocytes. Most accurate test is osmotic fragility test. Manage with splenectomy.

Reference: First aid step 2 CK. P.177

120-cases about IDA

Answer: iron deficiency anemia

IRON DEFICIENCY ANEMIA (A MICROCYTIC ANEMIA)

A condition in which iron loss exceeds intake. May occur when dietary intake is insufficient for the patient's needs (e.g., when needs are ↑ by growth or pregnancy) or in the setting of chronic blood loss, usually 2° to menstruation or GI bleeding. Toddlers, adolescent girls, and women of childbearing age are most commonly affected.

HISTORY /PE

Symptoms include fatigue, weakness, brittle nails, and pica. If the anemia develops slowly, patients are generally asymptomatic. Physical findings include glossitis, angular cheilitis, and koilonychia ("spoon nails").

DIAGNOSIS

Bone marrow biopsy looking for evidence of iron stores is the gold standard but is seldom performed. iron deficiency is often confused with anemia of chronic disease, in which iron use by the body is impaired. Labs can help differentiate the two conditions (see Table 2.7-4).Peripheral blood smear shows hypochromic and microcytic RBCs with a low reticulocyte count. Low serum ferritin reflects low body stores of iron and confirms the diagnosis.

However, ferritin is also an acute-phase reactant and may thus obscure evidence of iron deficiency.

TREATMENT

Treat with replacement iron for 4–6 months. Oral iron sulfate may lead to nausea, constipation, diarrhea, and abdominal pain. Antacids may interfere with iron absorption. If necessary, IV iron dextran can be administered but is associated with a 10% risk of serious side effects, including anaphylaxis.

Reference : First aid step 2 Ck. P.174

122-case of multiple myeloma

Explanation: Myeloma is an abnormal proliferation of plasma cells. These plasma cells are unregulated in their production of useless immunoglobulin that is usually IgG or IgA. IgM is a separate disease called Waldenström macroglobulinemia. These immunoglobulins do not fight infection but clog up the kidney.

The most common presentation of myeloma is bone pain from pathologic fractures. This is from osteoclast activating factor (OAF), which attacks the bone, causing

lytic lesions. Infection is common because the abnormal plasma cells do not make immunoglobulins that are effective against infections. Presentation: "CRAB" Hypercalcemia, renal failure, anemia and back pain.

Diagnosis: The first test done is usually an x-ray of the affected bone that will show lytic. The most accurate diagnosis is bone marrow biopsy (Nothing besides myeloma is associated with greater than 10% plasma cells on bone marrow biopsy.)

Treatment: The best initial therapy is a combination of dexamethasone with lenalidomide, bortezomib, or both.

Reference : MTB step 2 CK P.253-255

123-clear question about aplastic anemia

Answer:

Aplastic anemia is pancytopenia of unclear etiology. Any infection or cancer can invade the bone marrow, causing decreased production or hypoplasia.

Other causes of pancytopenia are:

- Radiation and toxins such as toluene, insecticides (DDT), and benzene
- Drug effect: sulfa, phenytoin, carbamazepine, chloramphenicol, alcohol, chemotherapy
- SLE
- PNH
- Infection: HIV, hepatitis, CMV, EBV
- B12 and folate deficiency
- Thyroid-inhibiting medications such as propylthiouracil (PTU) and methimazole

Presentation/Diagnostic Tests

Patients present with the fatigue of anemia, infections from low white cell counts, and bleeding from thrombocytopenia. Aplastic anemia is confirmed by excluding all the causes of pancytopenia. The most accurate test is a bone marrow biopsy.

Treatment

Besides supportive therapy such as blood transfusion for anemia, antibiotics for infection, and platelets for bleeding, you should treat any underlying cause that is identified. A true aplastic anemia is treated with allogeneic bone marrow transplantation (BMT) if the patient is young enough and there is a matched donor.

When the patient is too old for BMT (above age 50) or there is no matched donor, the treatment is antithymocyte globulin (ATG) and cyclosporine.

Tacrolimus is an alternative to cyclosporine.

Reference: MTB step 2 CK P.243

124-question about autoimmune hemolysis

Answer:

Autoimmune (Warm or IgG) Hemolysis

Fifty percent of cases have no identified etiology. Clear causes are:

- Chronic lymphocytic leukemia (CLL)
 - Lymphoma
 - Systemic lupus erythematosus (SLE)
 - Drugs: penicillin, alpha-methyldopa, rifampin, phenytoin
- Diagnostic Tests

The most accurate diagnostic test is the Coombs test, which detects IgG antibody on the surface of the red cells. Autoimmune hemolysis is associated with microspherocytes.

-Treatment

1. Glucocorticoids such as prednisone are the “best initial therapy.”
2. Recurrent episodes respond to splenectomy.
3. Severe, acute hemolysis not responding to prednisone is controlled with intravenous immunoglobulin (IVIG).
- 4 . Rituximab, azathioprine, cyclophosphamide, or cyclosporine is used when splenectomy does not control the hemolysis.

Cold Agglutinin Disease

Cold agglutinins are IgM antibodies against the red cell developing in association with Epstein-Barr virus, Waldenström macroglobulinemia, or Mycoplasma pneumoniae.

-Presentation

Symptoms occur in colder parts of the body such as numbness or mottling of the nose, ears, fingers, and toes. Symptoms resolve on warming up the body part.

-Diagnostic Tests

The direct Coombs test is positive only for complement. The smear is normal, or may show only spherocytes. Cold agglutinin titer is the most accurate test.

-Treatment

1. Stay warm.
2. Administer rituximab and sometimes plasmapheresis.
3. Cyclophosphamide, cyclosporine, or other immunosuppressive agents stop the production of the antibody.

Reference : MTB step 2 CK p.239-240

125-women (complain)lab .. high platelets ..Treatment?

Explanation : The scenario is incomplete and many diseases could present with high platelets

FYI: Essential Thrombocytosis

This is a markedly elevated platelet count above one million leading to both thrombosis and bleeding. Essential thrombocytosis (ET) can be very difficult to distinguish from an elevated platelet count as a reaction to another stress such as infection, cancer, or iron deficiency. The best initial therapy is hydroxyurea.

Reference: MTB step 2 ck P.342

**126-about Hemolytic anemia dx with peripheral blood smear shows ?
microspherocytosis**

Answer: hemolytic anemia (read about it)

“Repeated”

127-Sickle cell anemia dx (in hx there is typical feature of hand foot syndrome:

Answer: SCA (Repeated 2 times in

exam)

Explanation: Hand-foot syndrome (dactylitis's) is a painful swelling of the dorsum of the hand and feet seen in infancy and early childhood. Often the first manifestation of sickle cell. Caused by avascular necrosis of metacarpal and metatarsal bones.

Reference: [Step Up to medicine P>224](#)

128-anemia + glossitis + paresthesia:

Explanation: The classic triad of clinical findings associated with vitamin

B12 deficiency is weakness and fatigue, glossitis, and paresthesias. In addition, other clinical findings include anemia, clumsiness and unsteady gait, nonspecific gastrointestinal symptoms, and weight loss.

Reference: <http://blogs.nejm.org/now/index.php/paresthesias-and-anemia/2012/04/25/>

129-pernicious anemia

Explanation: Classic findings associated with pernicious anemia include atrophic body gastritis and intrinsic factor deficiency. A highly elevated fasting gastrin level and a reduced pepsinogen I level are consistent with atrophic body gastritis. The detection of antibodies to intrinsic factor is useful in making the diagnosis of pernicious anemia.

Reference: <http://blogs.nejm.org/now/index.php/paresthesias-and-anemia/2012/04/25/>

130-Clinical dementia ?

Vit b12 def

Explanation : B12 deficiency can give any neurological abnormality, but peripheral neuropathy is the most common. Dementia is the least common. Posterior column damage to position and vibratory sensation or "subacute combined degeneration" of the cord is classic. Look for ataxia.

Reference: [Master the boards Step 2 CK P.234](#)

131- Case of thalassemia >> splenomegaly +frontal protru

Explanation: Due to extramedullary hematopoiesis (leads to hepatosplenomegaly). Also, there will be marrow expansion ("crew cut" on skull x-ray) → skeletal deformities.

Reference: [First aid Step 1 P.391](#)

132-what is papanicolaou smear ? (Choices: how many sample and how many area ?)

Explanation:

- Human papillomavirus (HPV) vaccine is given to all women between ages 11 and 26.
- Pap smear is performed starting at age 21. Repeat the test every 3 years until the age of 65. When co-testing (Pap smear and HPV testing) is used as the screening method, the screening should be every five years if both tests are negative.

Reference: MTB step 2 CK p.389

<http://www.uptodate.com.oloro.sci-hub.io/contents/screening-for-cervical-cancer?u>

133-Hemolytic anemia:

Unconjugated bilirubin

Explanation: High LDH, elevated indirect bilirubin, and ↓ haptoglobin levels are consistent with a diagnosis of hemolytic anemia.

Reference: First aid step 2 Ck p.180.

134-question about (autoimmune hemolysis)[فاصل النفاذ النص][فاصل النفاذ النص]

“Repeated”

135-Patient with high Ca and low Iga Igm what is the diagnosis (this Q was already submitted by one of our colleagues but the answer in the (gathered smle) had multiple myeloma and an explanation to a subtype of it. In the exam they offer you both multiple myeloma and it's subtype as choices and you have to choose between the two.

Explanation: classification of multiple myeloma:

A-Monoclonal gammopathy of unown significance:

M-protein <30g/L and the bone marrow clonal cells <10% with no evidence of multiple myeloma or other B-cell proliferative disorders.

B-Smouldering (Asymptomatic) myeloma:

M-protein in serum >30 g/L and/or bone marrow clonal plasma cells >10% with no related organ or tissue damage (including bone lesions) or symptoms.

C - Active (symptomatic) myeloma:

M-protein >30g/L and/or bone marrow clonal plasma cells >10% + requires one or more of the following:

- Calcium elevation (>10.5mg/dL)
- Renal insufficiency (creatinine >2mg/dL)
- Anemia
- Bone lesions

Reference : BMJ (Multiple myeloma)

136-Question about Hodgkin's lymphoma

A predominantly B-cell malignancy with an unclear etiology. There is a possible association with EBV.

HD commonly presents as cervical adenopathy, although it may also present as a mediastinal mass; it is usually found above the diaphragm, with infra-diaphragmatic involvement suggesting more widely disseminated disease.

Patients also have systemic B symptoms, pruritus, and hepatosplenomegaly.

Pel-Ebstein fevers (1–2 weeks of high fever alternating with 1–2 afebrile weeks) and alcohol-induced pain at nodal sites are rare signs that are specific for HD.

Diagnosis:

-Fine-needle biopsy is usually nondiagnostic, so diagnosis is usually made by excisional lymph node biopsy, which is examined for the classic Reed-Sternberg (RS) cells (giant abnormal B cells with bilobar nuclei and huge, eosinophilic nucleoli, which create an “owl’s-eye” appearance) and for abnormal nodal morphology.

Treatment

Stage Ia and IIa: local radiation with a small course of chemotherapy

Stage III and IV or anyone with “B” symptoms: ABVD

A = adriamycin (doxorubicin) B = bleomycin V = vinblastine D = dacarbazine

Reference: MTB Step 2 ck p.350

137-Fanconi anemia: autosomal recessive

Information about fanconi anemia:

The most common inherited aplastic anemia. It is autosomal recessive condition.

The majority of children have congenital anomalies, including short stature, abnormal radii and thumbs, renal malformations, microphthalmia and pigmented skin lesions.

Children may present with one or more of these anomalies or with signs of bone marrow failure which do not usually become apparent until the age of 5 years. Neonates with fanconi anemia nearly always have a normal blood count but it can be diagnosed by demonstrating increased chromosomal breakage of peripheral blood lymphocytes.

Affected children are at high risk of death from bone marrow failure or transformation to acute leukemia. The recommended treatment is bone marrow transplantation.

Reference : Illustrated textbook of pediatrics p.394

138-young patient came with abd pain and tenderness in LUQ and splenomegaly , febrile, **(the question incomplete)**

139-Von willebrand disease > pathophysiology

FACTOR VIII

Explanation:

VWD is the most common inherited bleeding disorder with a decrease in the level or functioning of von Willebrand factor (VWF). It is autosomal dominant

Diagnostic Tests

- VWF (antigen) level may be decreased
- Ristocetin cofactor assay: detects VWF dysfunction, also called VWF activity
- Factor VIII activity
- Bleeding time: increased duration of bleeding (rarely done)

Treatment: best initial therapy is DDAVP , If there is no response, use factor VIII replacement or VWF concentrate.

Reference: MTB step 2 Ck p.258

140-2 cases of anaemia. (Incomplete)

141-Pt. with severe IDA Hg=10 range they put (120something) what to do first blood transfusion . (no iron trial in other choices)

Explanation:

Blood transfusion is indicated if:

- HB is <7 g/dL
- If the patient has symptomatic anemia
- Low hematocrit in elderly or those with heart diseases.

References: MTB step 2 ck p.229 and Step up to medicine P.324

31years old male presented with recent tiredness and dizziness he give history of -142 change of his bowel habit since awhile, in that he change his diet to gavage (something I t know type of food) on lap he had hypochromic microcitic anemia and iron;don deficiency What could be the cause : Change in his bowel habit Change in diet His age I t rember it was irrelevant hyperglobulinemia, not sure;don (Not clear)

143-Peripheral blood smear about leukemia I forgot it (incomplete)

144- Sickle cell having pain in the hand (Vasocclusive crisis) what is the most probable diagnosis:

answer: **Hand-foot syndrome**

“repeated”

145. Hemolytic anaemia patient with schistocyte normal apt and Bt what is management

A. acyclovir.

B. antibiotic if case of hus tx supportive

Explanation: The scenario is incomplete, maybe it is HUS or TTP (both have normal PT and apt+ schistocytes) however, BT is increased.

Reference : MTB step 2 ck p.242

146. spectrin-ankyrin binding deficiency

Answer: (spherocytosis)

Explanation: Hereditary spherocytosis is an autosomal dominant defect or deficiency in spectrin or Ankyrin, an RBC membrane protein resulting in a loss of RBC membrane surface area.

Reference: First aid step 2 ck

147. Child given-heparin blood +FTP the dz is

A. DIC with thromboses reference: OM ALQORA

(I could not understand the question)

Explanation: Disseminated intravascular coagulation (DIC) does not occur in otherwise healthy

people. Look for a definite risk such as:

- Sepsis
- Burns
- Abruptio placentae or amniotic fluid embolus
- Snake bites
- Trauma resulting in tissue factor release
- Cancer

There is bleeding related to both clotting factor deficiency as well as thrombocytopenia.

Diagnostic Tests

Look for:

- Elevation in both the PT and aPTT
- Low platelet count
- Elevated d-dimer and fibrin split products
- Decreased fibrinogen level (it has been consumed)

Treatment

If platelets are under 50,000/ μ L and the patient has serious bleeding, replace platelets as well as clotting factors by using FFP. Heparin has no definite benefit.

Cryoprecipitate may be effective to replace fibrinogen levels if FFP does not control bleeding.

Reference: MTB step 2 CK p. 361

148. Which bleeding disorder presents with prolonged BT & aPTT?

Answer: VWD

Explanation: vWD autosomal dominant bleeding disorder characterized by prolonged aPTT and BT.

Reference: MTB step 2 CK p.258

149. False positives may occur in patients with erythrocytosis, hyperglobulinemia, extreme leukocytosis or hyperlipidemia. Coarse flocculation may occur in these samples due to elevated levels of total serum protein. These patient samples may be washed in normal physiologic saline and centrifuged to minimize these problems. 2. False positives or false negatives may occur in patients with severe anemia (lt;15% hematocrit). 4. False positives or false negatives may occur in patients with a recent blood transfusion. **(Not clear)**

150. Agranulocytosis

Explanation:

-Drugs that cause agranulocytosis as a side effect: ganciclovir, clozapine, carbamazepine, colchicine, methimazole, propylthiouracil.

-Chloramphenicol cause aplastic anemia.

Reference: First aid Step 1 p.258

151. Hemolytic anemia , comb positive , what type of hypersensitivity ?

answer: Type 2

“repeated”

152. Examination and evaluation show para-spinous Edema and fluid collection -ve bru- cella

titer and tuberculin test , what the cause ?

- A.Brucellosis
 - B.breast cancer
 - C. recurrent hodgkin lymphoma
- “ repeated”

153. Maculapapular rash , plt low , blood smear showed fragmented RBC , schitocyte The antibodies was targeting?

- A.G glycoproteins Annex

Explanation: I think it is mostly ITP and the antibodies are against GpIIB/IIIa. However, schitocytes does not go with ITP, so I'm not really sure.

Reference: first aid step 1 p.397

154- Cause of low sickle solubility test :

- A. anemia,
- B. presence of hemoglobin c

Answer : B

Explanation: Hemoglobin S is less soluble in a reducing agent than other forms of hemoglobin. The solubility test is the most common screening test for sickle cell or presence of HbS. Other abnormal hemoglobin variants are known to cause sickling and will give a positive solubility test. include Hb C.

Reference:

<https://shp.utmb.edu/cls/NursePractitioners/SickleCell.PDF>

<http://wps.prenhall.com/wps/media/objects/684/700987/ch07SO.pdf>

Medicine

7. What is the hormone responsible for increasing insulin sensitivity in peripheral tissues?

- A. Leptin
- B. Adiponectin
- C. Renin

Answer: adiponectin

Explanation :administration of adiponectin has been accompanied by lower plasma glucose levels as well as increased insulin sensitivity.

Reference: <https://www.ncbi.nlm.nih.gov/pubmed/15655035>

8. NF gene is associated with..

Neurofibromatosis

Answer: a

Explanation : The NF genes are located on chromosome 17 and 22, respectively, for NF1 and NF2.

Reference: first aid usmle step 2 ck p.310

9. Best for DVT diagnosed pt is to give..

- A-LMWH,
- B-WARFARIN,

C-Unfractionated Heparin with Warfarin

Answer: c

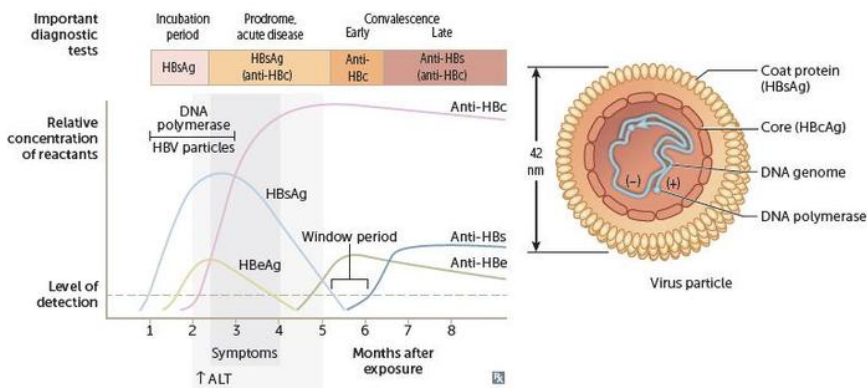
Explanation: Heparin is the best initial therapy. Warfarin should be started at the same time as the heparin in order to achieve a therapeutic INR of 2 to 3 times normal as quickly as possible.

Reference: MTB step 2 CK p.255

10. patient presents for annual health check up, you found Hepatitis B surface antigen to be positive. (no other details are provided). Which of the following is correct?

- A. Acute hep b infection
- B. chronic hep b infection
- C. acute carrier
- D. chronic carrier

Answer: I think b is the most appropriate answer



	HBsAg	Anti-HBs	HBeAg	Anti-HBe	Anti-HBc
Acute HBV	✓		✓		IgM
Window				✓	IgM
Chronic HBV (high infectivity)	✓		✓		IgG
Chronic HBV (low infectivity)	✓			✓	IgG
Recovery		✓		✓	IgG
Immunized		✓			

Reference: First Aid Step 1 P.157

11. Patient presents with hypertension, tachycardia, diaphoresis and dilated pupil. Which of the following is the most likely abused substance?

Ans: sympathomimetic

Explanation: hypertension, tachycardia, pupillary dilation, diaphoresis, paranoia can occur in stimulants abuse (such as amphetamine).

Reference: first aid usmle step1 p.518

12. pt take overdose of aspirin. what to do?

- gastric lavage
 - urine alkalinization
 - I forget other choices
- Answer: urine alkalization

Explanation: We suggest that adults with salicylate poisoning and clinical signs of toxicity be treated with alkalization of the serum and urine. Alkalinization is the mainstay of therapy. We

use intravenous sodium bicarbonate for this treatment. Activated charcoal can be used within two hours of ingestion.

Reference: <http://www.uptodate.com.oloro.sci-hub.io/contents/salicylate-aspirin-poisoning-in-adults#H17>

13. Patient developed signs of lower motor signs weakness, and has upper motor neuron lesion myasthenia gravis myasthenic syndrome , motor neuron disease

Answer: Could be ALS

Explanation : Upper and lower motor neuron weakness is a hallmark of ALS , progressive muscle weakness is characteristic feature.

Refernce: P.234 Step up to medicine.

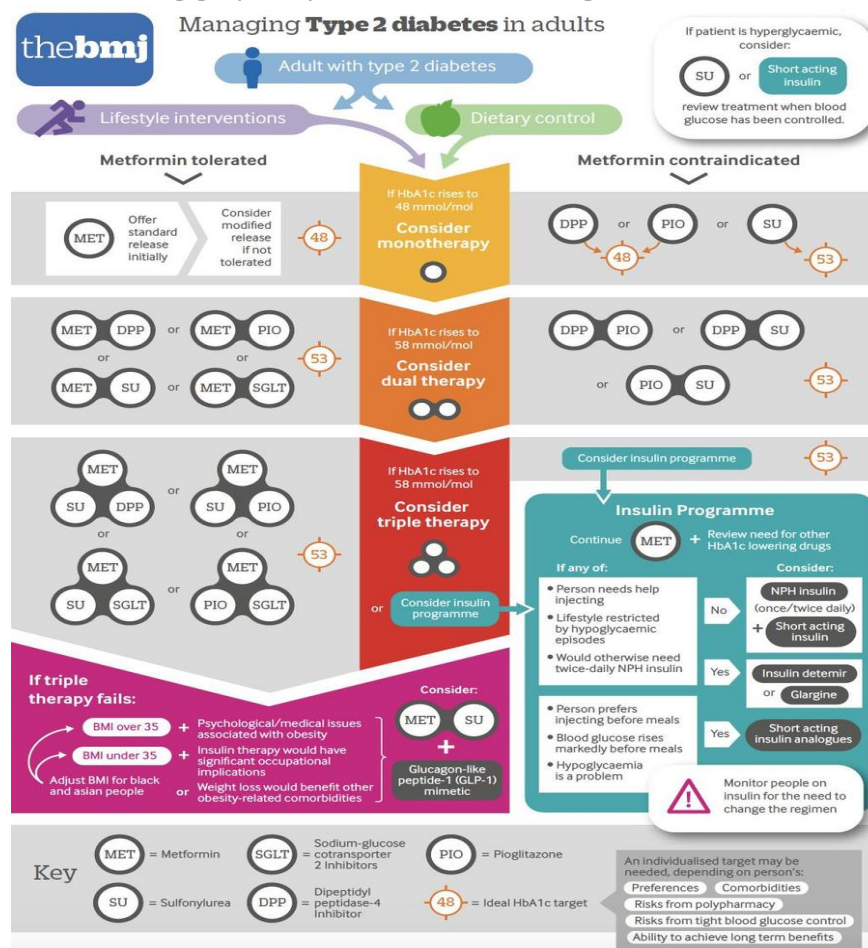
14. diaptic pt has sulfa allergy.. what is the treatment of choice??

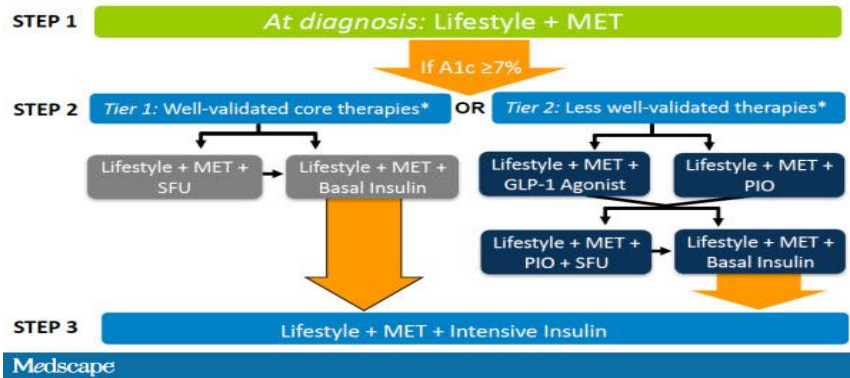
Answer: if metformin in options go for it. Don't choose sulfonylureas.

Explanation:

Synfonyureas may not be used in this case, Metformin remain the first line in the treatment of diabetes regardless of sulfa allergy.

The following graph explains the treatment guideline for diabetes type 2:





Reference: <http://www.bmj.com/content/353/bmj.i1575>
http://www.medscape.org/viewarticle/734424_4

15. female in 24 wks has HIV not on any treatment, want to breast feeding, which is best anti-viral to start ?

Answer:

Explanation: I'm not sure how she is in 24 wks and want to breast feed.

If the patient is known HIV patient and she is pregnant and not already on medications, she should be treated for the same indications as nonpregnant person. The only exception is the use of efavirenz, which should be avoided. (protease inhibitors with 2 nucleosides (such as zidovudine and lamivudine) are the best.

Breast feeding is contraindicated in HIV infected mothers.

Reference: MTB step 2 ckp.44 and MTB step 3 p.94
 Kaplan pediatrics p.32

16. burning sensation, epigastric pain, on examination there is mass in epigastric area.. what inv?

- A. -H pylore test
- B. -US abdomen
- C. -I forget other choices

answer: not clear Q, it can be stomach cancer, best to diagnose by endoscopy

17. Treatment of panic attack

- A. SSRI
- B. Benzodiazepine
- C. TCA
- D. MAO

Answer: The question is incomplete.

Explanation: SSRI are considered to be the first line in the treatment for panic disorder. If the question is panic attack, then alprazolam is the correct answer, if a single panic attack is the diagnosis, a benzodiazepine is the treatment.

Reference: MTB step 2 ck p.583

18. Long scenario about panic attack, what is the diagnosis?(incomplete question)

Explanation: Panic disorder is the experience of intense anxiety along with feelings of dread and doom. This is accompanied by at least 4 symptoms of autonomic hyperactivity, such as diaphoresis, trembling, chest pain, fear of dying, chills, palpitations, shortness of breath, nausea, dizziness, dissociative symptoms, and paresthesias. These sensations typically last less than 30 minutes and may be accompanied by agoraphobia, defined as the fear of places where escape is felt to be difficult.

Panic disorder is typically seen in women, can occur at any time, and usually has no specific stressor. It is important to ensure that thyroid disease, hypoglycemia, and cardiac disease have been ruled out.

References: MTB step 2 CK p.773

19. What is the justification to give both Polio vaccine as live OPV and killed IPV

- A. To increase IgA at gastrointestinal tract at entry of virus
- B. To increase the antigen at anterior horn to kill the virus (I think like this...)
- C. I forgot other choices.

Answer: a

Explanation:

-In countries still using OPV, IPV does not replace the OPV vaccine, but is used with OPV to strengthen a child's immune system and protect them from polio. Mucosal immunity as measured by stool excretion of virus is superior with combination of OPV and IPV as compared to IPV alone.

-Clinical trials have demonstrated that administration of IPV to children who had received OPV increases humoral and mucosal immunity to the three poliovirus serotypes more effectively than a supplementary dose of OPV.

-OPV stimulates good mucosal immunity, which is why it is so effective at interrupting transmission of the virus. or several weeks after vaccination the vaccine virus replicates in the intestine, is excreted and can be spread to others in close contact. This means that in areas with poor hygiene and sanitation, immunization with OPV can result in 'passive' immunization of people who have not been vaccinated.

Reference: FAQs on vaccines and immunizations practices P.122

<http://polioeradication.org/polio-today/polio-prevention/the-vaccines/opv/>

20. When group A hemolytic streptococcus trigger rheumatic fever?

- A. At tonsillitis/ pharyngitis infection
- B. When it inter blood stream
- C. When it indulge the endocardium or pericardium

Answer: a

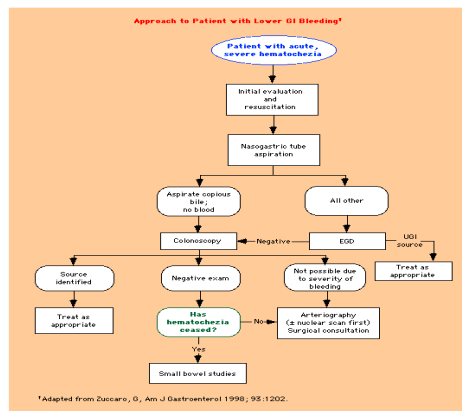
Explanation: Rheumatic fever is an immunologically mediated systemic process that occur as a consequence to pharyngeal infection with group A beta hemolytic streptococci.

Reference: Step up to medicine p.47 and first aid step 1 p.299

21. Initial treatment in lower GI bleeding

- Resuscitation

Answer: ABC



Reference: <http://bestpractice.bmj.com/best-practice/monograph/457/diagnosis/step-by-step.html>

22. Kid came from Ghana with Jaw lesion, the pathological report of Lymph node shows starry sky appearance, and Ki-67 positive, what is the diagnosis?

Burkitt's lymphoma Answer: a

Explanation: African + jaw lesion + starry sky appearance and positive Ki-67 (proliferation index) all are key features for the diagnosis of burkitt lymphoma.

Reference: First aid step 1 p.400

78. Symptoms of Typhi fever

- Abdominal pain , headache
- Nausea. Vomiting loose diarrhea

Answer: a

Reference: Toronto notes

Typhoid fever is one of the causes of fever in the returned travelers and is caused by salmonella typhi and salmonella paratyphi.

Incubation period: 3-60 days

Clinical manifestations:

Sustained fever 39°-40°C (103°-104°F), abdominal pain, headache, loss of appetite, cough, constipation

Diagnosis:

Stool, urine, or blood sample positive for *S. typhi* or *S. paratyphi*

Treatment:

Quinolone antibiotic (e.g. ciprofloxacin), ceftriaxone, or macrolide

79. Iris pigmentation, medial LN enlargement on upper trunk,

- Wilm's tumor
- Neuroblastoma
- 2 other choices I forgot them.
-

Reference: Toronto notes

This question is incomplete. Here is a detailed information about each choice written.

Wilms tumor (nephroblastoma) is the most common primary renal neoplasm of childhood.

Clinical presentation:

- 80% present with asymptomatic, unilateral abdominal mass
- may also present with HTN, gross hematuria, abdominal pain, vomiting
- may have pulmonary metastases at time of diagnosis (respiratory symptoms)

It could present as a part of WAGR syndrome (**W**ilms' tumour, **A**niridia, **G**enital anomalies, **R**ental retardation).

Neuroblastoma:

- . most common cancer occurring in 1st year of life.
- . neural crest cell tumour arising from sympathetic tissues (neuroblasts).

Clinical presentation:

- can originate from any site in sympathetic nervous system, presenting as mass in neck, chest, or abdomen (most common site is adrenal gland)

signs and symptoms of disease vary with location of tumour:

- thoracic: dyspnea, Horner's syndrome
- abdomen: palpable mass
- spinal cord compression
- metastases are common at presentation (>50% present with advanced stage disease):
 - usually to bone or bone marrow (presents as bone pain, limp)
 - can also present with periorbital ecchymoses, abdominal pain, emesis, fever, weight loss, anorexia, hepatomegaly, "blueberry muffin" skin nodules

- paraneoplastic: HTN, palpitations, sweating (from excessive catecholamines), diarrhea, FTT (from vasoactive intestinal peptide secretion), opsomyoclonus
- diagnostic criteria (either of the following):
 - unequivocal histologic diagnosis from tumour tissue biopsy
 - evidence of metastasis to bone marrow (“rosettes”) on aspirate analysis, with concomitant elevation of urine or serum catecholamine metabolite (VMA, HVA) levels

80. one of these associated with mania?

- Bipolar
- Schizophrenia

Answer: bipolar

Reference: Toronto notes.

Bipolar I disorder:

Disorder in which at least one manic episode has occurred.

Bipolar II disorder:

Disorder in which there is at least 1 major depressive episode, 1 hypomanic and no manic episodes.

81. History and lab result of DKA and ask about acid base balance?

- Metabolic acidosis

Answer: high anion gap MA

Reference: Master the board

Causes of High anion gap metabolic acidosis is remembered by the famous mnemonics

MUDPILES.

Here is a good table with some details about different causes of high anion gap metabolic acidosis

Causes of Metabolic Acidosis with an Increased Anion Gap			
	Cause	Test	Treatment
Lactate	Hypotension or hypoperfusion	Blood lactate level	Correct hypoperfusion
Ketoacids	DKA, starvation	Acetone level	Insulin and fluids
Oxalic acid	Ethylene glycol overdose	Crystals on UA	Fomepizole, dialysis
Formic acid	Methanol overdose	Inflamed retina	Fomepizole, dialysis
Uremia	Renal failure	BUN, creatinine	Dialysis
Salicylates	Aspirin overdose	Aspirin level	Alkalinize urine

82. Lab Result , Compensated or uncompensated acid base balance (unit of PCO2 Pka)

Reference: Introduction to Acid Base Disturbances Presentation by Dr. Riyadh Al-Sehli

Please refer to the table below for every question asking about compensations in acid base disorders

Acid base disorder	Primary defect	Compensation
Met acidosis	↓HCO ₃	1.2 drop in PCO ₂ for each 1 mmol decrease in HCO ₃
Met alkalosis	↑HCO ₃	0.7 rise in PCO ₂ for every 1 mmol rise in HCO ₃
Acute resp acidosis	↑PCO ₂	1 mmol rise in HCO ₃ for every 10 point increase in PCO ₂
Ch resp acidosis	↑PCO ₂	3.5 mmol rise in HCO ₃ for every 10 point increase in PCO ₂
Acute resp alkalosis	↓PCO ₂	2 mmol drop in HCO ₃ for every 10 point fall in PCO ₂
Ch resp alkalosis	↓PCO ₂	4 mmol drop in HCO ₃ for every 10 point fal in PCO ₂

83. Which of these vaccine has many use?

- Tetanus
- Varicella
- Diphtheria
- Rubella

Answer: tetanus?

The question is vague

84. Most specific test to diagnose TB

- o Culture sputum

Answer: a

Reference: BMJ

Sputum culture is the most sensitive and specific test to diagnose pulmonary TB.

85. Case about old man just lost his wife in 6 weeks, since that time he has a loss of interest and loss of concentration since he return to his work he has no suicidal idea , normal appetite, guilty about he did not took her to periodic check up

- Bereavement
- Major depressive episode

Answer: bereavement

Reference: Toronto notes.

bereavement is a normal psychological and emotional reaction to a significant loss, also called grief or mourning

normal response: *protest* then *searching and acute anguish* then *despair and detachment* then *reorganization*.

if a patient meets criteria for major depressive disorder (MDD), even in the context of a loss or bereavement scenario, they are still diagnosed with MDD

Please make sure the scenario in the exam is not meeting MDD criteria before deciding it to be bereavement.

86. Long history and lab investigation show patient diagnosed with N. Meningitis.

what you should do to his roommate?

- o Penicillin antibiotic to decrease nose
- o Vaccination to cross ...
- o Isolate for 4 weeks

Answer: rifampicin is the prophylaxis

Reference: Toronto notes

close contacts of patients infected with *H. influenzae* type B should be treated with rifampin if they live with an inadequately immunized (<4 yr) or immunocompromised child (<18 yr); ciprofloxacin, rifampin, or ceftriaxone if close or household contact of a patient with *N. meningitidis*.

87. premature child come to well baby clinic for vaccination what is your plan about vaccination schedule?

- o Proceed as chronological age

Answer: a

Reference: Immunization lecture by Prof. AL-Zamil 431 team, College of medicine, KSU

Preterm (36 weeks and below): Give FULL dose of vaccine + according to the chronological age (from the day he was born\delivered, not the corrected age, he follows the schedule normally, means no difference between a full term or preterm baby, both follow the schedule from day 1 of birth). only oral polio **shouldn't** be given to preterm babies who are usually in NICU, because Babies will continue shedding the virus through the stool, and will be transmitted through the nurse to another baby (a theoretical issue). Give it after the baby leave NICU.

88. Most common presentation of acute gastritis

- o Pain
- o Melena

Answer: b

Reference: MTB Step 2

Gastritis often presents with gastrointestinal **bleeding without pain**. Severe, erosive gastritis can present with epigastric pain. NSAIDs or alcoholism in the history is a clue.

89. positive PPD test negative X Ray what next

- o 6 month Isoniazid Answer: a

Reference: Master the board

If there is 9 months isoniazid in the choices, choose it. Otherwise, 6 months is considered right as well.

This area is often asked in exams and it is really important to understand all the details about TB treatment and PPD test.

Here are detailed information about PPD.

Indications for PPD Testing:

e PPD is not a general screening test for the whole population. Only those in the risk groups previously described should be screened. PPD testing is not useful in those who are symptomatic or those with abnormal chest x-rays. ese patients should have sputum acid fast testing done.

What Is Considered a Positive Test?

Only induration is counted towards a positive test. Erythema is irrelevant.

Induration larger than 5 millimeters:

- HIV-positive patients
- Glucocorticoid users
- Close contacts of those with active TB

- Abnormal calcifications on chest x-ray
- Organ transplant recipients

Induration larger than 10 millimeters

- Recent immigrants (past 5 years)
- Prisoners
- Health care workers
- Close contacts of someone with TB
- Hematologic malignancy, alcoholics, diabetes mellitus

Induration larger than 15 millimeters

- Those with no risk factors

Two-Stage Testing

If the patient has never had a PPD skin test before, a second test is indicated within 1 to 2 weeks if the first test is negative. This is because the first test may be falsely negative. If the second test is negative, it means the patient is truly negative. If the second test is positive, it means the first test was a false negative.

Interferon gamma release assay (IGRA) is a blood test equal in significance to PPD to exclude TB exposure. There is no cross-reaction with BCG.

Treatment for a Positive PPD or IGRA

After active tuberculosis has been excluded with a chest x-ray, patients should receive 6-9 months of isoniazid. A positive PPD confers a 10% lifetime risk of tuberculosis. Isoniazid results in a 90% reduction in this risk; after isoniazid, the lifetime risk of TB goes from 10% to 1%. The PPD test should not be repeated once it is positive. Use pyridoxine (B6) with isoniazid.

Those at high risk, such as healthcare workers, should have a PPD done every year to screen for conversion. Most of the risk of developing active TB lies within the first 2 years after conversion.

Everyone with a reactive PPD test should have a chest x-ray to exclude active disease.

90. Which anti TB cause vertigo

- Isoniazide
- Rifampine
- Ethambutole
- pyrazinamide

91. CBC showing lower low of WBC, RBC, PLT and low Hb

- Aplastic
- Hypoplastic

Answer: a

Reference: Master the board

Aplastic anemia is **pancytopenia** of unclear etiology. Any infection or cancer can invade the bone marrow, causing decreased production or hypoplasia.

92. SCA very low Hb, symptomatic, what is the appropriate treatment

- Regular transfusions
- Hydroxyurea

Answer: it should be exchange transfusion Hydroxyurea prevents recurrence
Reference: MTB CK 2

93. Patient start anti lipid medication come with muscle pain they present lipid profile showing that HDL slightly low , LDL 3.5 high other normal

And they gave 4 anti lipid medication

- o One of them simvastatin (my answer)

Answer: a

Reference: UWorld

Statin-induced myalgia can occur in 2-10% of patients, but significant myositis with elevated CK is uncommon. Myalgias tend to present as symmetrical proximal muscle weakness or tenderness. Statins decrease coenzyme Q10 synthesis, which is involved in muscle cell energy production and contributes to statin-induced myopathy.

94. Patient of Heart Failure on digitalis and prescribe digitalis toxicity symptoms And ask what is the diagnosis

Reference: Master the board

Digoxin toxicity

Etiology

Hypokalemia predisposes to digoxin toxicity because potassium and digoxin compete for binding at the same site on the sodium/potassium ATPase. **When less potassium is bound, more digoxin is bound.**

Presentation

The most common presentation of digoxin toxicity is **gastrointestinal problems** such as **nausea, vomiting**, and abdominal pain. Other symptoms are:

- **Hyperkalemia** from the inhibition of the sodium/potassium ATPase
- Confusion
- **Visual disturbance** such as **yellow halos around objects**
- **Rhythm disturbance** (bradycardia, atrial tachycardia, AV block, ventricular ectopy, and arrhythmias such as atrial fibrillation with a slow rate)

Diagnostic tests

The most accurate test is a digoxin level. The best initial tests are a potassium level and an EKG. The EKG will show a **downsloping of the ST segment** in all leads. Atrial tachycardia with variable AV block is the most common digoxin toxic arrhythmia.

Treatment

Control potassium and give **digoxin-specific antibodies**. Digoxin-binding antibodies will rapidly remove digoxin from circulation.

95. Case about Toxic shock syndrome (easy)

Reference: Master the board

Staphylococcal scalded skin syndrome (SSSS) and toxic shock syndrome (TSS) are different severities of the same event: a reaction to a toxin in the surface of *Staphylococcus*.

SSSS looks similar to TEN, including Nikolsky sign. TSS has the same skin involvement as well as life-threatening multiorgan involvement such as:

- Hypotension
- Renal dysfunction (elevated BUN and creatinine)
- Liver dysfunction
- CNS involvement (delirium)

96. Extensive skin removing off all the body evolving sole and Palm

- o Pityriasis rosea

Answer: Toxic epidermal necrosis I think would be the answer

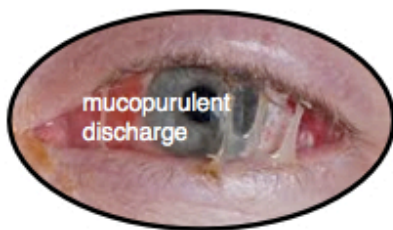
Please refer to Q97

97. Case describe bacterial conjunctivitis, Ask about the cause?

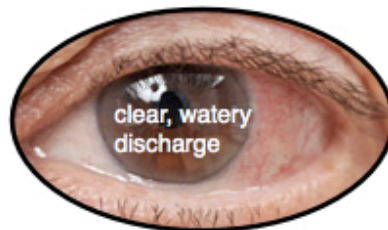
- o Bacterial
- o Viral

Answer: a

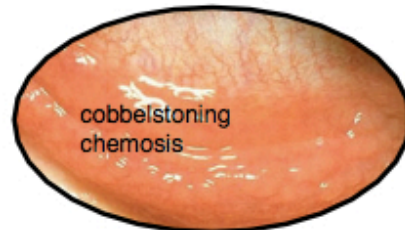
Conjunctivitis			
Clinical Finding	Bacterial	Viral	Allergic
Bilateral involvement	50%	25%	Mostly
Discharge	Mucopurulent	Watery	Rare
Redness	Yes	Yes	Yes
Pruritus	Rare	Rare	Yes



Bacterial



Viral



Allergic

98. Hypopigmentation, hypertrophy of radial nerve

- o Leprosy

Answer: a

Reference: Wikipedia

Leprosy, also known as Hansen's disease (HD), is a long-term infection by the bacteria *Mycobacterium leprae* or *Mycobacterium lepromatosis*. Leprosy is mostly a granulomatous disease of the peripheral nerves and mucosa of the upper respiratory tract; skin lesions (light or dark patches) are the primary external sign.

99. On the sole of foot, Black ...Scalpe...

- o Vercue

Answer: a

This question is not clear

100. Polymyalgia Rheumatica

ESR 85

What in the symptom support the diagnosis?

- o Shoulder tenderness
- o Shoulder weakness

Answer: a

Reference: Master the board

Polymyalgia rheumatica (PMR) occurs in those **over age 50** with:

- Pain and stiffness in shoulder and pelvic girdle muscles
- Difficulty combing hair and rising from a chair
- **Elevated ESR**
- Normochromic, normocytic anemia

Although there is muscle pain, there are no lab findings of muscle destruction. **e CPK and aldolase are normal.** PMR has a rapid and enormous response to **steroids even at low doses.**

101. Case describe anemic patient and lab and peripheral smear diagnosed hereditary spherocytosis

What is the defect?

- o Ankeritin...

Answer: Hereditary spherocytosis is the genetic loss of both ankyrin and spectrin in the red cell membrane

Reference: MTB

102. Iron deficiency patient with chronic gastritis how to treat?

- o Oral iron
- o IM

iron Answer: b

103. You find AST liver enzyme what other test you can order it to confirm that the source is liver

- o Gamma glutamyl transferase

Answer: a

This question is not clear or incomplete

104. What syphils test to confirm it?

- o VDRL
- o RPR
- o FTA-ABS

Answer: C.

Reference: BMJ

Among the choices given, FTA-ABS is the one used to confirm the diagnosis. VDRL and RPR are often used as markers of treatment efficacy.

105. Diabetic uncontrolled after start him on metformin and gliclazide last month what to add?

- o Actos
- o Pioglitazone

Reference: Toronto notes.

This question has incomplete choices. Furthermore, Actos is a brand name for pioglitazone. Management of diabetes type II is important and has a lot of details. Please see the picture below.

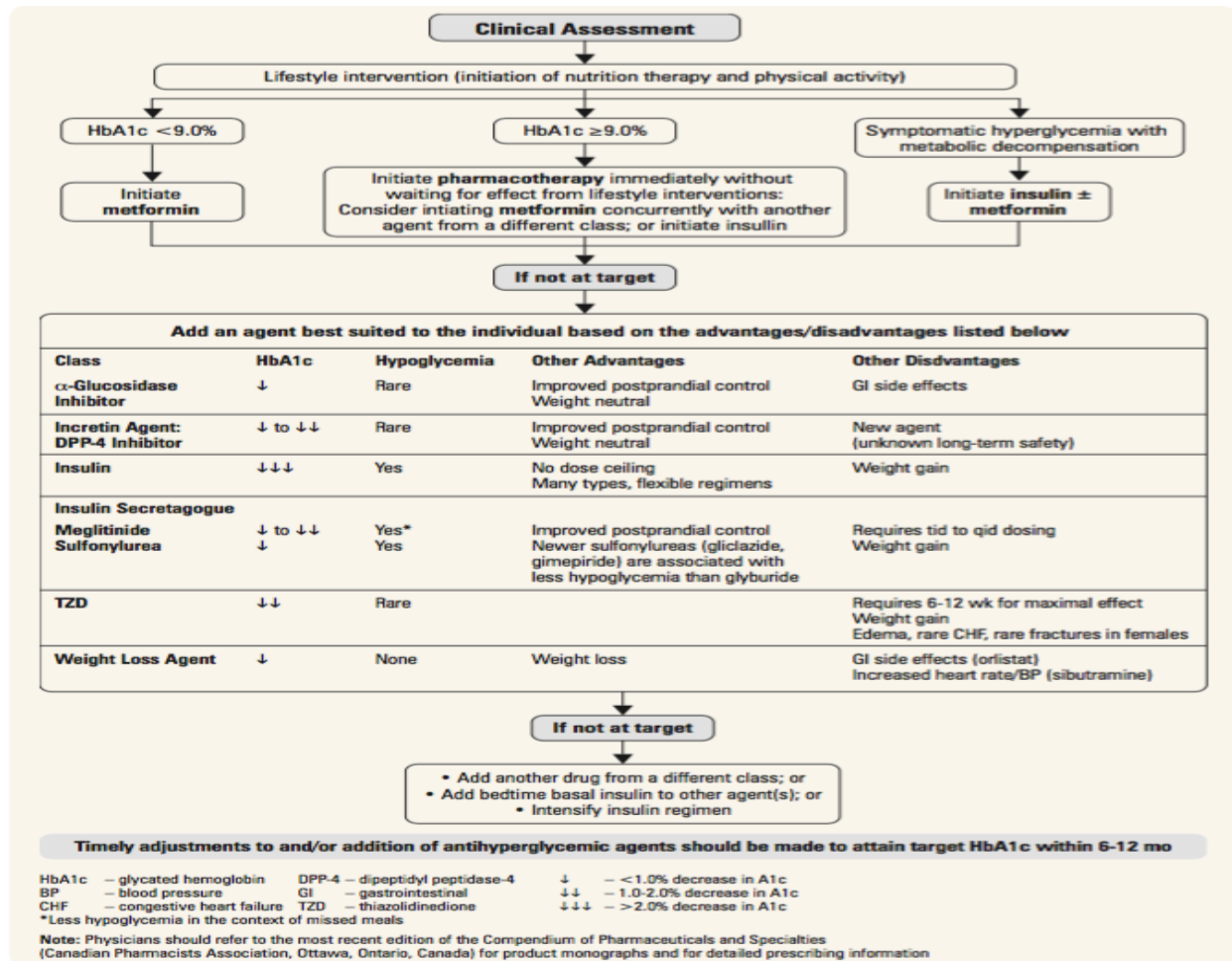


Figure 9. Management of hyperglycemia in type 2 diabetes
 Canadian Diabetes Association Clinical Practice Guidelines Expert Committee. Pharmacologic Management of Type 2 Diabetes. *Can J Diabetes* 2013;37:S61-S68 (used with permission)

106. Factor VII will affect on

- Bleeding time
- Prothrombin time
- aPTT
- Platelet count

Answer: b

Factor VII is present in the extrinsic pathway which, if deficient, will affect the prothrombin time. aPTT is increased in case of defects in the intrinsic pathway.

107. Which of bisphosphonate works by ADPag....

Answer: coldronate, etodronate and tiludronate work by changing phosphate in ATP to non-functional and kill osteoclasts.

While other bisphosphonates work by inhibiting Fornysyl diphosphate synthase.

108. Which will decrease cancer

- Fibers
- Vit D
- Vaccine

Answer: could be A

Reference: BMJ

Most studies suggest an inverse relationship between dietary fibers and colon cancer.

109. Which of the following virus has vaccine

- Human T cell Leukemia

Answer:?

There is no vaccination against HTLV yet. Many researches are currently trying to develop one. Please, look for the other choices in the exam.

110. Why inulin used to measure GFR

- o Because its filtered freely through glomerulus

Answer:

Reference: Wikipedia

This is not the right complete answer. Inulin is used because it is completely inert in the renal tubules (i.e. not secreted or reabsorbed and the amount excreted is the same amount filtered). For more information, please see the slide below

Inulin vs. Creatinine for GFR

- Inulin (the perfect glomerular marker)
 - Not bound to plasma proteins, uncharged
 - Freely filtered across the glomerular capillary wall
 - Completely inert in the renal tubule
- Creatinine (not perfect, but it's good)
 - Freely filtered across the glomerular capillaries
 - Secreted to a small extent
 - Clearance of creatinine slightly overestimates the GFR.
- Creatinine is more convenient b/c it's endogenous and you don't have to infuse it like you do for inulin
- Plasma level of creatinine is related to age, gender, and muscle mass of the patient

111. Scenario describe organophosphphate poisoning (easy) Ask for diagnosis

Reference: Master the board

Organophosphates and nerve gas are identical in their effects. Nerve gas is faster and more severe. It causes a massive increase in the level of acetylcholine by inhibiting its metabolism.

Patients present with:

- Salivation
- Lacrimation
- Polyuria
- Diarrhea
- Bronchospasm, bronchorrhea, and respiratory arrest if severe

112. Scenario with lab absolute eosinophilia

- o Schistosomiasis
- o Giardiasis

Answer: a

Reference: BMJ

Schistosomiasis present with eosinophilia on 90% of cases.

Giardiasis has normal CBC with no eosinophilia.

113. Middle age man , Two weeks history of abdominal diarrhea no blood or mu- cous associated with aphthous ulcer, he lost 12 kg in the last 4 years, and there is dermatological manifestation along upper limbs on the radial side (I think macula...something)

- o Ulcerativecolitis
- o Crohns
- o Celia

c Answer: b

114. Most common cause of secondary hypertension in adults

- o Kidney disease
- o Phechromcytoma
- o Cushing's

Answer: a

115. Man went to high city and then we find polycythemia what is the cause

- o Erythropoietin stimulation

Answer: a

Secondary polycythemia affects some people as a result of limited oxygen due to smoking or living at high altitudes causing erythropoietin stimulation.

116. Scenario describe patient with dementia and they list medication and ask what to give

- o Rivastigmine

Answer: a

Reference: BMJ

Rivastigmine is an acetylcholinesterase inhibitor used for alzheimers dementia

117. Description of painless ulcer on penis after unprotected sex

- o Syphilis

Answer: a

Reference: Toronto notes

Syphilis that is caused by *Treponema pallidum* present with a painless ulcer as opposed to chancroid which present with a painful ulcer. Chancroid is caused by *Haemophilus ducreyi*

118. You advice 45 year healthy man to take 81mg aspirin each day what is its mechanism

- o Decrease thromboxane A2

119. Case describe Auditory hallucination

The question what is the type of hallucination (easy)

120. What is ever-smoker

Answer:

100 sig per life

Referene: <http://www.yourdictionary.com/ever-smoker#UwXpKyhw2IbbUADk.99>

- 1- A person who has ever been a cigarette smoker or cigar smoker.
- 2- *More precisely*, a person who has smoked at least one hundred cigarettes and cigars during the course of his life.

123.2 y/o boy , acute abd pain restless febrile. Pic of VCUG showing single kidney with dialated uereter+pelvis+calysis

Uretrocele

Ureter

agenesis

Pyelonephriti

s

Answer: c

Reference: Toronto notes

This patient most likely has ureterovesical reflux which increases the risk of pyelonephritis

124.A doctor used biopsychosocial therapay on a old patient > 60 (I forgot the symptoms). biopsychosocial therapy is based on which type of model:

A- evidence based
medicine B- geriatric
medicine
C- holistic medicine
And one more option that I

forgot

Answer: c

Reference: Wikipedia

The biopsychosocial model is a broad view that attributes disease outcome to the intricate, variable interaction of biological factors (genetic, biochemical, *etc*), psychological factors (mood, personality, behavior, etc.), and social factors (cultural, familial, socioeconomic, medical, etc.).

125. A middle aged male came with increased thirst and urination, decreased libido. He was found to have hepatosplenomegaly and skin bronzing on physical exam. Lab values showed increased blood glucose and >300 iron.

- A. central diabetes insipidus
- B. peripheral diabetes insipidus
- C. hemochromatosis
- D. pituitary adenoma

Answer: C

Hemochromatosis Hereditary hemochromatosis is an adult-onset disorder that represents an error of iron metabolism characterized by inappropriately high iron absorption resulting in progressive iron overload.[1] This disease is the most common cause of severe iron overload.[3] The organs involved are the liver, heart, pancreas, pituitary, joints, and skin.[12]

Excess iron is hazardous, because it produces free radical formation. The presence of free iron in biologic systems can lead to the rapid formation of damaging reactive oxygen metabolites, such as the hydroxyl radical and the superoxide radical.

Clinical presentation:

Liver disease (hepatomegaly, 13%; cirrhosis, 13%, usually late in the disease) Skin bronzing or hyperpigmentation (70%)

Diabetes mellitus (48%)

Arthropathy

Amenorrhea, impotence, hypogonadism

Cardiomyopathy

Osteopenia and osteoporosis [1]

Hair loss

Koilonychia (spoon nails)

126. Patient taking drug presented pupil dilated and seizure:

SSRI

TCA

Answer: if only these choose b. it goes more with sympathomimetics

Sympathomimetics toxidrome:

MATHS

M: Mydriasis

A: Agitation, arrhythmia, angina

T: Tachycardia

H: Hypertension, hyperthermia

S: Seizure, sweating

127.15 yo male with Cough fever headache CXR shows bilateral infiltration, CBC: increased wbc, HR is 73..

Stret. Pneumonia

Mycoplasma pneumoniae

Others

Answer: b

Reference: Master the board

Chest x-ray: Bilateral interstitial infiltrates are seen with:

· *Mycoplasma*

· Viruses

· *Coxiella*

· *Pneumocystis*

· *Chlamydia*

128.77 yo male with early onset of dyspnea when moving 50 meters, has left apical heave and loud audible systolic murmur most intense to hear in right sternal border..

Severe mitral regurgitation

Calcified aortic

stenosis Answer: b

129.2 years of sadness, insomnia depressed mood..

Dysthymia

Depression

disorder

Answer: a

130. CT abdomen shows renal tumor affecting calyceal system with lung multiple nodules?

Answer:

This question is incomplete, but if the CT really showed a tumor in the calyces it should be urothelial carcinoma instead of RCC. Lung nodules may mean metastatic disease.

131. Reuptak inhibitor treatment is for..

SSRI

This question is incomplete

132. Most common cause of primary health care visits..

H
T
N
D
M

Coryza

Answer: I could not find a source for this question.

Coryza may seem the right answer

133. Pt with hemolysis, increased creatinin look for deficiency in the protease that

breaks.

Answer: ADAMTS13

Reference: Master the board

Hemolytic uremic syndrome (HUS) and thrombotic thrombocytopenic purpura (TTP) are different versions of the same basic disease caused by deficiency of metalloproteinase ADAMTS 13. HUS is associated with *E. coli* 0157:H7 and is more frequent in children. TTP is associated with ticlopidine, clopidogrel, cyclosporine, AIDS, and SLE. Both disorders are characterized by:

- Intravascular hemolysis with fragmented red cells (schistocytes)
- Thrombocytopenia
- Renal insufficiency

TTP is also associated with neurological disorders and fever and is more common in adults. Neurological symptoms include confusion and seizures. There is no one specific test to diagnose either disorder. HUS and TTP both have normal PT/aPTT and negative Coombs test. Severe cases are treated with plasmapheresis or plasma exchange. Cases not related to drugs or diarrhea can be treated with steroids.

134. anxiety + weight loss of 10 kg :

A- major depression

B- secondary depression

Answer: these are the only symptoms?

Incomplete question.

135. Agitation, hallucinations, euphoria:

A- amphetamin toxicity

B- cannabis toxicity

C- cocaine withdrawal

Answer: a

Reference: Master the board

Please refer to the table below for details about presentation and treatment of intoxication and withdrawal

Presentation and Treatment of Intoxication and Withdrawal				
Substance	Signs and symptoms of Intoxication	Treatment of Intoxication	Signs and symptoms of withdrawal	Treatment of withdrawal
Alcohol	Talkative, sullen, gregarious, moody, disinhibited	Mechanical ventilation if severe	Tremors, hallucinations, seizures, delirium tremens	Benzodiazepines, thiamine, multivitamins, folic acid
Amphetamines and cocaine	Euphoria, hypervigilance, autonomic hyperactivity, weight loss, pupillary dilatation, perceptual disturbances	Antipsychotics and/or benzodiazepines and/or antihypertensives	Anxiety, tremulousness, headache, increased appetite, depression, risk of suicide	Bupropion and/or bromocriptine
Cannabis	Impaired motor coordination, slowed sense of time, social withdrawal, increased appetite, conjunctival injection	None	None	None
Hallucinogens	Ideas of reference, perceptual disturbances, impaired judgment, tremors, incoordination, dissociative symptoms	Antipsychotics and/or benzodiazepines and/or talking down	None	None
Inhalants	Belligerence, apathy, aggression, impaired judgment, stupor, or coma	Antipsychotics	None	None
Opiates	Apathy, dysphoria, pupillary constriction, drowsiness, slurred speech, coma, or death	Naloxone	Fever, chills, lacrimation, abdominal cramps, muscle spasms, diarrhea	Clonidine, methadone, or buprenorphine
Phencyclidine (PCP)	Belligerence, psychomotor agitation, violence, nystagmus, hypertension, seizures	Antipsychotics and/or benzodiazepines and/or talking down	None	None
Anabolic steroids	Irritability, aggression, mania, psychosis	Antipsychotics	Depression, headaches, anxiety, increased concern over body's physical state	SSRIs

136.reatment of clostridium difficile is...

Vancomycin (metronidazole not in the choices)

Answer: a

Reference: BMJ

Both metronidazole and vancomycin are used to treat pseudomembranous colitis

137.Psoriasis (silver scale) involving 15% of skin treatment..

Oral methotrexate

Treatment of psoriasis:

- Mild (<5% BSA)
 - Topical corticosteroid and/or topical vitamin D analogue
- Moderate (5-10% BSA) to severe (>10% BSA)
 - Phototherapy

- Methotrexate
- Apremilast (oral PDE-4 inhibitor)
- Biological agents (infliximab, adalimumab, etc)
- Oral retinoid

138. How to prevent chlamydia trachomatis infection.

Don't know the choices but remember enhance sanitation (not sure if it's the answer)

Mid esophageal tumor ddx..

[SCC of esophagus](#)

Answer: a

Dermatology



1- A beach guard who stays most of the time under the sun, presented to you complaining of new papules over his nose and cheeks. What is the most likely diagnosis?

- A. Melasma
- B. Hamartoma
- C. Freckling
- D. Actinic keratosis

Answer: D

Explanation: ill-defined, scaly erythematous papules or plaques on a background of sun-damaged skin (solar heliosis). sites: areas of sun exposure (face, ears, scalp if bald, neck, sun-exposed limbs).

risk of transformation (dysplasia) of AK to SCC (~1/1,000) .

Reference: [Toronto notes / dermatology section p.31](#)

2- A patient with a typical history of herpes zoster infection with dermatomal involvement? (Rash in the dermatomal distribution of the trunk)

- A. HSV
- B. Herpes Zoster
- C. Bacterial vaginosis

Answer: B

Explanation: Unilateral dermatomal eruption occurring 3-5 days after pain and paresthesia of that dermatome. typically involves a single dermatome , lesions rarely cross the midline)
distribution: thoracic (50%), trigeminal (10-20%), cervical (10-20%); disseminated in HIV. Hutchinson's sign: involvement of tip of nose suggests eye involvement.

Reference: [Toronto notes dermatology P.28](#)

3- Patient with psoriasis involving 15% of his body with nail involvement. What is the best treatment for him?

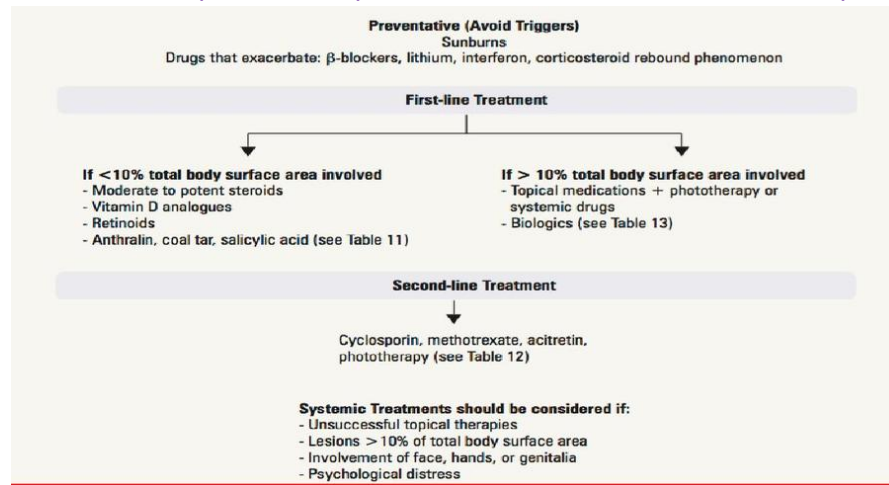
- A. Laser
- B. Topical steroid
- C. Topical vitamin D analogs
- D. Methotrexate

Answer: D

Explanation : Methotrexate can be used in severe psoriasis (involving more than 10% of body surface). Patients with more than 5 to 10 percent body surface area affected are generally candidates for phototherapy or systemic therapy, since application of topical agents to a large area is not usually practical or acceptable for most patients.

There is ample evidence of efficacy of the newer systemic therapies; however, cost is a major consideration with these agents. Established therapies such as methotrexate and phototherapy continue to play a role in the management of moderate to severe plaque psoriasis.

Reference: <https://www.uptodate.com/contents/treatment-of-psoriasis>



4- Picture of a woman's face with comedones and papules on the cheek. Which of the following drugs should be avoided?



- A. Retinoic acid
- B. Erythromycin
- C. Tetracycline
- D. Steroids

Answer: D

**Acne Exacerbating Factors**

- Systemic medications: lithium, phenytoin, steroids, halogens, androgens, iodides, bromides, danazol
- Topical agents: steroids, tars, ointments, oily cosmetics
- Mechanical pressure or occlusion, such as leaning face on hands
- Emotional stress

Reference: Toronto Notes P.11

5- Description of a man with red nodules and papules on the face involving mainly the cheeks and nose. Few telangiectasias are also present. What treatment will you suggest?



- A. Cold compresses
- B. Oral doxycycline
- C. Topical retinoic acid
- D. Topical steroids

Answer: B

Reference: Fitzpatrick

It's a case of rosacea. (avoid topical corticosteroids, telangiectasia: treated by physical ablation; electrical hyfrecators, vascular lasers, and intense pulsed light therapies).



Guidelines for the Diagnosis of Rosacea

J Drugs Dermatol 2012;11(6):725-730

Presence of one or more of the following primary features:

- Flushing (transient erythema)
- Nontransient erythema
- Papules and pustules
- Telangiectasia

May include one or more of the following secondary features:

- Burning or stinging
- Dry appearance
- Edema
- Phymatous changes
- Ocular manifestations
- Peripheral location

1st Line	2nd Line	3rd Line
Oral tetracyclines (250-500 mg PO bid) Topical metronidazole Oral erythromycin (250-500 mg PO bid) Topical azelaic acid	Topical clindamycin Topical erythromycin 2% solution Topical benzoyl peroxide Oral metronidazole Ampicillin	Oral retinoids Topical sulfur

6- 18 years old girl with vitiligo on the face and arm that is symmetrical started on medical treatment 3 years ago. She wants to get married soon and wants the lesions go away. What will you do for her?

- E. Split thickness graft
- F. Continue medical treatment
- G. Melanocyte transfer
- H. Stop medication and observe

Answer: C

Reference: BMJ

This is the most likely answer by exclusion. Melanocyte transfer is usually recommended in patients with inactive disease for at least 6 months (and some recommend up to 2 years), and the patient should not have a history of Koebner's phenomenon.

7- A long scenario about a rash over the elbows, knees, and cheeks that is itchy, weeps and crusts which got better with steroids. What is the diagnosis?

- A. HSV
- B. Staph
- C. Fungal
- D. Eczema

Answer: D



Triggers for Atopic Dermatitis

- Irritants (detergents, solvents, clothing, water hardness)
- Contact allergens
- Environmental aeroallergens (e.g. dust mites)
- Inappropriate bathing habits (e.g. long hot showers)
- Sweating
- Microbes (e.g. *S. aureus*)
- Stress

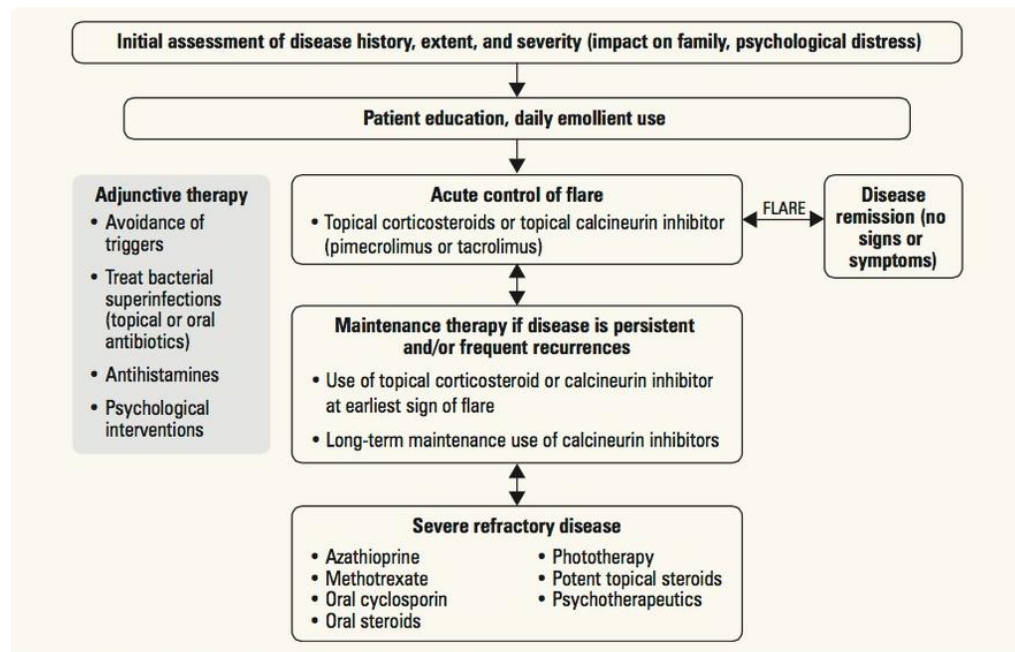
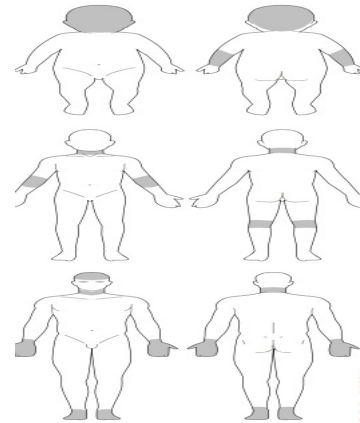


Figure 5. Atopic dermatitis treatment algorithm

Adapted from: Ellis C, et al. ICCAD II Faculty. International Consensus Conference on Atopic Dermatitis II (ICCAD II): clinical update and current treatment strategies. *Br J Dermatol* 2003;148(Suppl 63):3-10

8- A patient complaining of itchiness that increases at night, superficial linear burrows around 4th & 5th digits, inflammatory papules and nodules?

- A. Atopic dermatitis
- B. Allergic dermatitis
- C. Scabies
- D. Tinea

Answer: C

Reference: Master the board, Fitzpatrick

primary lesion: superficial linear burrows; inflammatory papules and nodules. Most common sites: finger webs, periumbilical and groin, common sites: axillae, groin, buttocks, hands/feet (especially web spaces), sparing of head and neck (except in infants)

Management : bathe, then apply **permethrin 5% cream** (i.e. Nix®) from neck down to soles of feet (must be left on for 8-14 h and requires second treatments it is not ovicidal), in pregnancy permethrin is not used due to neurotoxicity. Instead topical sulfur is considered safe, change underwear and linens; wash twice with detergent in hot water cycle then machine dry, treat family and close contacts.

9- Which of the following drugs is used for acne rosacea?

- A. Erythromycin
- B. Clindamycin
- C. Cephalexin

Answer: A

Explanation: 1st line in the treatment of rosacea is oral tetracycline , Erythromycin, topical Metronidazole or Topical azelaic acid.

Reference: Toronto notes Dermatology P.13

10- Treatment of pyoderma gangrenosum?

- A. Methotrexate.
- B. Antibiotics.
- C. Systemic Steroids.

Answer: C

Explanation: Small ulcer: potent topical steroids, large ulcer: systemic steroid
Treatment is non-surgical. The necrotic tissue should be gently removed. Wide surgical debridement should be avoided during the active stage of pyoderma gangrenosum because it may result in enlargement of the ulcer. Skin grafting and other surgical procedures may be performed when the active disease phase has settled, with care to minimise trauma

Reference: <https://www.dermnetnz.org/topics/pyoderma-gangrenosum/>

11- Condyloma lata is caused by?

Answer: Treponema pallidum

Explanation: Wart-like lesions on the genitals and perianal region .They are generally symptoms of the secondary phase of syphilis, caused by the spirochete, Treponema pallidum.

Reference : Toronto notes dermatology section p.30

12- Condyloma acuminata is caused by?

Answer: Commonly HPV 6 and 11.

Explanation: HPV 16,18,31 and 33 cause cervical dysplasia, SCC and invasive cancer.

Reference : Toronto notes , dermatology section, P.29

13- 30 years-old man came with erythema of the nose and pain in the right eye, there is erythema and nodules in left periorbital area and forehead. What is the most likely diagnosis?

- A. Systemic lupus Erythematosus.
- B. Herpes zoster.
- C. Rosacea.
- D. Measles.

Answer: B

Explanation:

Herpes Zoster Ophthalmicus: Erythematous skin lesions with macules, papules, vesicles, pustules, and crusting lesions in the distribution of the trigeminal nerve. Hutchinson's sign is defined as skin lesions at the tip, side, or root of the nose. This is a strong predictor of ocular inflammation and corneal denervation in HZO, especially if both branches of the nasociliary nerve are involved.

Herpes zoster is caused by reactivation of primary VZV, usually presents with pain described as burning or stabbing, followed by vesicular rash in the affected dermatome. The pain typically precedes the rash and may persist several months after the rash resolves.

Reference: BMJ/Herpes zoster infection + http://eyewiki.aao.org/Herpes_Zoster_Ophthalmicus

14- Schoolboy brought by his mother, he have 2x2 hair loss in the temporal area, hair around this area-clubbed hair. What is the most likely diagnosis?

- A. Trichotillomania.
- B. Alopecia areata.
- C. Tinea infection.
- D. Telogen effluvium

Answer: B

Explanation: I think the scenario is incomplete, however based on this scenario I think alopecia areata is the most appropriate answer.

Trichotillomania is impulse-control disorder characterized by compulsive hair pulling with irregular patches of hair loss, and with remaining hairs broken at varying lengths.

Alopecia : Autoimmune disorder characterized by patches of complete hair loss often localized to scalp but can affect eyebrows, beard and all body hair in rare occasions. key features: non-scarring alopecia, exclamation-mark, positive hair pull test and nail pitting.

Tinea infection (tinea capitis) usually appears as round, scaly patches of alopecia, possibly with dry scales. Kerion may form secondary to bacterial infection (which is elevated purulent inflamed nodule/plaque)

Telogen effluvium is a uniform decrease in hair density secondary to hairs leaving anagen stage and entering telogen stage of hair cycle. Hair loss typically occurs 2-4 months after exposure to precipitant.



Precipitants of Telogen Effluvium
"SEND" hair follicles out of anagen and into telogen

- S**tress and **S**calp disease (surgery)
- E**ndocrine (hypothyroidism, post-partum)
- N**utritional (iron and protein deficiency)
- D**rugs (citraetin, heparin, lithium, IFN, β -blockers, valproic acid, SSRIs)

Reference: Toronto notes , dermatology , p.36-37
<https://www.dermnetnz.org/topics/tinea-capitis/>

15- 16-4 years old child presented with area of 3x3 hair loss, on examination of the area there is multiple pustule. What is the most likely diagnosis?

- A. Aplasia cutis congenita.
- B. Staphylococcal infection.
- C. Trichotillomania.

Answer: A

Explanation: (staph infection alone won't cause hair loss , its only cause pustules so in this case it's look like infection on top of an original Dx which had caused the alopecia which is missing in this scenario , if the child born with areas of alopecia the dx would be Aplasia cutis congenita which later could be complicated by secondary infection)

Aplasia cutis congenital is a condition where a newborn child is missing skin from certain areas. In about 70% of cases, aplasia cutis affects the scalp in a single location, but sometimes multiple lesions may appear on other parts of the body. The areas of skin loss vary in size from 0.5 cm to 10 cm. Secondary infection is one of the complications of cutis aplasia congenital.

Reference: <http://dermnetnz.org/lesions/aplasia-cutis.html>

17- A Picture of 1 month baby with rash and scale what is the most likely cause?



Answer: Seborrheic dermatitis

Explanation: Greasy, erythematous, yellow, scaling, minimally elevated papules and plaques in areas rich in sebaceous glands, can look moist and superficially eroded in flexural regions
infants: “cradle cap”

children: may be generalized with flexural and scalp involvement

adults: diffuse involvement of scalp margin with yellow to white flakes, pruritus, and underlying erythema

sites: scalp, eyebrows, eyelashes, beard, glabella, post-auricular, over sternum, trunk, body folds, genitalia

Reference: Toronto Notes , dermatology section p.16

18-What is the main treatment for non-inflammatory acne?

- A. Azelaic acid
- B. Isotretinoin
- C. Differin cream

Answer: C

Reference: Fitzpatrick

Non-inflammatory acne is a mild form of acne that is characterized by black heads and white heads (open comedones and closed comedones). Comedones are keratin plugs that form within follicular ostia.

Non-inflammatory acne is best treated with topical retinoids. Differin cream is the same as adapalene, which is a topical retinoid

19- What is the treatment for moderate to severe acne vulgaris?

- A. Isotretinoin
- B. Tetracycline
- C. Clindamycin
- D. erythromycin

Answer: A

Reference: Master the board

Treatment

Mild acne: Use topical antibacterials such as **benzoyl peroxide**. If this is ineffective, add topical antibiotics such as **clindamycin** or **erythromycin**.

Moderate acne: Add **topical vitamin A derivatives** such as **tretinoin**, **adapalene**, or **tazarotene** to topical antibiotics. If there is no response to topical vitamin A derivatives and antibiotics, use **oral antibiotics** such as **minocycline** or **doxycycline**.

Severe acne: Add **oral vitamin A**, **isotretinoin** to oral antibiotics. Isotretinoin causes hyperlipidemia

Table 7. Management of Acne (continued)

Drug Name	Mechanism of Action	Notes
MODERATE ACNE: After topical treatments have failed, add oral antibiotics, such as doxycycline (100 mg po bid), minocycline (50 to 100 mg po bid), tetracycline (250 mg PO bid to 500 mg bid), or erythromycin (500 mg PO bid). Antibiotics require 3-6 mo of use before assessing efficacy. Consider hormonal therapy, including antiandrogens		
Tetracycline	Inhibits protein synthesis	Use caution with regard to drug interactions: do not use with isotretinoin. Sun sensitivity
Oral contraceptive pills (Ortho Tri-cyclen[®], Estrostep[®] and Yaz[®] are FDA-approved for acne treatment)	Norgestimate, norethindrone, drospirinone: possesses anti-androgenic, progestogenic and antigonadotrophic activity	After 35 yr of age, estrogen/progesterone should only be considered in exceptional circumstances, carefully weighing the risk/benefit ratio with physician guidance
Spirolactone (off-label use for acne)	Ethinyl estradiol: increases level of SHBG, reducing circulating plasma levels of androgens	May cause hyperkalemia at higher doses
SEVERE ACNE: Consider systemic retinoids after above treatments have failed or if significant scarring present		
Isotretinoin (Accutane[®], Clarus[®])	Retinoid that inhibits sebaceous gland function and regulates keratinization	See Table 25, D44 for full side effect profile Most adverse effects are temporary and will resolve when the drug is discontinued Baseline lipid profile (risk of hypertriglyceridemia), LFTs and β -hCG before treatment May transiently exacerbate acne before patient sees improvement Drug may be discontinued at 16-20 wk when nodule count has dropped by >70% A second course may be initiated after 2 mo pm Refractory cases may require multiple courses of isotretinoin

20-Patient with Positive HPV. What is associated with it?

- A. Hyperkeratosis
- B. Parakeratosis
- C. Apoptosis

Answer: A

Reference: Fitzpatrick, Wikipedia

HPV is associated with differentiated (hyperkeratotic) SCC

Hyperkeratosis is thickening of the stratum corneum (the outermost layer of the epidermis), often associated with the presence of an abnormal quantity of keratin

21 - Patient with single hypopigmented lesion on the forearm, with Ulnar nerve thickness, what is the diagnosis?

- A. Vitiligo
- B. Amyloidosis
- C. TB

Answer: I think it's associated more with leprosy because leprosy can presents with Reference :
<http://nlep.nic.in/pdf/manual3.pdf>

Hypopigmented or reddish skin lesion with Involvement of the peripheral nerves: Demonstrated by definite thickening of the nerve with/ without loss of sensation and/or weakness of the muscles of the hands, feet or eyes supplied. while vitiligo rarely to be associated with nerve thickness. An almost identical to this scenario was found in hematology section and leprosy was one of the choices.

22 - Single Red lesion on shoulder that keeps growing?

- A. Strawberry Nevus
- B. Pyoderma gangrenosum

Answer : A

Explanation: The question is incomplete

- Strawberry nevus (superficial hemangioma): usually appears shortly after birth, increases in size over months, then regresses 50% of lesions resolve spontaneously by age of 5 years.

- Pyoderma gangrenosum usually starts quite suddenly, often at the site of a minor injury. It may start as a small pustule, red bump or blood-blister. The skin then breaks down resulting in an ulcer. The ulcer can deepen and widen rapidly.

Reference <https://www.dermnetnz.org/topics/pyoderma-gangrenosum/>

+ Toronto notes , derma section , p.10

23 - Black to brown lesion on sole of the foot?

Answer:

Explanation: differential diagnosis includes benign nevus, a pigmented seborrheic wart, a squamous cell papilloma, carcinoma or malignant melanoma Kaposi's sarcoma. so the differential is so broad and we need more details.

I think this is mostly between benign nevus and acral lentiginous melanoma.

Reference: <https://www.dermnetz.org/topics/acral-lentiginous-melanoma/>

24 - Diaper rash that is resistant to topical steroids and has satellite lesions on thighs (well demarcated and red), topical antifungal?

Answer:

Explanations :Topical ointments and creams, such nystatin, clotrimazole, miconazole or ketoconazole are effective topical therapies in case of diaper rash due to candida infection.

Reference: <http://emedicine.medscape.com/article/801222-treatment>

25- About baby with multiple plaques in his face, abdomen and feet what is the diagnosis?

- A. Basal cell carcinoma
- B. Squamous cell carcinoma

Answer: Most likely it's eczema (atopic dermatitis) but i'm not sure.

Explanation:

Acute presentation of atopic dermatitis: poorly defined erythematous patches, papules and plaques with or without scales. Edema and widespread involvement is also noted secondary infection with staph. aureus is common

Basal Cell Carcinoma is the most common form of skin cancer. The question will describe a waxy lesion that is shiny like a pearl. Unlike melanoma, wide margins are not necessary, and shave biopsy is a fine way to make diagnosis. Recurrence rates are less than 5%.

Basal cell is a good use of Mohs micrographic surgery (removal of skin cancer under a dissecting microscope with immediate frozen section is one of the most precise methods of treating skin cancer)

Squamous Cell Carcinoma: The second most common skin tumor, with locally destructive effects as well as the potential for metastasis and death. UV light is the most common causative factor, but exposure to chemical carcinogens, prior radiation therapy, and the presence of chronically draining infectious sinuses (as in osteomyelitis) also predispose patients to developing SCC. Most SCCs occur in older adults with sun-damaged skin, arising from actinic keratoses. Diagnosed by clinical suspicion and confirmed by biopsy, which is necessary for accurate diagnosis and appropriate therapeutic planning. Histology shows intraepidermal atypical keratinocytes, with penetration of the basement membrane by malignant epidermal cells growing into the dermis.

Reference: MTB step 2 Ck p.551, First aid step 2 CK p.106, Fitz Patrick color atlas and synopsis p.32.

26- A patient with a typical history of headache, fever and then rash which type of herpes?

- A. HS type 1
- B. HS type
- C. Varicella

Answer : C (chickenpox)

Explanation: varicella is an infectious disease caused by primary infection with varicella-zoster virus (VZV). The disease typically presents with fever, malaise, and a widespread vesicular and pruritic rash primarily on the torso and face. Other features include: headache, sore throat and vesicles on mucous membranes.

Reference: BMJ/Acute varicella-zoster

27- Patient with a localized patch of hair loss?

- A. Male pattern
- B. Female pattern
- C. Something starting with "T" I don't know what it is but I chose it !!

Answer :

Explanation: Androgenetic alopecia:

Clinical presentation:

-Male or female pattern alopecia

*Male pattern hair loss: the hair loss is in fronto-temporal areas progressing to vertex, entire scalp may be bald.

*Female pattern hair loss: diffuse thinning of hair on the scalp due to increased hair shedding or a reduction in hair volume, or both. It is normal to lose up to 50-100 hairs a day. " usually the central part is affected giving Christmas tree pattern"

Reference:

Toronto notes , Dermatology P.36

<https://www.dermnetnz.org/topics/female-pattern-hair-l>

28- Patient came with lobulated nose, erythema over cheeks and (other features indicating rosacea type 4), what is the treatment?

- A. Doxycycline.
- B. Acyclovir.

Answer: A

Please refer to Q 5 for details about rosacea treatment

4- First line of defense in the skin is?

- A. Mucous membranes
- B. Collagenous cell.
- C. Keratinocytes.
- D. Areolar connective tissue

Answer: C

Keratinized skin cells is the first line of defense in the skin and provides a barrier to the entry of microorganisms

29- First immunologic defense of skin?

- A) Keratinocytes
- B) Blast cells
- C) Melanocytes

Answer: A

Reference: Wikipedia

The primary function of keratinocytes is the formation of a barrier against environmental damage by pathogenic bacteria, fungi, parasites, and viruses, heat, UV radiation and water loss. Once pathogens

start to invade the upper layers of the epidermis, keratinocytes can react by producing proinflammatory mediators, particularly chemokines such as CXCL10 and CCL2 which attract leukocytes to the site of pathogen invasion.

30- Scenario for patient with scabies what is the treatment of choice?

Answer:

1-treated overnight with 1-2 applications of 5% permethrin from neck down +their contacts should be treated

2-oral ivermectin

3-symptoms treatment “pruritus”

Reference: FIRST AID USMLE STEP2 CK

31- A patient presented with maculopapular rash and fever no vaccination before ?

A) Measles

B) Mumps

C) Rubella

Answer: it could be A or C.

“Although the distribution of the rubella rash is similar to that of rubeola”measles”, the spread is much more rapid, and the rash does not darken or coalesce”

also Rubella has low grade fever

Measles has a high grade fever

Reference: Uptodate

Mumps: low-grade fever, malaise, headache, myalgias, and anorexia. These symptoms are generally followed within 48 hours by the development of parotitis

32-About patient on long uses of topical steroids, what will happen ?

A. Scaling

B. Atrophy

Answer: B

Side effects of local steroids includes:

- Skin thinning (atrophy)
- Stretch marks (striae) in armpits or groin
- Easy bruising (senile/solar purpura) and tearing of the skin.
- Localised increased hair thickness and length(hypertrichosis)
- Enlarged blood vessels (telangiectasia)

31- Pregnant +ve hx of herpetic outbreak annually, on examination everything is normal. What is the management?

A Reassurance

B Acyclovir

Answer: A ? not sure

32- How to decrease the keratosis?

A. Wound trauma

B. Use AB

C. Avoid sun exposure

Answer : C

Reference: Toronto notes – dermatology

33- Pt have nodulo-cystic acne how to management?

A. Clindamycin

B. Oral AB

C. Erythromycin

D. Isotretinoin

Answer : D

Reference: Fitzpatrick's Color Atlas and Synopsis of Clinical Dermatology – Page6

34- A case of a patient diagnosed to have cutaneous leishmania or bgh- labar/ bhagdad type which type of leishmania ? or what's the organism ?

A. Tropica

B. Donovanii

C. Post kala-azar dermal leishmaniasis

Answer: A

(question is not clear, but by exclusion, A would be the most appropriate answer based on geographical distribution as its one of the Old World cutaneous leishmaniasis)

CUTANEOUS AND MUCOCUTANEOUS LEISHMANIASIS

Clinical syndromes: cutaneous, mucosal, visceral.

- Cutaneous leishmaniasis (CL) characterized by development of single or multiple cutaneous papules at the site of a sandfly bite, often evolving into nodules and ulcers, which heal spontaneously with a depressed scar.

- Old World cutaneous leishmaniasis (OWCL)

New World cutaneous leishmaniasis (NWCL)

- Diffuse (anergic) cutaneous leishmaniasis

(DCL)

- Mucosal leishmaniasis (ML)

- Visceral leishmaniasis (VL); kala-azar; post-kalaazar

dermal leishmaniasis (PKDL)

Management: parenteral antimonials for significant

Disease

Reference: Fitzpatrick's Color Atlas and Synopsis of Clinical Dermatology – Page888

http://www.uptodate.com/contents/clinical-manifestations-and-diagnosis-of-cutaneous-leishmaniasis?source=search_result&search=leishmania&selectedTitle=1~93

35- Oropharyngeal maculopapular rash , Also rash in palm and foot ?

A. CMV

B. EBV

C. Coxsackievirus

D. Vaccinia virus

Answer: C

typical description of hand, foot and mouth disease (coxsackie virus A16)]

Reference:

<http://www.uptodate.com/contents/hand-foot-and-mouth-disease-and-herpangina-an-overview>

36- 2 year old complain of papule on the foot no itching pink pale not respond for antifungal?

Answer: Granuloma

Granuloma annulare is a common skin condition with raised, flesh-colored bumps that appear in a ring. It may occur on any part of the body (though most commonly on the sides or backs of the hands or feet). The bumps may be red at the beginning, but this disappears as the ring forms. There is no itching or scaling.

Reference: <http://www.uptodate.com/contents/granuloma-annulare>

37- Isotretinoin most feared complication?

Answer: Birth defect.

Isotretinoin (roaccutane) is teratogenic it can cause embryopathy in 20 - 30 % and spontaneous abortion is approximately 20 %

Reference: <http://www.uptodate.com/contents/oral-isotretinoin-therapy-for-acne-vulgaris>

Adverse effect	
Adverse effect	Comment
Cheilitis	May be severe, fissuring, bleeding, impetiginization
Dry nose	Occasional epistaxis
Dry eyes	Problematic for contact-lens wearers
Decreased night vision	Rare
Corneal ulcers/opacities	Very rare
Photosensitivity	Rare in Indians
Headaches	May indicate pseudotumor cerebri/overdose
Hair loss	Indicates overdose
Hyperostosis	Rare, dose-dependent
Elevated triglycerides	Common, reversible, occasionally precipitate pancreatitis
Elevated cholesterol	Uncommon, reversible
Hepatitis	Rare
Inflammatory bowel disease	Rare
Rhabdomyolysis	Rare, idiosyncratic, dose-independent
Teratogenicity	
Depression, suicidal ideation	Controversial

38- Young female, loss of hair half of her head and the skin is normal?

A. Alopecia

B. Trichomania

Answer: No Enough details but it could be Trichomania

Alopecia types

1- Non-scarring:

☞ ANDROGENETIC ALOPECIA

Clinical Presentation

- male- or female-pattern alopecia
- males: fronto-temporal areas progressing to vertex, entire scalp may be bald
- females: widening of central part, “Christmas tree” pattern

☞ PHYSICAL

- trichotillomania: impulse-control disorder characterized by compulsive hair pulling with irregular patches of hair loss, and with remaining hairs broken at varying lengths
- traumatic (e.g. tight “corn-row” braiding of hair, wearing tight pony tails, tight tying of turbans)

☞ TELOGEN EFFLUVIUM

Clinical Presentation

- uniform decrease in hair density secondary to hairs leaving the growth (anagen) stage and entering the resting (telogen) stage of the cycle

☞ ANAGEN EFFLUVIUM

Clinical Presentation

- hair loss due to insult to hair follicle impairing its mitotic activity (growth stage)

☞ ALOPECIA AREATA

Clinical Presentation

- autoimmune disorder characterized by patches of complete hair loss often localized to scalp but can affect eyebrows, beard, eyelashes, etc.
- may be associated with dystrophic nail changes – fine stippling, pitting
- “exclamation mark” pattern

2- scarring:

Clinical Presentation

- irreversible loss of hair follicles with fibrosis

Reference: : <http://emedicine.medscape.com/article/1071854-overview#a6>

Patient diagnosed with shingles around thoracic dermatome, what will you give him?

A. Topical acyclovir and topical steroid

B. Oral steroid

C. Oral acyclovir

Answer: C

Reference: Toronto notes – dermatology

39- Male with pustules and papules and telangiectasia , what is the diagnosis ? Answer: Rosacea.

Guidelines for the Diagnosis of Rosacea

Presence of one or more of the following primary features:

- Flushing (transient erythema)
- Nontransient erythema
- Papules and pustules
- Telangiectasia

☞ Rosacea can be differentiated from acne by the absence of comedones, a predilection for the central face and symptoms of flushing

Reference: Toronto notes – dermatology

45- Question about description of scarlet fever rash?

Answer: The rash of scarlet fever is a diffuse erythema that blanches with pressure, with numerous small (1 to 2 mm) papular elevations, giving a "sandpaper" quality to the skin. It usually starts in the groin and armpits and is accompanied by circumoral pallor and a strawberry tongue. Subsequently, the rash expands rapidly to cover the trunk, followed by the extremities, and, ultimately, desquamates; the palms and soles are usually spared. The rash is most marked in the skin folds of the inguinal, axillary, antecubital, and abdominal areas and about pressure points. It often exhibits a linear petechial character in the antecubital fossae and axillary folds, known as Pastia's lines.

46- Patient present to the ER with erythema and peeling of the skin with fever and other things?

A-Toxic epidermal syndrome B-Neisseria meningitidis

C- Septicemia

Answer: A

- Toxic Epidermal Necrolysis: Mucous membrane involvement, and severe blistering "Atypical lesions": 50% have no target lesions Diffuse erythema then necrosis and sheet-like epidermal detachment in >30% of BSA, high grade fever

Table 13. Comparison of Erythema Multiforme, Stevens-Johnson Syndrome, Toxic Epidermal Necrolysis

	Lesion	Sites	Other Complications	Constitutional Symptoms	Etiology	Differential Diagnosis	Course and Prognosis	Management
Erythema Multiforme	Macules/papules with central vesicles Classic bull's-eye pattern of concentric light and dark rings (typical target lesions) Bilateral and symmetric All lesions appear within 72 h May show dermal edema Lesion "fixed" for at least 7 d	Dorsa of hands and forearms Mucous membrane involvement (lips, tongue, buccal mucosa) is possible Extremities with face > trunk Involvement of palms and soles	Burning and stinging Recurrences Secondary bacterial infection	Weakness, malaise	Infection: HSV, or Mycoplasma pneumoniae	Urticaria, granuloma annulare, mycosis fungoides, vasculitis	Lesions last 2 wk and heal without complications	Symptomatic treatment (oral antihistamines, oral antacids) Corticosteroids in severely ill (controversial) Prophylactic oral acyclovir for 6-12 mo for HSV-associated EM with frequent recurrences
Stevens-Johnson Syndrome	Cutaneous blistering with mucous membrane involvement (especially lips) "Atypical lesions": red circular patch with dark purple center (i.e. targetoid) "Sicker" (high fever) Sheet-like epidermal detachment in <10% of BSA (Nikolsky sign)	Prominent face and trunk involvement Palms and soles may be involved later on <10% body surface area involved by detached and detachable skin	Infection, scarring, contractures, eruptive NMN, corneal scarring, blindness, phimosis, and vaginal synechiae	Prodrome 1-14 d prior to eruption with fever and flu-like illness	Frequently drug-related (NSAIDs, anticonvulsants, sulfonamides, penicillins) Occurs up to 1-3 wk after drug exposure with more rapid onset upon rechallenge	Scarlet fever, phototoxic eruption, GVHD, SSSS, exfoliative dermatitis, Kawasaki disease, paraneoplastic pemphigus	4-6 wk course 5% mortality	Prolonged hospitalization, admit to burn unit if significant denudation Withdraw suspect drug Intravenous fluids Infection prophylaxis Consider IVig vs. cyclosporine (corticosteroids controversial)
Toxic Epidermal Necrolysis	Mucous membrane involvement, and severe blistering "Atypical lesions": 50% have no target lesions Diffuse erythema then necrosis and sheet-like epidermal detachment in >30% of BSA	Nails may also shed	Same as SJS PLUS electrolyte imbalance, dehydration, tubular necrosis and acute kidney injury, epithelial erosions of trachea, death	High fever >101°F	Same as SJS	Same as SJS	30% mortality due to fluid loss, regrowth of epidermis by 3 wk, secondary infection	Same as SJS Admit to burn unit Consider IVig vs. cyclosporine

Reference: Toronto notes – dermatology

47- Symmetrical hypo pigmentation with no scaling for 1 year and it's progressing with no previous lesion?

A. Post inflammatory

B. Vitiligo

C. Leprosy

Answer: B (by exclusion)

Vitiligo

- is a primary pigmentary disorder characterized by depigmentation
- acquired destruction of melanocytes characterized by sharply marginated white patches
- associated with streaks of depigmented hair, chorioretinitis
- sites: extensor surfaces and periorificial areas (mouth, eyes, anus, genitalia)
- Koebner phenomenon, may be precipitated by trauma

Reference: Toronto notes – dermatology

48- Scabies ,what's the organism ? Answer: **Sarcoptes scabiei**

SCABIES

Clinical Presentation

- characterized by superficial burrows, intense pruritus (especially nocturnal), and secondary infection

Etiology

- *Sarcoptes scabiei* (a mite)
- risk factors: sexual promiscuity, crowding, poverty, nosocomial, immunocompromised

Management

- bathe, then apply permethrin 5% cream (i.e. Nix®) from neck down to soles of feet.
- in pregnancy permethrin is not used due to neurotoxicity. Instead topical sulfur is considered safe
- treat family and close contacts

Reference: Toronto notes – dermatology

49- Purple,papule,polygonal rash on the flexors? Answer: **Lichen planus**



Reference: Toronto notes – dermatology

50- Child with maculopapular rash on the face and nose (not sure about vesicles) White spot inside cheeks, I think there is fever?

- Mumps
- Measles
- HSV1
- Varicella zoster virus

Answer: B

The answer depends on vesicle if it present it would be vsv if absent would be measles. white spot inside mouth could be (koplik spot) in this case the answer is measles.

51- DM pt with has lesion papule on dorsum of right hand ?

- Granuloma annulare
- Lichen plants

C. Fungal infection

Answer: A (by exclusion)

Reference: Fitzpatrick's Color Atlas and Synopsis of Clinical Dermatology – Page134

52- Old patient with diffuse thinning of hair and without eyelash, What is the diagnosis ?

Answer: Alopecia areata

Reference: http://www.uptodate.com/contents/clinical-manifestations-and-diagnosis-of-alopecia-areata?source=see_link

53- What is most commonly cause itching ?

A. Bile salt retention

B. Eczema

C. Pregnancy

Answer: B

Reference: http://www.uptodate.com/contents/pruritus-etiology-and-patient-evaluation?source=search_result&search=itching&selectedTitle=2~150#H690781

54- Female recently used eye cream and developed inflammation in the face with redness?

A. Contact dermatitis

B. Seborrheic dermatitis

Answer: A

Note: Seborrheic : condition affecting infant and cause yellow crusty greasy scaling.

Contact: due to contact to material of clothing soap lotion chemical detergent and medication.

55- Case of Contact dermatitis, what is the Treatment ?

A. Topical steroid

B. Systemic steroid

C. Systemic antibiotic

D. Fluconazole

Answer : A

Irritant contact: Topical class I glucocorticoid preparations. In severe cases, systemic glucocorticoids may be indicated.

Allergic contact: Topical initially, systemic Glucocorticoids are indicated if severe (i.e., if patient cannot perform usual daily functions, cannot sleep).

Reference: Fitzpatrick's Color Atlas and Synopsis of Clinical Dermatology – Page20

56- Patient with nodulo-cystic acne with scar what is the treatment ?

A. Oral isotretinoin ' retinoids '

B. Oral antibiotics

C. Topics antibiotics

Answer: A

(repeated)

57- Question about Angioedema ?

Answer : Angioedema is form of urticaria in which there is deeper swelling in the skin which may take longer than 24 Hours to clear.

58- Rash that involved the palms and soles but spared the face?

- A. Chancroid
- B. Syphilis
- C. Herpes
- D. Leishmaniasis

Answer : B

List of rashes involved Palm & soles :

Meningococemia

Keratoderma blenorrhagica (Reiter's syndrome) Typhus

Acral lentiginous melanoma Hand, Foot, and Mouth Disease Mercury poisoning in children Bacterial endocarditis

Tylosis

Rocky Mountain Spotted Fever Graft Versus Host Disease rash.

Kawasaki, Measles, or Toxic Shock Syndrome Steven Johnson syndrome

Secondary and Congenital Syphilis with it's characteristic Copper colored rash.

59- Itching in lower limbs ,otherwise normal ?

- A. Tinea
- B. Scabies

Answer:??

Maybe a sign of a serious internal disease not dermatological disease OR stress.

(question is not clear)

60- Vesicles highly suspected roundworms ?

- A. Ascaris
- B. Taenia saginata

Answer: ???

(couldn't find any association of skin symptoms and roundworms, only Taenia solium a flatworm can cause skin symptoms)

Reference: [Toronto notes – dermatology](#)

61- Alopecia, in a boy who performs poorly in school ?

Answer: [Trichotillomania](#)

It's a compulsive disorder resulting in Alopecia from repetitive hair manipulation by the patient's own hand.

62- Patient with hyperpigmented non pruritic papules in the dorsum of the hands not resolved with antifungal ?

- A. Tinea corporis
- B. Lichen planus

Answer: ?? Other choice!

(Repeated-Probably same as question 36)

Lichen planus : 6 P : pruritic , purple, polygonal, papules and plaques.

hyperpigmented lesions that doesn't resolved by antifungals but it cause pruritis!!

Treatment: Topical corticosteroids with occlusion or intradermal steroid injections. Reference:

[Toronto notes – dermatology](#)

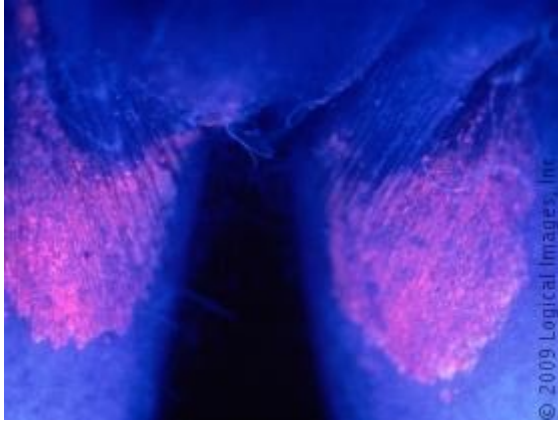
63- Pic / pink patch under wood's lamp it fluorescent a coral red color Dx ?

- A. Erythrasma

- B. Fungal infection
- C. Vitiligo

Answer: A

Caused by G+ve bacteria *Corynebacterium minutissimum*.



64- Treatment of folliculitis ?

Answer:

scalp folliculitis:

Topical antibiotics eg fusidic acid gel, clindamycin solution, erythromycin solution Mild topical steroid lotions or creams

Oral antihistamines

Oral antibiotics, particularly long-term tetracycline Oral isotretinoin – long-term low dose treatment.

(if the question is talking about infectious folliculitis, there are Bacteria, fungi, virus, mites. Each has its own treatment, I recommend to read the reference)

Reference: Fitzpatrick's Color Atlas and Synopsis of Clinical Dermatology – Page993

65- Trichotillomania treatment ?

Answer: I don't know Choices but the best answer is (Cognitive behavioral therapy).

<http://emedicine.medscape.com/article/1071854-treatment#d10>

66- Treatment of acne rosacea?

Answer : oral AB (Doxycycline) and topical Antibiotics, like metronidazole for mild to moderate.

Reference: Toronto notes – dermatology

67- Scrape of skin can be done in which of the following?

Answer: Scabies

Most effective drug for Rx is permethrin cream.

Management

- bathe, then apply permethrin 5% cream (i.e. Nix®) from neck down to soles of feet.
- in pregnancy permethrin is not used due to neurotoxicity. Instead topical sulfur is considered safe
- treat family and close contacts

Reference: Toronto notes – dermatology

68- Picture of lichen planus

<http://emedicine.medscape.com/article/1123213-overview>

69- Patient is brought by his parent because of loss of hair. On examination: he had localized patch of hair loss at temporal area, the end of hair looked broken and tapered. What is the diagnosis?

A. Alopecia Areata.

B. Trichotillomania.

Answer: Trichotillomania



Reference: Toronto notes – dermatology

70- Multiple myeloma in the spine?

Answer: Histopathology report

(bone marrow aspirate and biopsy)

Reference: Toronto notes – hematology

71- Adult male on multiple drug came with violaceous maculopapular lesion in the trunk
Diagnosis?

A. Erythema multiforme

B. Toxic epidermal necrolysis

Answer: Exanthematous (maculopapular) drug eruption



<http://www.aafp.org/afp/2010/0315/p726.html>

72- Patient c/o rash over elbows, knees, and cheeks? Answer : Eczema , But If there's no cheek it will be psoriasis.

73- Treatment of moderate to severe acne vulgaris

- A. Isotretinoin
- B. Clindamycin
- C. Tetracycline

Answer: A

Reference: Toronto notes – dermatology

74- Case of scabies very clear.

Answer: May be as Diagnosis there's night itching.

Permethrin 5% lotion. Alternative drug therapy includes precipitated sulfur 6% in petrolatum, lindane, benzyl benzoate, crotamiton, and ivermectin; a possible new option is albendazole. repeat applic'ation in 7 days. <http://emedicine.medscape.com/article/1109204-medication>

75- Patient dx with cutaneous leishmania what is the organism ? Answer: Lishmenia aka aza

Kala azar is other name for a Visceral leishmaniasis!

(repeated)

76- Female patient obese with regular menstrual cycle , on PE/ she had acne , other examination is normal , what investigation will you order ?

- A. TSH
- B. ACTH

Answer: B for cushing!

Reference: Toronto notes – endocrine

77- Pyoderma with any disease? Answer: immunodeficiency patient.

Commonly associated diseases include inflammatory bowel disease, either ulcerative colitis or regional enteritis/Crohn disease, and a polyarthritis that is usually symmetrical and may be either seronegative or seropositive. Hematologic diseases/disorders are other commonly associated conditions; these include leukemia or preleukemic states, predominantly myelocytic in nature or monoclonal gammopathies (primarily immunoglobulin A [IgA])

Refrence: <http://emedicine.medscape.com/article/1123821-clinical>

78- Keratitis caused by parasites? Answer : Acanthamoeba keratitis

Note : Acanthamoeba keratitis, or AK, is a rare but serious infection of the eye that can cause permanent vision loss or blindness. This infection is caused by a tiny ameba (single-celled living organism) called Acanthamoeba. Acanthamoeba causes Acanthamoeba keratitis when it infects the cornea, the clear dome that covers the colored part of the eye.

79- Infant suffer from groin rash , spare folds? Answer: diaper rash dermatitis .

Other names: Napkin dermatitis.

Reference: Fitzpatrick's Color Atlas and Synopsis of Clinical Dermatology – Page59

80- White patches after sun exposure treatment?

- A. Antibiotic
- B. Antifungal (selenium sulfide)

Answer : B

It's pityriasis versicolor (tinea flava)

PITYRIASIS (TINEA) VERSICOLOR

Clinical Presentation

- asymptomatic superficial fungal infection with finely scaling macules of various colors.
- common sites: upper chest and back

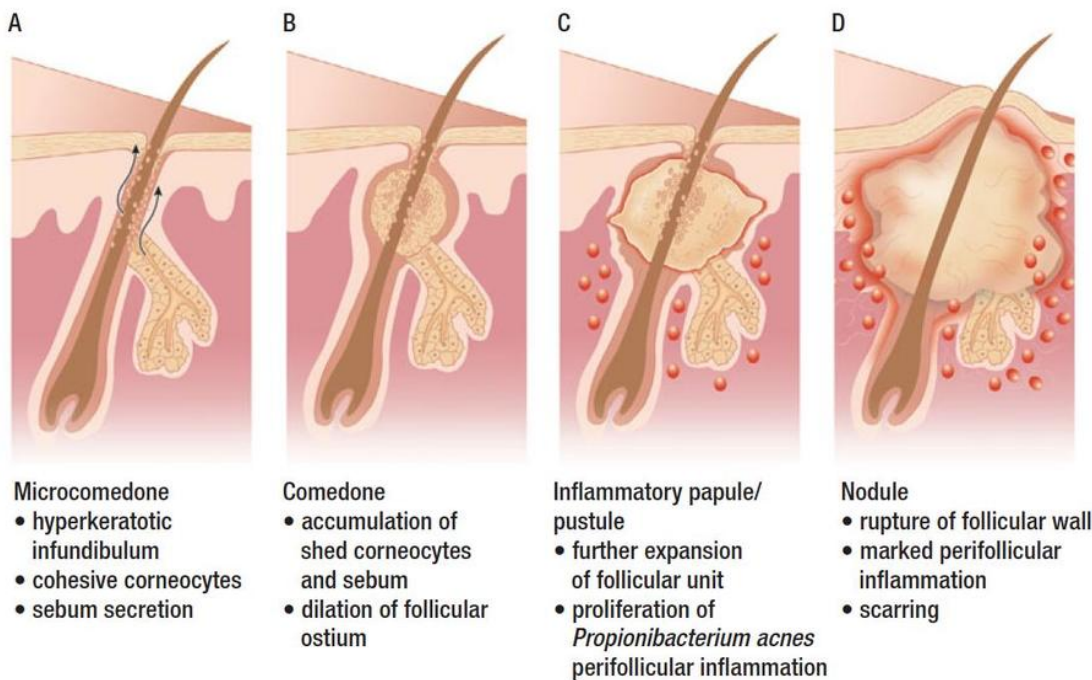
Reference: Toronto notes – dermatology

81- Patient with acne come with comedones and presence of pustules what is the type of acne ?

- A. Obstructive
- B. Inflammatory
- C. Infectious
- D. Obtrusive

Answer : B

Papules and pustules represent inflammatory acne lesions.



Reference: Fitzpatrick's Color Atlas and Synopsis of Clinical Dermatology – Page4

2- Commonest site for Lichen planus is?

- A. Mouth
- B. Abdomen

Answer : A (by exclusion)

- Distribution: predilection for flexural aspects of arms and legs, can become generalized.
- Main symptom: pruritus; in the mouth, pain.

Reference: Fitzpatrick's Color Atlas and Synopsis of Clinical Dermatology – Page128

82- Postcholecystectomy developed parotid enlarge ?

- A. Bacterial sialadenitis

(I think they mean: Acute surgical parotitis [sialoadenitis] by S.Arues)

83- Angular cheilosis deficiency in ?

- A. B12
- B. B6

Answer: B

Angular cheilitis is a common inflammatory condition affecting the corners of the mouth or oral commissure.

84- Patient with lower limb weakness and sensation also angular stomatitis ?

- A. Vit B3 niacin
- B. Vit B1 thiamin

Answer: Vit B1 thiamin “ Beri Beri “

Thiamin deficiency: Three well-described manifestations include: beriberi (dry and wet), infantile beriberi, Wernicke encephalopathy with Korsakoff syndrome
Alcoholism is a cause of reduced intake of thiamine, leading to deficiency.

Reference: Toronto notes – neurology

85- Non pruritic pink eruption of the right foot no scales no history of infection?

Answer : Granuloma annulare

(repeated)

86- Question about Hives (urticaria).

<http://acaai.org/allergies/types/skin-allergies/hives-urticaria>

Toxin	Treatment
Acetaminophen	Decontaminate (activated charcoal) N-acetylcysteine
Acute Dystonic Reaction	Benzotropine: 1-2 mg IM/IV then 2 mg PO x 3 d OR Diphenhydramine 1-2 mg/kg IV, then 25 mg PO qid x 3 d
Anticholinergics	Decontaminate (activated charcoal) Supportive care
ASA	Decontaminate (activated charcoal) Alkalinize urine; want urine pH >7.5
Benzodiazepines	Decontaminate (activated charcoal) Flumazenil Supportive care
β-blockers	Decontaminate (activated charcoal) Consider high dose insulin euglycemia therapy Some dialyzable, some use intralipids
Calcium Channel Blockers	Decontaminate (activated charcoal) CaCl ₂ 1-4 g of 10% solution IV if hypotensive Other: high dose insulin euglycemia, inotropes or intralipids
Cocaine	Decontaminate (activated charcoal) if oral Aggressive supportive care

87- Contact with moulds in a new apartment her son develop a Rash in his hand and resolve completely, After a while he develop multiple rash?

- A. Maculo papular
- B. wheal (urticaria)
- C. Plaque
- D. Cup?

Answer: B

88- Man live in desert present with skin lesion on forearm ,microscope show donovani what is treatment?

A. Leishmaniasis

(repeated)

<http://emedicine.medscape.com/article/220298-treatment#d11>

89- Lady with spot of hair loss over the scalp with normal underlying skin, what's the Dx?

Answer: Alopecia areata

Alopecia areata is a recurrent non scarring type of hair loss that can affect any hair-bearing area and can manifest in many different patterns.

The presence of smooth, slightly erythematous (peach color) or normal-colored alopecic patches is characteristic.

Referance: <http://emedicine.medscape.com/article/1069931-clinical#b4>

90- Patient with macular hypopigmentation and no history of chronic disease ?

A. Vitiligo

B. Albinism

C. Psoriasis

D. Melanoma

Answer: A

Reference: Toronto notes – dermatology

91- Hypopigmentation and loss of sensation in forearm with ulnar nerve thick- ness?

Answer: Leprosy

Leprosy (Hansen's Disease)

- Etiology: Mycobacterium leprae: obligate intracellular bacteria, slow-growing (doubling time 12.5 d), survives in macrophages
- bacteria transmitted from nasal secretions, potentially via skin lesions
- invades skin and peripheral nerves leading to chronic granulomatous disease

Reference: Toronto notes – dermatology

92- Patient develop 2 cm dome shape mass in the dorsum of the hand , it's cover by keratin What is the diagnosis ?

Answer: Keratoacanthoma

Medscape: Lesions typically are solitary and begin as firm, roundish, skin-colored or reddish papules that rapidly progress to dome-shaped nodules with a smooth shiny surface and a central crateriform ulceration or keratin plug that may project like a horn. Most keratoacanthomas occur on sun-exposed areas. The face, neck, and dorsum of the upper extremities are common sites.

93- Patient has family history of allergy has scaling -skin , itching in the face and antecubital fossa , what is the diagnosis ?

Answer: Atopic eczema

(Family history)

Reference: Toronto notes – dermatology

94- Child has itching and all student in his class got the same infection? Answer : Scabies

(repeated)

95- Adult male on multiple drug came with violaceous maculopapular lesion in the trunk
Diagnosis?

A. Erythema multiforme

B. Toxic epidermal necrolysis

Answer : Exanthematous Eruptions should be one of the choices.

The question is more with Exanthematous Eruptions (Maculopapular

Eruptions/Morbilliform) as it the “classic” and most common adverse drug reaction and its often start at the trunk.

Reference: Toronto notes – dermatology

96- Female with pustules on her face, which type of acne is this?

A. Inflammatory.

B. Infectious.

Answer: A

(repeated)

From toronto note derma: inflammatory type 3 . Type 1: comedonal, sparse, no scarring .

Type 2: comedonal, papular, moderate -+ little scarring. Type 3: comedonal,papular, and pustular with scarring. Type 4: nodulocystic acne, risk of severe scarring.

97- Case of lichen planus.

6 P's : Purple Pruritic Polygonal Peripheral Papules Penis (i.e. mucosa) small, polygonal, pruritic, flat-topped, shiny, violet papules; resolves into hyperpigment- ed macules.

- Common sites: wrists, ankles, mucous membranes in 60% (mouth, vulva, glans), nails, scalp ,distribution: symmetrical and bilateral
- Wickham’s striae: reticulate white-gray lines over surface; pathognomonic but may not be present
- Mucous membrane lesions: lacy, whitish reticular network, milky-white plaques/ papules; increased risk of SCC in erosions and ulcers
- Nails: longitudinal ridging; dystrophic; pterygium formation
- Scalp: scarring alopecia with perifollicular hyperkeratosis
- Spontaneously resolves but may last for weeks, months or years (mouth and skin lesions)
- Rarely associated with hepatitis C
- Koebner phenomenon

98- Patient with psoriasis, took a medication then developed generalized psoriasis covering all his body surface, what is the percentage of the involved body surface?

A. 30%.

B. 50%

C. 70%

D. 90%

Answer: D

Pustular psoriasis

<http://www.kevinmd.com/blog/2014/05/mksap-64yearold-man-rapidly-spread-ing-rash.html>

99- Case Necrotizing fasciitis treatment?

A. Imipenem and metronidazole

B. Ampicillin and gentamicin

C. Piperacillin and tazobactam

D. Penicillin and smth

Answer : C+ clindamycin as combination therapy

Treatment of Necrotizing fasciitis

- resuscitation with IV fluids
- emergency surgical debridements to confirm diagnosis and remove necrotic tissue (may require amputation)
- IV antibiotics
 - unknown organism: meropenem or piperacillin/tazobactam + clindamycin IV ± vancomycin if MRSA is considered
 - Type I (polymicrobial): piperacillin/tazobactam + clindamycin IV
 - Type II (monomicrobial): penicillin G + clindamycin IV, with Type II, evaluate for streptococcal toxic shock syndrome and the need for IVIg

Reference: Toronto notes – dermatology

100- Herpes keratitis of eye, scenario with picture, how to treat?



Answer:

The mainstay of therapy is antiviral treatment either in the form of topical therapy with trifluridine 1% eight to nine times a day or oral administration of acyclovir or valacyclovir for 10 to 14 days. If trifluridine drops are used, care is to be taken to ensure antiviral drops are discontinued within 10-14 days due to corneal toxicity. Epithelial debridement of the dendrites may also be utilized in conjunction with antiviral therapy to help reduce viral load. Topical corticosteroids are contraindicated in the treatment of active HSV epithelial keratitis.

http://eyewiki.aao.org/Herpes_Simplex_Virus_Keratitis#Management

101- Child with hairless spot, mother noted she was pulling her hair when stressed, what to give her?

- A. Lithium
- B. Lorazepam
- C. Other antiepileptic mentioned

Answer: SSRI Citalopram Fluvoxamine Escitalopram Paroxetine Sertraline

Fluoxetine

Treatment modalities vary in childhood and adult varieties. Apart from psychotherapy, the drug treatment involves several agents including selective serotonin reuptake inhibitors (SSRIs) and domipramine. Trichobezoar/Rapunzel syndrome requires surgical intervention.

102- Case of herpes type 1, what to give?

- A. Oral antiviral
- B. Topical steroids

Answer: A

Reference:

<http://emedicine.medscape.com/article/218580-medication#2>

<http://www.uptodate.com/contents/treatment-of-herpes-simplex-virus-type-1-infection-in-immunocompetent-patients#H26>

103- Child with itchy scalp and scales, other classmates affected, Diagnosis?

A. Tinea capitis

B. Scabies

Answer : A

(repeated)

104- Case of multiple myeloma

<http://emedicine.medscape.com/article/204369-overview#a1>

(repeated)

105- HIV PT come with diffuse papule in skin and mouth treatment is ?

A. Topical steroid

B. Oral AB

C. Topical AB

D. Chemo and radiotherapy

Answer: B ? KS

106- Case of thickened skin of forearm ask about test to do? Answer : scl 70 for Scleroderma

Investigations for Scleroderma:

- blood work

CBC, Cr, ANA

anti-topoisomerase 1/anti-Scl-70: specific but not sensitive for diffuse systemic sclerosis

anti-centromere: favors diagnosis of CREST (limited systemic sclerosis)

- PFT

assess for pulmonary HTN or interstitial lung disease

- imaging

CXR for fibrosis, echo for pulmonary HTN

Reference: Toronto notes – Rheumatology

107- Hypopigmentation on trunk ?

A. Antibiotics

B. Steroid

C. Selenium

Answer: C

PITYRIASIS VERSICOLOR

Treated by antifungal and Selenium sulfide (2.5%) lotion or shampoo

Reference: Fitzpatrick's Color Atlas and Synopsis of Clinical Dermatology – Page734

108- Shingles at umbilicus level what is the dermatome ? Answer: T10

Reference: Toronto notes - neurology

109- Old lady with migraine on medication stable for 3 years went to ophthalmology to treat blepharitis with eye drops and developed rash big nose and big mouth ?

A . Seborrheic dermatitis

B . Contact dermatitis

C . Rosacea

Answer : B

110- Dew drops on rose petals vaginal lesions, what is the diagnosis ?

- A. Herpes simplex
- B. Syphilis
- C. Chancroid lesion
- D. Herpangina

Answer: A

111- Patient was started on Carbamazepine. Presented with large area of skin peeling with blisters. He looks toxic. There is eosinophilia. What is the problem here?

- A. Steven Johnson syndrome.
- B. Toxic epidermal necrolysis.

Answer: B

<http://emedicine.medscape.com/article/229698-overview#a5>

112- Loose cornified fragments of the skin what is it ?

- A. Scales
- B. Crusts

Answer : A

Reference: Fitzpatrick's Color Atlas and Synopsis of Clinical Dermatology – Page xxx

113- What is the difference between Scale and Crust?

Scale is an accumulation of loose cornified fragments of the Stratum corneum. Crust is the presence of a dried exudate (serum, blood, pus) on the skin surface.

114- Alopecia and eyelashes fall Answer: Alopecia totalis

Reference: Toronto notes – dermatology

115- Contact with moulds in a new apartment her son develop a Rash in his hand and resolve completely After a while he develop multiple rash ?

- A. Maculo papular
- B. Wheal
- C. Plaque
- D. Cup...

Answer : Question is not clear !

116- DM patient presented with Hx of itching and rash like lesions with white center in inguinal region but with sparing of the folds (picture) What is the cause ??

Answer: Candida

117- skin lesion "ringworm" which stain should be used ?

- A. Potassium chloride

Answer: Potassium hydroxide

<http://www.uptodate.com/contents/dermatophyte-tinea-infections>

118- Planus Case with hypopigmentation on the arm (one area only) + with symptoms on it (Can't remember them well it's like paresthesia or something like this but i'm sure it not vitiligo?)

- A. Vitiligo
- B. Leprosy

Answer: B

(repeated)

119- Female with history of lichen sclerosis present with lesion what will you do?

Answer: Take biopsy

Reference: Fitzpatrick's Color Atlas and Synopsis of Clinical Dermatology – Page137

120- Fever, headache, with macules, papules, pustules and vesicles over the face, scalp & the trunk ; what is the causative organism ?

- A. Herpes type 6
- B. CMV
- C. Herpes zoster
- D. EBV

Answer: C

121- Farmer have cyst on his dorsal of his right hand after 4 month his Dom- like cyst have keratin growth?

- A. BCC
- B. keratoacanthoma

Answer: B

(repeated)

122- Patient with hypopigmented areas on trunk , the same lesion in his uncle , his wife pregnant , what the possible mode of transmission ?

- A. Autosomal trait
- B. X- linked trait .
- C. No dominant trait

Answer: ?

123- Best test to diagnose syphilis ?

Answer: fluorescent treponemal antibody-absorption

Reference: Toronto notes – dermatology

124- Rash start in face and then spread ? Answer: Rubella

Reference: Toronto notes – pediatrics

125- Measles incubation period (or varicella) can't recall ? Answer: Measles : 10-14 days

Varicella: 10-21 days

Table 23. Common Infectious Pediatric Exanthems (continued)

Disease	Pathogen(s)	Incubation Period	Communicability	Mode of Transmission	Rash	Associated Features	Management	Outcomes and Complications
Non-Specific Interstitial Exanthems	Etiotiviruses	Variable	Variable	Direct and indirect contact with infected bodily fluids	Polymorphous: rash (macules, papules, vesicles, petechiae, urticaria)	Systemic involvement is rare, but possible	Supportive Diagnosis confirmed using viral cultures (NP and rectal swabs)	Self-limiting
Roseola	HHV 6	5-15 d	Unknown	—	Appearance: blanching pink, maculopapular Timing: appears once fever subsides Distribution: starts at the neck and trunk and spreads to the face and extremities	High grade fever Common: irritability, anorexia, lymphadenopathy, erythematous TM and pharynx, flagelloma spots (erythematous papules on soft palate and uvula) Less common: cough, coryza, bulging fontanelles	Supportive	CNS: febrile seizures (10-20%), aseptic meningitis Thrombocytopenia
Rubella	Rubivirus	14-21 d	7 d before and after onset	Droplet	Appearance: pink, maculopapular Timing: 1-5 d after start of symptoms Distribution: starts on face and spreads to neck and trunk	Prodrome of low grade fever and occipital/retroauricular nodes STAIN complex (sore throat, arthritis, rash) Positive serology for rubella IgM	Infected: supportive Prevention: MMR vaccine Report to Public Health	Excellent prognosis with acquired disease Arthritis may last days to weeks Encephalitis Irreversible defects in congenitally infected patients (i.e. congenital rubella syndrome)
Scarlet Fever	Strep PHS							
Varicella	Varicella zoster virus	0-21 d	1-2 d pre-eruptions and 5 d post-eruption	Mainly airborne, but also through direct contact with vesicle fluid	Appearance: groups of skin lesions, polymorphic, from macules to papules to vesicles to crusts Timing: 1-3 d after start of symptoms Distribution: generalized	Significant pruritis Erythema: vesicular lesions which may become pustular or ulcerate	Supportive Avoid salicylates (due to risk of Reye syndrome) Consider antivirals Respiratory and contact isolation, report to Public Health Prevention: varicella vaccine	Skin: bacterial superinfection, necrotizing fasciitis CNS: acute encephalitis and cerebellar ataxia Systemic: hepatitis, DIC Congenital varicella syndrome if intrauterine infection

Reference: Toronto notes – pediatrics

126- HIV had skin lesion violaceous, bx showed spindle cells , what is the diagnosis?

Answer: kaposi sarcoma

Reference: Fitzpatrick's Color Atlas and Synopsis of Clinical Dermatology – Page540

127- Patient came with skin lesion , wood lamp pink, what is the diagnosis ?

A. fungal infection

B. Can't recall other choices

Answer: Erythrasma

Corynebacteria bacteria cause a pigmented rash in skin folds that fluoresces a coral-pink colour. (repeated)

128- Best treatment of Pyoderma Gangrenosum?

A. Plasmapheresis

B. Steroid

C. Oral Antibiotics

D. Methotrexate

Answer: B

Reference: Fitzpatrick's Color Atlas and Synopsis of Clinical Dermatology – Page162

129- Long case of patient with salivary patches? Answer: Psoriasis

130- Patient with Hx of unprotected sex 8 weeks ago, came with rash all over his body except the face, what is the organism ?

A. Syphilis

B. Chlamydia

C. Chancroid

Answer : A

131- Black spot at the sole of foot that pared with scalpel, what is the diagnosis?

A. Verruca

B. Heloma

C. Tyloma

Answer: A

The seborrheic keratosis (Verruca) is the most common of the benign epithelial tumor.

Reference: Fitzpatrick's Color Atlas and Synopsis of Clinical Dermatology – Page 216

132- Patient presented to hospital with 5 days of generalized skin eruption including soles and palms, what is the cause?

- A. Drug Induced Reaction
- B. Pityriasis
- C. Erythema Nodosum
- D. Erythema Marginatum
- E. Erythema Multiforme

Answer: Most probably A

There is not enough data it could be A or E

Drug eruption : Most commonly maculopapular (95% of cases); common in patients taking allopurinol (Zyloprim), beta-lactam antibiotics, sulfonamides, anti-convulsants, angiotensin-converting enzyme inhibitors, nonsteroidal anti-inflammatory drugs, hypoglycemics, and thiazide diuretics, but can occur with almost any drug; usually appears within 1 to 4 weeks of initiating drug; key to diagnosis is timing of rash appearance in relation to drug use.

Erythema Multiforme : Round, dusky red lesions that evolve into target (iris) lesions over 48 hours; starts on backs of hands and feet and on extensor surfaces of arms and legs; symmetric; may involve palms, soles, oral mucous membranes, or lips; key to diagnosis is presence of target lesions.

133- Rash band like distribution, what is the Diagnosis? Answer: Shingles

Reference: Toronto notes – dermatology

134- Patient with fever, mouth ulcer, and other symptoms, what is the Diagnosis?

- A. HSV 1
- B. HSV 2

Answer: A

Reference: Toronto notes – dermatology

135- Patient with flushing of face and amp and neck, which antibiotic she is using ?

No enough data but may be it is Jarisch-Herxheimer reaction Read about it.

136-

137- Athlete after exercise presented with hypopigmented lesion what is the treatment ?

Answer: Topical antifungal medications containing selenium sulfide are often recommended (tinea versicolor)

Reference: Toronto notes – dermatology

138- Bee sting leads to erythema and swelling what is the treatment ? 2 Questions with different options.

First step in treatment following a bee sting is removal of the stinger itself. The stinger should be removed as quickly as possible without regard to method: Once the stinger is removed, pain and swelling should be reduced with a cold compress. A topical anesthetic containing benzocaine will kill pain quickly and menthol is an

effective anti-itch treatment. Itching can also be relieved by antihistamine or by a steroid cream.

139- Hypopigmented macule shin on sun exposure how will treat him ? **Answer :** No answers !

May be it is post inflammatory hypopigmentation which mostly resolve spontaneously

140- Diagnosis of penile painless ulcer ? **Answer:** Darkfield microscopy

Reference: Toronto notes – dermatology

Selected Differential Diagnosis of a Penile Lesion	
CONDITION	CHARACTERISTICS
Syphilis	Single, rigid, painless, elevated ulceration with a red areola and rolled edges with a flat base
Genital herpes	Grouped vesicles or small ulcerations covered with serous secretion
Erythroplasia of Queyrat	Erythematous, moist plaque on the glans, shaft, and foreskin
Fixed drug eruption	Violaceous or dark erythema, may be associated with a bulla or ulceration
Chancroid (soft chancre)	Painful, undermined, open sore with gray-yellow, necrotic, "dirty" base; usually accompanied by inguinal adenopathy

141- Itching in lower limbs , otherwise normal ?

- A. Tinea
- B. Scabies

No enough data , Both answers could be correct

<http://www.ihealthblogger.com/2013/03/Itchy-Legs-Causes-Symptoms-Treatment-Prevention.html>

142- Well circumscribed lesion on erythematous base , arthritis ?

Answer: Rheumatological disease

143- Patient with skin slightly elevated and mild itching. What's diagnosis? **Answer:** Lichen planus
6 p's: Purple, Pruritic, Polygonal, Planar, Papules, Plaques.

144- Patient with penile lesion that is caused by using sulfa drugs describe the lesion ?

- A. Erythema
- B. Ulcer
- C. Fixed drug eruptions of the skin blistering

Answer: C

Reference : <http://www.dermnetnz.org/reactions/fixed-drug-eruption.html>

145- Boy have lesion on his forearm erythematous and silvery scaling , what is the diagnosis ?

Answer: Psoriasis

Reference: Toronto notes – dermatology

146- Fever, malaise , maculopapular rash over the body and behind the ear what is the causative organism ?

A- Rubella

B- Measles

C- Mumps

Answer: B

Reference: Toronto notes – pediatrics

147- Child who has to have itchy papules , started as 1 papule then spread to the whole body, what is the treatment?

A. Steroid

B. Acyclovir

C. Antibiotics

D. Antiseptic

Answer: A

Pityriasis rosea (also known as pityriasis rosea Gibert) is a skin rash. It is benign but may inflict substantial discomfort in certain cases. Classically, it begins with a single "herald patch" lesion, followed in 1 or 2 weeks by a generalized body rash lasting up to 12 weeks. Treatment topical steroids.

148- Which consider as Atypical moles (dysplastic nevi)?

A. Irregular border

B. Smaller than 6 mm

C. Uniformity of color

Answer : A

Refrence: <http://emedicine.medscape.com/article/1056283-clinical#b1>

149- Dermatomyositis associated with ?

A. Generalized morbilliform eruption

B. Distal muscle weakness

C. Malignancy

Answer: Malignancy

Reference: Toronto notes – dermatology

150- Regarding Retinoid (for acne) side effect ? Answer: Avoid sun exposure

Reference: Toronto notes – dermatology

153- Redness and itching between the toes , what is the Diagnosis ? Answer: Scabies (sure)

Reference: Toronto notes – dermatology

154- Xeroderma pigmentosum defect in? Answer: DNA break repair gene

Reference: Fitzpatrick's Color Atlas and Synopsis of Clinical Dermatology – Page234

155- Picture of patient lower limbs has rash on medial thigh , written that it was pinkish in color and itchy , and the patient is diabetic?

Answer: Tinea cruris



Table 16. Different Manifestations of Dermatophyte Infection (continued)

	Clinical Presentation	Differential Diagnosis	Investigations	Management
Tinea Cruris (Jock Itch)	Scaly patch/plaque with a well-defined, curved border and central clearing Pruritic, erythematous, dry/frosted Site: medial thigh	Candidiasis (involvement of scrotum and satellite lesions), contact dermatitis, erythema, inverse psoriasis, seborrheic dermatitis	Same as for tinea corporis	Same as for tinea corporis
Tinea Pedis (Athlete's Foot)	Pruritic scaling and/or maceration of the web spaces and powdery scaling of soles Acute infection: interdigital (esp. 4th web space) red/white scales, vesicles, bullae, often with maceration Secondary bacterial infection may occur Chronic: non-pruritic, pink, scaling keratosis on soles and sides of feet May present as flare-up of chronic tinea pedis Predisposing factors: heat, humidity, occlusive footwear	Alopecic dermatitis, contact dermatitis, dyshidrotic dermatitis, erythema, palmoplantar psoriasis if only between 4th and 5th toes soft corn	Same as for tinea corporis	Same as for tinea corporis
Tinea Manuum	Primary fungal infection of the hand is rare; usually associated with tinea pedis Acute: blisters at edge of red areas on hands Chronic: single dry scaly patch	AD, contact dermatitis, granuloma annulare, psoriasis	Same as for tinea corporis	Same as for tinea corporis
Tinea Unguium (Onychomycosis)	Crumbling, distally dystrophic nails; yellowish, opaque with subungual hyperkeratotic debris Tonal infections usually precede fingernail infections T. rubrum (90% of all toenail infections)	Psoriasis, lichen planus, contact dermatitis, traumatic onychodystrophies, bacterial infections, chronic candidal infection	Microscopic examinations of KOH prep of scales from subungual scraping shows hyphae Culture of subungual scraping or nail clippings on Sabouraud's agar PAS stain of nail clipping by pathology	Terbinafine (Lamisil [®]) (6 wk for fingernails, 12 wk for toenails) Itraconazole (Sporanox [®]) 7 d on, 3 wk off (7 pulses for fingernails, 3 pulses for toenails) Topical: ciclopirox (Penlac [®]); nail lacquer (often ineffective)

Reference: Toronto notes – dermatology

156- Visceral leishmania ?

A. L.donovani

B. L.tropica

Answer : A

(repeated)

157- Patient have skin eruption affected all body including palms and I think soles only thats the details, what's the diagnosis?

A. Scleroderma

B. Something medication

Answer: B Not sure “drug eruption is generalized and involve sole and palms”

158- 7 years boy soccer player' have hypopigmentation on the trunk and over the arm and the the pigmentation get lighter with sun what you will give him ?

A. Oral antibiotic

- B. Topical antibiotic
- C. Topical steroid
- D. oxide

Answer: ? C??

159- Child came with swelling in the scalp with loss of hair Something sebum ? 160- Band of neutrophil under skin?

There is no answers , it could be Leukemia cutis !! CML

There were also missing questions about the following: Hidradenitis suppurativa of the buttocks. <http://www.nhs.uk/conditions/hidradenitis-suppurativa/Pages/Introduction.aspx>

Management of Acne & Scabies

Table 8. Management of Acne

Drug Name	Mechanism of Action	Notes
MILD ACNE: Topical Therapies Over-the-Counter		
Benzoyl peroxide	Bactericidal agent (targets <i>P. acnes</i>) and comedolytic	Helps prevent <i>P. acnes</i> resistance
Salicylic acid	Comedolytic	Used when patients cannot tolerate a topical retinoid due to skin irritation
MILD ACNE: Prescription Topical Therapies		
Clindamycin phosphate (e.g. Dalacin T [®])	Lincosamide antibiotic; inhibits protein synthesis	High rate of resistance when used as monotherapy
Erythromycin	Macrolide antibiotic; inhibits protein synthesis	High rate of resistance when used as monotherapy
BenzaClin [®] gel	1% clindamycin and 5% benzoyl peroxide	See above
Erythromycin + benzoyl peroxide (Benzamycin [®])	3% erythromycin and 5% benzoyl peroxide	See above
Adapalene (e.g. Differin [®])	Comedolytic	Less irritating than tretinoin. Not photolabile
Tretinoin (e.g. Retin-A [®])	Comedolytic	Photolabile and irritation
Adapalene + benzoyl peroxide (e.g. Tactuo [®])	0.1% adapalene and 2.5% benzoyl peroxide	See above
MODERATE ACNE: After topical treatments have failed, add oral antibiotics, such as tetracycline (250 mg PO bid to 500 mg bid), or erythromycin (500 mg PO bid). Antibiotics require 3-6 mo of use before assessing efficacy. Consider hormonal therapy, including antiandrogens		
Tetracycline	Inhibits protein synthesis	Use caution with regard to drug interactions: do not use with isotretinoin. Sun sensitivity
Cyproterone acetate-ethinyl estradiol (Diane-35 [®])	Cyproterone: potent anti-androgenic, progestogenic and antigonadotropic activity Ethinyl estradiol: increases level of SHBG, reducing circulating plasma levels of androgens	After 35 yr of age, estrogen/progesterone should only be considered in exceptional circumstances, carefully weighing the risk/benefit ratio with physician guidance
Spironolactone (source ADA)	Blocks androgen receptors Dosages of 50 mg to 200 mg have been shown to be effective in hormonal acne	May cause hyperkalemia at higher doses Black box warning for breast cancer
SEVERE ACNE: Consider systemic retinoids after above treatments have failed or if significant scarring present		
Isotretinoin (Accutane [®] , Claris [®])	Retinoid that inhibits sebaceous gland function and regulates keratinization	See Table 29, D46 for full side effect profile Most adverse effects are temporary and will resolve when the drug is discontinued Baseline lipid profile (risk of hypertriglyceridemia), LFTs and β -hCG before treatment May transiently exacerbate acne before patient sees improvement Drug may be discontinued at 16-20 wk when nodule count has dropped by >70% A second course may be initiated after 2 mo prn Refractory cases may require multiple courses of isotretinoin

.161. Case of thickened skin of forearm ask about test to do

A. Scl70

Answer: a to r/o scleroderma

162. Example for non-keratinized squamous epithelium?

Non-keratinized: non-keratinized surfaces must be kept moist by bodily secretions to prevent them from drying out. Examples of non-keratinized stratified squamous epithelium include cornea, lining mucosa of oral cavity, esophagus, anal canal, foreskin, vagina, and the internal portion of the lips. https://en.wikipedia.org/wiki/stratified_squamous_epithelium 180. Xeroderma pigmentosum defect in?

Dna break repair gene

163.a patient presented with macular papular rash and fever. (case of rubella)

Answer: ?

Clinical features: rash (pink, maculopapular rash 1-5 d after start of symptoms. The rash starts on face and spreads to neck and trunk), prodrome of low grade fever and generalized, tender lymphadenopathy especially occipital/retroauricular nodes. Diagnosis is clinical. Star complex (sore throat, arthritis, rash) and positive serology for rubella igm. Most important complication is congenital rubella syndrome. Management:

- For infected patients: symptomatic rx.
- For prevention: mmr vaccine.
- For rubella-exposed pregnant women: serologic testing.

Reference: [toronto notes and medscape](#)

164. Premalignant lesion of SCC?

A) [Actinic keratosis](#) Answer: A

Actinic keratosis (AK) is a UV light–induced lesion of the skin that may progress to invasive squamous cell carcinoma. It is by far the most common lesion with malignant potential to arise on the skin. ,

[http:// emedicine.medscape.com/article/1099775-overview](http://emedicine.medscape.com/article/1099775-overview)

165. Scaly erythematous rash on nasal folds and hair line ?

Answer: [Sebrohic dermatitis](#)

Seborrheic dermatitis (American spelling is ‘seborrheic’) is a common, chronic or relapsing form of eczema/dermatitis that mainly affects the scalp and face.

There are infantile and adult forms of seborrheic dermatitis. It is sometimes associated with psoriasis (sebopsoriasis). Seborrheic dermatitis is also known as seborrheic eczema.

<Http://www.dermnetnz.org/dermatitis/seborrheic-dermatitis.html>

166-Case of lichen planus..

6 p’s: Purple, Pruritic, Polygonal, Planar, Papules, Plaques.

- Common sites: wrists, ankles, mucous membranes in 60% (mouth, vulva, glans), nails, scalp, genitals.
- Wickham’s striae: reticulate white-gray lines over surface; pathognomonic but may not be present.
- Increased risk of SCC in erosions and ulcers.
- It is associated with hepatitis
- Koebner phenomenon

167 -Pt come with abdominal rash on one side rash like band (long cause)

168-shingle 2-Most common cause of itching > aczima

169-Picture of genitalia rash for 40 y.o male PT with DM >> candida ...

Pediatrics



1. The most common parotid tumor in pediatrics?

There was no multiple choices provided.

Answer: Mixed tumor OR hemangioma

Explanation: The most common benign tumor in children is the hemangioma. Of the benign epithelial tumors, the mixed tumor (pleomorphic adenoma) is the most common.

Reference: <http://emedicine.medscape.com/article/1289560-overview - a3>

*Mucoepidermoid

2. Which of the following is the most common heart abnormality to get infective endocarditis?

a. Tetralogy of fallot

Answer: A

Explanation: In children, cyanotic heart disease is still the most common cause of endocarditis, and the risk does not diminish after surgical repair as prostheses carry their own risk.

Reference: <http://www.ncbi.nlm.nih.gov/books/NBK2208/>

Explanation: Bacterial endocarditis can occur with many heart defects but is most common in aortic valve

Key changes for patients with congenital heart defects

Preventive antibiotics are no longer recommended for any other congenital heart disease than these:

- Cyanotic congenital heart disease (birth defects with oxygen levels lower than normal), that has not been fully repaired, including children who have had a surgical shunts and conduits.
- A congenital heart defect that's been completely repaired with prosthetic material or a device for the first six months after the repair procedure.
- Repaired congenital heart disease with residual defects, such as persisting leaks or abnormal flow at or adjacent to a prosthetic patch or prosthetic device.

lesions, a patent ductus arteriosus (unrepaired), tetralogy of Fallot, ventricular septal defects, coarctation of the aorta, and mitral valve prolapse with mitral regurgitation.

Reference: [Bacterial Endocarditis by Ernest G. Brookfield, M.D.](#)

3. What is the most common congenital abnormally cause infective endocarditis ?

A. ASD

B. VSD

C. Tetralogy of fallot

Answer: C

Explanation: (C because according to the references the cause of IE is unrepaired cyanotic congenital heart disease. Picture below is the American heart association recommendation for infective endocarditis management.

reference: nelson essential +

http://www.heart.org/HEARTORG/Conditions/CongenitalHeartDefects/TheImpactofCongenitalHeartDefects/Infective-Endocarditis_UCM_307108_Article.jsp#.WW6IWHdh3Uo)

4. Baby with greasy looking rash on face.

a. Seborrheic dermatitis

Answer: A

Explanation: Seborrheic dermatitis, characterized by erythema and greasy scales, is highly prevalent

Pharmacologic intervention — As previously noted, there are limited data on the use of pharmacologic intervention in children with ITP. In our practice, the presence of one or more of the following factors is used as an indication for pharmacologic intervention:

- Presence of severe or life-threatening bleeding
- Risk of significant bleeding, such as a child undergoing a procedure that is likely to induce blood loss, or a child with a platelet count <10,000/microL and signs of cutaneous bleeding (bruising, petechiae, and/or purpura)
- Any concomitant or preexisting condition that increases the risk of thrombocytopenia or bleeding (eg, hemophilia)

during the first 4 weeks of life, and it needs to be differentiated from atopic dermatitis. Seborrheic dermatitis, or "cradle cap," occurs most commonly on the scalp, but it may also affect the face, ears, and neck. Management of seborrheic dermatitis usually consists of parental reassurance and observation, but tar-based shampoo, topical ketoconazole, or mild topical steroids may be required for treatment of severe or persistent cases.

Reference: <http://www.medscape.org/viewarticle/568652>

5. Child presented with petechiae and his platelets is 15 , otherwise healthy. What will you do for him?

a. Splenectomy

b. IVIG

c. Observations

d. steroid

Answer: C

Explanation: from UpToDate.

Reference: UpToDate.

Additionally from UptToDate: If treatment is indicated, we suggest administering IVIG rather than corticosteroids or intravenous anti-Rho(D) Ig. In our practice, we administer IVIG as a single 1000 mg/kg dose. Alternate options include intravenous or oral corticosteroids, different dosing regimens of IVIG, and intravenous anti-Rho(D) Ig.

Platelet transfusions — The only indication for platelet transfusions is life-threatening hemorrhage, such as intracranial hemorrhage [8]. Larger-than-normal doses are required because normal doses are ineffective due to platelet destruction.

6. 4 weeks old boy with acute onset forceful non bilious vomiting after feeding. On abdominal examination: There is olive mass at epigastric area. What is the 1st investigation should you do?

a. PH monitoring

b. Abdominal US

Answer: B

Explanation:

Reference: Toronto Notes GS p62

7. What is the most common site for mump?

a. Parotid

Answer: A

Reference: <http://reference.medscape.com/article/966678-overview>

8. Typical case of Post-streptococcal glomerulonephritis (PSGN). What will you do to confirm diagnosis?

Answer: (it is really depends on the answers given!!

Explanation: PSGN Occurs 1-3 wk following initial primary GAS infection of pharynx or skin. Diagnosis is confirmed with elevated serum antibody titers against streptococcal antigens (ASOT, anti-DNAseB (best single test)), low serum complement (C3). consider biopsy only if; acute renal failure, nephrotic syndrome, absence of streptococcal or normal compliment. If it Glomerular involvement occurred in less than a week after URTI it's due to IgA Nephropathy (burger disease) , normal complement.

Reference: <http://emedicine.medscape.com/article/980685-workup>

9. The most common chromosomal abnormality in a new infant:

a. Down syndrome (Trisomy 21)

Answer: A

- In children, both ICS therapy and untreated asthma itself have been associated with deceleration of growth velocity. The effects are most pronounced with severe asthma. Inhaled GC do cause changes in very sensitive measures of growth velocity; however, asthmatic children appear to continue growing over a longer period of time and ultimately attain normal adult height. (See 'Skeletal effects' above.)

Explanation: Most common pattern of human malformation.

Trisomy 18(Edwards syndrome) is the 2nd most common.

Reference: USMLE step2 CK pediatrics p19

10. Child came with wheezing and cough, diagnosed to have asthma and his dr. pre- scribed

Hypertrophic Pyloric Stenosis	0.03-1.0% of live births Can present at 1-20 wk, most commonly at 6-8 wk M:F = 4:1 Early erythromycin exposure (<13 d old)	Acquired pyloric circular muscle hypertrophy results in gastric outlet obstruction Hypovolemia caused by emesis of gastric contents causes hypochloremic hypokalemic metabolic alkalosis Electrolyte exchange based volume retention in kidneys results in paradoxical aciduria	Projectile non-bilious vomiting Vomiting 30-60 min after feeds Hungry after vomiting Dehydration (variable severity)	Smooth oblong 1-2 cm mass palpable above umbilicus, "olive" visible left-to-right gastric contraction "waves" after feeding	Electrolytes (assess hypochloremia, dehydration) U/S shows pyloric length >14 mm, muscle thickness >4 mm Upper GI series necessary only when U/S unavailable or non-diagnostic will show "string sign"	Fluid resuscitate with normal saline, correct electrolyte and acid/base abnormalities with DS, 1/2NS + 20 mEq/L KCl at maintenance rate NGT decompression unnecessary Pyloromyotomy, open (Ramstedt vs. transumbilical or laparoscopic approach) Alternative therapies such as TPN/wait or atropine impractical due to long time course of effect	Pyloromyotomy curative
--------------------------------------	---	---	---	--	--	--	------------------------

beclomethasone space inhaler or nebulizer?? twice daily. you will be worried about:

a. Growth retardation

b. Extraocular problem

Answer: A

Reference: 3rd Edition UQU > Pediatrics > Q 58

picture below from UpToDate. ICS(inhaled corticosteroid)

NB. Corticosteroids inhalers can lead to oral thrush (yeast infection of the mouth).

11. Child presented with Asthma exacerbation. The patient did not respond to Beta agonist. What is your next step?

- a. Aminophylline
- b. Systemic steroid

Answer: B

Explanation:

Reference: Toronto Notes Pediatrics p87

12. Cystic fibrosis

- A. chromosome 7 long q arm
- B. chromosome 7 short p arm
- C. chromosome 7 short q arm
- D. chromosome 7 long p arm

Answer: A

Explanation: about CF chromosome

Answer: chromosome 7 called CFTR *autosomal recessive, CFTR gene found on the long (q) arm of chromosome 7 resulting in a dysfunctional chloride channel on the apical membrane of cells.

Investigations

- NP specimen using aspirate or NP swab
 - gold standard: culture using special media (Regan-Lowe agar)
 - PCR to detect pertussis antigens
- blood work: CBC (lymphocytosis) and serology (antibodies against *B. pertussis*)

Reference: <https://ghr.nlm.nih.gov/gene/CFTR - location>

13. Child was having rhinorrhea and then developed episodes of cough followed by vomiting. Which of these vaccination may prevent him from having this disease?

- a. DTaP

Answer: A

Explanation: classical pertussis symptoms(DTaP).

Reference: <http://emedicine.medscape.com/article/967268-clinical>

14. A case of pertussis ,, How to diagnose of pertussis?

Management

- acute
 - O₂ (keep O₂ saturation >94%) and fluids if dehydrated
 - β₂-agonists: salbutamol (Ventolin*) MDI + spacer (nebulized or IV in very severe episodes with impending respiratory failure), 5 puffs (<20 kg) or 10 puffs q20min for first hour (>20 kg)
 - ipratropium bromide (Atrovent*) if severe: MDI + spacer, 3 puffs (<20 kg) or 6 puffs (>20 kg) q20min with salbutamol, or add to first 3 salbutamol masks (0.25 mg if <20 kg, 0.5mg if >20 kg)
 - steroids: prednisone (1-2 mg/kg x 5 d) or dexamethasone (0.3 mg/kg/d x 5 d or 0.6 mg/kg/d x 2 d); in severe disease, use IV steroids
 - continue to observe; can discharge patient if asymptomatic for 2-4 h after last dose

- A. Nasopharyngeal swab

Answer: A

Explanation:

Reference: Toronto Notes p61 Pediatrics.

15. Child is complaining of severe throbbing unilateral headache, aggravated by light. What is the most likely diagnosis ?

- a. Migraine
- b. Cluster Headache
- c. Stress Headache

Answer: A

Explanation: typical presentation of migraine (unilateral, throbbing in nature, visual and sensory symptoms).

Reference:

<http://emedicine.medscape.com/article/1142556-overview>

16. Tetralogy of Fallot findings ?

- a. Ventricular Septal Defect (VSD) + Overriding of the aorta + Pulmonary Stenosis + Right Ventricular Hypertrophy (RVH)

Answer: A

Explanation: Tetralogy of Fallot (TOF) is a cyanotic congenital heart disorder that encompasses four anatomic features: right ventricular hypertrophy, ventricular septal defect (VSD), overriding aorta, and right ventricular (RV) outflow obstruction. (See 'Anatomy' above.)

- The pathophysiologic effects of TOF are largely dependent upon the degree of: RV outflow obstruction.
- The clinical presentation: intermittent hyper-cyanotic (tet) spells, crescendo-decrescendo harsh systolic ejection murmur, and a single second heart sound.
- The diagnosis of TOF is typically made by echocardiography, which can usually delineate the location and number of VSDs, the anatomy and severity of RV outflow tract obstruction, the coronary artery and aortic arch anatomy, the presence of any associated anomalies, and the hemodynamic abnormalities associated with the anatomical defects.

Treatment is by surgical repair. This usually consists of complete intracardiac repair typically during the neonatal or infant period. Occasionally, an aortopulmonary shunt is used palliatively before complete repair.

The most common long-term complications of complete repair are progressive pulmonary regurgitation and RV failure, atrial arrhythmias, and ventricular arrhythmias.

References: <http://emedicine.medscape.com/article/2035949-overview> - a4

17. Mother brought her 2 years old child to the ER with history of upper respiratory tract infection for the last 3 days with mild respiratory distress. This evening the child started to have hard barking cough with respiratory distress. On examination: RR 40/min, associated with nasal flaring, suprasternal & intercostal recessions. What is the most likely diagnosis?

- a. Viral Pneumonia
- b. Bacterial Pneumonia
- c. Bronchiolitis
- d. Acute epiglottitis
- e. Laryngo-tracheo-bronchitis (croup)

Answer: E

Explanation: barking cough is key word.

Reference: <http://emedicine.medscape.com/article/962972-clinical>

18. A case of TOF. How does it appear on X-Ray and echo?

Answer: no answers given.

Explanation:

- ECG: Right axis deviation, Right ventricular hypertrophy.

- Echo : which can usually delineate the location and number of VSDs, the anatomy and severity of RV outflow tract obstruction, the coronary artery and aortic arch anatomy, the presence of any associated anomalies
- CXR: boot shaped heart, decreased pulmonary vasculature, right aortic arch(in 20%) Reference: <http://emedicine.medscape.com/article/2035949-workup#c10>
<http://emedicine.medscape.com/article/2035949-workup#c11>

19. Turner Features:

- a. Thick skin neck
Answer: A

Explanation: no other answers given. In the link below turners syndrome features.

Reference: <http://emedicine.medscape.com/article/949681-overview>

20. Child known case of DM 1, lost his consciousness at school. The last insulin injection is unknown.

- a. Take him to the hospital
- b. IV ringer lactate
- c. IM Glucagon
- d. Insulin

Answer: C

Explanation: Because the patient could have hypoglycemic attack so give him shot of glucagon to increase his blood sugar. A glucagon injection should be used on a child that has lost consciousness due to hypoglycemia.

Reference: <http://www.healthofchildren.com/G-H/Hypoglycemia.html>

21. A child with the history of repeated infections, failure to thrive and anemia. His older brother also has same condition. what is the most likely diagnosis?

- A. Nutritional anemia (there family hx so it not correct)
- B. Leukemia
- C. Lymphoma ≈
- D. Haemoglobinopathy

Answer: D

Explanation: lymphoma typically present with constitutional symptoms (weight loss, fever, night sweat), leukemia

Repeated infection, Failure to thrive, Anemia and Family history of same condition make Hemoglobinopathy the best answer.

Reference : <http://www.uptodate.com/contents/overview-of-the-clinical-manifestations-of-sickle-cell-disease?source=machineLearning&search=haemoglobinopathy&selectedTitle=7%7E150§ionRank=1&anchor=H13#H19>

22. A child was on clindamycin developed abdominal pain and watery diarrhea.

- a. Clostridium difficile

Answer: A

Explanation: typical Pseudomembranous colitis scenario.

Reference: <http://www.mayoclinic.org/diseases-conditions/pseudomembranous-colitis/home/ovc-20169329>

23. During delivery, when the doctor cut the umbilical cord, bleeding doesn't stop. Which of the following factors is deficient in this case ?

- A. Factor X
- B. Factor XI
- C. Factor XII
- D. Factor XIII

Answer: D

Explanation: The bleeding diathesis in inherited factor XIII (FXIII) deficiency is severe in most patients. 343

within the first days to weeks of life is a characteristic sign.

Most likely diagnosis: I'm thinking of von willebrand.

Reference: <http://emedicine.medscape.com/article/206996-clinical>

24. When does girls get puberty as compared to boys?

- A. 1 to 2 yrs before
- B. 2 to 3 yrs before
- C. Same time when boys do
- D. After boys

Answer: A

Explanation:

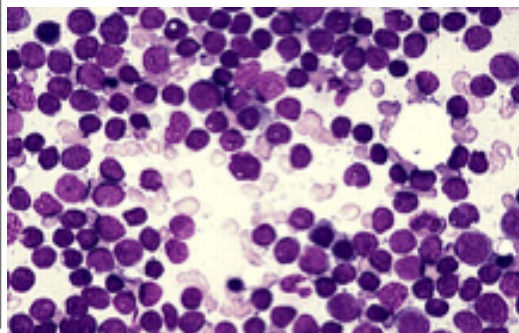
Unset of puperty in girls: 8-13 years old.

Average age for boys: 9-14 years old

Reference: Toronto Notes p30 Pediatrics.

25. 6 year old child with fever , malaise, lymphadenopathy and hepatosplenomegaly. Shown is the CBC and bone marrow aspiration slide. What is the most likely diagnosis?

WBC	30,000 (4,500-11,000)
Hgb	9
Platelet	50,000 (150,000-400,000)
Peripheral Blast Cells	25%



- a. Sickle sequestration.
- b. Leukemia.
- c. Malaria.
- d. Leishmaniasis.

Answer: B

Explanation: The diagnosis of acute lymphoblastic leukemia (ALL) is made when at least 30% lymphoblast

(French-American-British [FAB] classification) or 20% lymphoblast (World Health Organization [WHO] classification) are present in the bone marrow and/or peripheral blood.

In addition, slides should be stained with myeloperoxidase (MPO) (or Sudan black) and terminal deoxynucleotidyl transferase (TdT), unless another method is used, such as flow cytometry. Bone

marrow samples should also be sent for flow cytometry and cytogenetics. Approximately 15% of patients with ALL have a t(9;22) translocation (ie, Philadelphia [Ph] chromosome).

Reference: <http://emedicine.medscape.com/article/207631-workup#c11>

26. Child came with Rt abdominal pain , jaundice, palpable tender liver, Dx ?

a. HAV

Answer: A

Explanation: liver diseases depends on the age of the child every age group have a different differential and most likely to this presentation it is hepatitis.

hepatitis A virus (HAV) spread via the fecal-oral route.

● HAV infection in children is typically an acute, self-limited illness

Symptomatic patients may present with abrupt-onset fever, abdominal pain, malaise, and jaundice.

Common examination findings are hepatomegaly and clinical jaundice with marked elevation of serum transaminases (usually >1000 units/L). IgM anti-hepatitis A virus serology is the test of choice for diagnosis.

● The incubation period for HAV is 15 to 50 days. HAV RNA can be detected in stools at least one week before the onset of histological and biochemical evidence of hepatitis, and it can be detected for at least 33 days after the onset of disease. In neonates and younger children, HAV RNA can be detected in stools for several months.

● The diagnosis of acute HAV infection is made by the detection of Serum IgM anti-HAV (gold standard for the detection of acute illness) . This antibody is positive at the onset of symptoms, peaks during the acute or early convalescent phase of the disease,

● Post-exposure prophylaxis for individuals with recent exposure to HAV may be accomplished with the HAV vaccine or immune globulin.

● HAV infection in children is usually a minor and self-limited infection requiring no specific therapy. The usual supportive measures for fever and diarrhea may be undertaken. Patients rarely require hospitalization except for those who develop fulminant hepatic failure. Children with HAV-related hepatic failure are candidates for liver transplantation.

Reference: uptodate.

<http://emedicine.medscape.com/article/964575-clinical>

27. An adolescent boy came to the clinic with unilateral gynecomastia. No other complaints.

Everything was normal. How will you manage?

a. Reassure

b. Give hormonal therapy

c. Breast US

Answer: A

Explanation: Gynecomastia (transient development of breast tissue) is a common self-limited condition seen in 50% of male during puberty (but any discharge from nipple or fixed mass should be investigated).

Reference: .

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3706045/>

28. Neonate born in home by a midwife presented with umbilical bleeding. What does he need?

A. Vit K injection

Answer: A

Explanation: Vitamin K —is one of the routine management of the healthy newborn infant Prophylactic vitamin K1 is given to newborns shortly after birth to prevent VKDB, previously referred to as hemorrhagic

disease of the newborn. In our practice, a single intramuscular dose of 1 mg is administered,

Reference: http://www.medscape.com/viewarticle/418329_1

29. Turner syndrome chromosomes?

A. 45 XO

Answer: A

Reference: https://www.uptodate.com/contents/sex-chromosome-abnormalities?source=search_result&search=Turner+Syndrome&selectedTitle=3%7E150

30. Child with fever, malaise, LNs enlargement & mouth ulcers. What is the diagnosis?

- A. Herpes simplex virus infection type 1 (HSV 1)

Answer: A

Reference: Toronto Notes Dermatology P29.

31. A boy with rickets (Picture was provided). What is the deficient vitamin?

The inheritance of alpha thalassemia is complex. Each person inherits two alpha-globin alleles from each parent. If both parents are missing at least one alpha-globin allele, their children are at risk of having Hb Bart syndrome, HbH disease, or alpha thalassemia trait. The precise risk depends on how many alleles are missing and which combination of the *HBA1* and *HBA2* genes is affected.



- a. Vit D

Answer: A

Reference: Toronto notes.

<http://emedicine.medscape.com/article/985510-overview#a5>

32. Which of the following diseases has Mendelian mode of inheritance?

- a. Alpha thalassemia

Answer: A

Explanation:

Reference: <https://ghr.nlm.nih.gov/condition/alpha-thalassemia#inheritance>

33. Minimal probability of a baby getting beta thalassemia from carrier parents?

- A:0%
B:25%
C:50%
D:75%
E:100%

Answer: B

Explanation: If both members of a couple are carriers (or heterozygotes) for this mutation, each of their offspring has a 25% chance of being affected (Nelson Essentials of Pediatrics 7th Ed, 2015)



34. A child presented with fever and coryza, then watery diarrhea.

- A. Adenovirus
- B. Rotavirus

Answer: A

Explanation: if its only GI symptoms then rotavirus is correct, but there is coryza (URTI symptoms)

Reference:

Adenovirus: <http://emedicine.medscape.com/article/211738-overview>

Rotavirus: <http://emedicine.medscape.com/article/803885-clinical>

35. Child that throws a ball at you and draws a straight line and stacks "few" cubes on each other (they didn't mention the number of cubes). What is the age?

- A. 12 months
- B. 14 months
- C. 18 months
- D. 24 months

Answer: D

NB. Drawing straight lines begins at the age of 2 years.

Reference: illustrated textbook.

USMLE step 2 CK Pediatrics p44.

36. A child that can raise his head slightly when prone and smiles. He turns his head 180 degrees and has head lag when you pull him to sit. How old is he?

- A. 4 weeks
- B. 8 weeks
- C. 12 weeks
- D. 16 weeks

Answer: B

Reference: USMLE step 2 CK Pediatrics p:43

37. Which of the following is most typically seen in 4 years old baby?

- A. Print name.
- B. Stand on one foot briefly.
- C. Copy triangle and square.
- D. Toilet trained.

Answer: D

4 years	Hops on 1 foot, down 1 foot per step	Copies a cross, uses scissors, buttons clothes	Speech intelligible, uses past tense, 100% intelligible, understands 3- part directions	Cooperative play, fully toilet-trained by day, tries to comfort someone who is upset
---------	--------------------------------------	--	---	--

Reference: USMLE step 2 CK Pediatrics p:44

38. Child can sit without support, cruises around furniture, uses chair to stand, say dada, crawl stairs. What is the age of this child?

- A. 8 months.
- B. 10 months.
- C. 12 months.
- D. 15 months.

Answer: B

Explanation: the nearest answer is 10 m (at 9m can sits , crawls , say dada & Mama)

Reference: USMLE step 2 CK Pediatrics p:43

39- Roll from prone to supine and vice versa + crab with only two fingers. What is the milestone.

Answer: the fact that baby can grasp objects with two fingers (the so called ‘pincer grasp’, a fine motor milestone) means he/she is about 12 month old. (+ rolling from supine to prone is a GROSS MOTOR milestone at 7 months of age.)

Reference: First aid .(+ USMLE step 2 CK Pediatrics p:43)

40 -baby can smile at which age :

- a. 2 months
- b. 4 months
- c. 6 months

Answer: A

Reference: USMLE step 2 CK Pediatrics p:43

41. A 2 years old child can run and play ball. Socially active but he refused to share his toys with other children. What you will say to his parents?

- a. Delay motor
- b. Social impairment
- c. Well developed and normal response

Answer: C

Explanation: 2 y child can run , play alone , and the cooperative playing start at 4y .

Reference: All developmental milestones are listed in a table in USMLE step 2 CK Pediatrics p43-

44. and illustrated textbook p35-39 (go through it).

42. 5 months old infant his parents were not able to bring him for his 4 months vaccination. What will you do?

- a. Arrange for 4 months vaccination
- b. Give missed vaccination and next appointment
- c. Give vaccine together during next appointment

Answer: B

43. A child who came for 6 month vaccination appointment, his family report he had an anaphylaxis shock at 4 months vaccination: what vaccine to give and what not to give? Or do an allergy test first? Or reassure and give them all?

Answer: Allergy test

Reference: UpToDate

SKIN TESTING WITH VACCINES AND VACCINE CONSTITUENTS — If the patient must receive further doses of a vaccine, skin testing with the vaccine should be performed. Proper performance and interpretation of skin tests requires expertise in the procedure, including the use of appropriate positive and negative controls. Also, skin tests themselves can rarely cause anaphylactic reactions in highly allergic individuals. Thus, skin testing should only be performed by persons such as allergists with training in interpretation of, and treatment of possible reactions to, the tests, and only in a setting where anaphylactic reactions can be recognized and treated quickly.

44. 14 years old boy comes to your clinic with swollen lips. He has similar episodes since 3 or 5 years. Deficiency of which of the following caused his presentation?

- a. Factor D
- b. Anaphylatoxin inhibitor
- c. C1 esterase inhibitor

Answer: C

Vitamin B₁₂

B₁₂ ingested and bound to R proteins mainly from salivary glands; stomach secretes intrinsic factor (IF) in acidic medium; in basic medium, proteases from the pancreas cleave R protein and **B₁₂**-IF complex forms, protecting **B₁₂** from further protease attack; **B₁₂** absorbed in ileum and binds to transcobalamin (TC)

Subacute combined degeneration of the spinal cord, peripheral/optic neuropathy, dementia, megaloblastic anemia, glossitis

Differentiate causes by nuclear Schilling test (when available) Positive anti-intrinsic factor antibodies and atrophic gastritis point toward pernicious anemia (see [Hematology, H24](#))

Explanation: Hereditary angioedema is an autosomal dominant disease caused by low levels of the plasma proteins C1 inhibitor (C1-INH). + (Hereditary angioedema (HAE) is a disease characterized by recurrent episodes of angioedema, **without** urticaria or pruritus, which most often affect the skin or mucosal tissues of the upper respiratory and gastrointestinal tracts. Although the swelling is self-limited, laryngeal involvement may cause fatal asphyxiation.

HAE results from mutations in the gene for C1 inhibitor Hereditary angioedema usually presents in late childhood or adolescence and is not associated with other underlying diseases).

Reference: Medscape +(uptodate

<http://cursoenarm.net/UPTODATE/contents/mobipreview.htm?2/12/2255>)

45. Image of cells for a 2 years old with pancytopenia and something else. What is the most likely diagnosis?

- a. Malaria
- b. leishmaniosis
- c. Leukemia

Answer: ? Depends on the image. since we don't have the image we could depend only the question. So, pancytopenia deferential diagnosis and from the answers (leukemia) could be correct and leishmania but less commonly.

Reference: <http://bestpractice.bmj.com/best-practice/monograph/1024/diagnosis/differential-diagnosis.html>

46. Mode of inheritance of neurofibromatosis.

Answer: Autosomal dominant

Explanation:

Neurofibromatosis type 1 (NF1) and type 2 (NF2) are neurocutaneous disorders inherited as autosomal dominant genetic syndromes. mutation in NF1 gene on 17q11.2

Reference: Toronto notes pediatrics p84.

47. 10 years old girl presented with fatigability, diarrhea and glossitis. What is the diagnosis?

- a. Vitamin B12 deficiency

Answer: A

Reference: Toronto Notes Hematology P24

48. 6 years old boy presented with gingivitis, petechiae and rash. What is the diagnosis?

- a. Vitamin C deficiency

Answer: A

Explanation : Vit C deficiency cause impaired collagen synthesis symptoms occurs after 3 months of deficiency, which includes ecchymoses, bleeding gum, petechiae, coild hair, hyperk- eratosis and impaired wound healing. Its common is severely malnourished and alcohol abusers. (scurvy) Tx supplementation.

Reference: uptodate : <http://cursoenarm.net/UPTODATE/contents/mobipreview.htm?33/43/34481>

49. 15 years old has DM with dehydration?

a. DKA

Answer: A

Explanation: DKA is the 2nd most common presentation of type1 diabetes and it presents with polyuria, vomiting (which lead to dehydration) other symptoms : abdominal pain drowsiness and lethargy and fruity smelling breath.

Reference: Toronto Notes endocrinology p11.

50. Infant suffer from groin rash that spare folds?

Answer: Irritant diaper dermatitis

Explanation: Irritant diaper dermatitis Shiny, red macules/patches, no skin fold involvement. however, candida dermatitis is erythematous macerated, papule/plaques, satellite lesions, involvement of skin folds.

Reference: Toronto Notes pediatrics p12.

51. A child with rheumatic heart disease allergic to Penicillin. What prophylaxis should be given before a procedure?

- A. IV amoxicillin
- B. IV vancomycin + IV gentamicin
- C. Oral vancomycin + gentamicin
- D. Oral amoxicillin

Answer: B

Most probable, the answer is B. Since Amoxicillin is type of penicillin and gentamicin generally not given PO.

Explanation: <http://www.cps.ca/documents/position/infective-endocarditis-guidelines>

Patients with rheumatic heart disease and valve damage require a single dose of antibiotics 1 hour before surgical and dental procedures to help prevent bacterial endocarditis. Patients who had rheumatic fever without valve damage do not need endocarditis prophylaxis. Do not use penicillin, ampicillin, or

Clinical Features

- Polyuria, polydipsia, polyphagia with marked fatigue, N/V
- Dehydration (orthostatic changes)
- LOC may be ↓ with ketoacidosis or with high serum osmolality (osm > 330 mmol/L)
- Abdominal pain
- Fruity smelling breath
- Kussmaul's respiration

amoxicillin for endocarditis prophylaxis in patients already receiving penicillin for secondary rheumatic fever prophylaxis (relative resistance of PO streptococci to penicillin and aminopenicillins).+ Alternate drugs recommended by the American Heart Association for these patients include PO clindamycin (20 mg/kg in children, 600 mg in adults) and PO azithromycin or clarithromycin (15 mg/kg in children, 500 mg in adults).

Reference: <http://emedicine.medscape.com/article/891897-treatment>

52. What's the most common minimum side effect of DTP vaccine?

- a. low grade fever
- b. erythema over the injection site

Answer: A

Explanation: mild local and systemic reactions are the most common adverse reaction for the vaccine and it includes low grade fever and mild redness and tenderness at the site of injection, both of them are correct but the redness is the minimal side effect.

Reference: uptodate : Diphtheria, tetanus, and pertussis immunization in infants and children 0 through 6 years of age Diphtheria, tetanus, and pertussis immunization in children 7 through 18 years of age.

Reference: https://www.vaccines.gov/basics/safety/side_effects/index.html#dtap

Both of them are written in the CDC as mild common problems with the same incidence (up to about 1 child in 4)!! I will answer A because it is more common in the practice.

53. 7 years old boy developed Flu after receiving Flu vaccine. His father asked you about the reason. How will you reply?

- a. Live attenuated vaccine has small risk of infection

Answer: A

Explanation: Uptodate : seasonal influenza vaccination in children

In a study of the effectiveness of a school-based immunization program, students who received LAIV had significantly higher rates of symptoms of influenza-like illness (other than wheezing) "

54. Boy presented with unilateral nasal obstruction and foul smelling. What is the diagnosis?

- a. Foreign body

Answer: A

Explanation: most common presentation of nasal foreign body is age btw 2months-4 yrs. present as foul smelling nasal discharge.

Reference: <http://emedicine.medscape.com/article/763767-overview#a4>

55. What is the inheritance mode of fanconi anaemia?

Answer: Autosomal recessive

Reference: <http://jmg.bmj.com/content/40/1/1.full>

56. Patient diagnosed with congenital adrenal hyperplasia. What is the next step?

Answer: there is no answers available so here is prevue about CAH.

Explanation:

IV hydrocortisone

Initial management is hydration , long term is oral steroids. Management in children:- 1- glucocorticoid is necessary in children who have classic 21-hydroxylase deficiency and in symptomatic children with non-classic 21-hydroxylase deficiency.

2- mineralcorticoid and nacl: mineralocorticoid replacement is recommended in all pts who have the classic form of CAH , whether or not it is the salt-losing form. E.g fludrocortisone.

Response to therapy is monitoring by measuring serum 17-hydroxyprogesterone, androstenedione, plasma rennin activity and growth velocity.

Reference: uptodate <http://cursoenarm.net/UPTODATE/contents/mobipreview.htm?18/60/19406>

57. In Atrial septal defect (ASD) there will be:

- A. fixed wide S2 splitting

Answer: A

Reference: USMLE step2 CK Pediatrics p117.

58. Child with thumb sign on lateral Xray. What is the diagnosis?

- a. Epiglottitis

Answer: A.

Reference: USMLE step2

CK Pediatrics p66.

59. DTaP vaccine is against what?

- a. Whooping cough , tetanus, diphtheria
- b. Pertussis, tetanus, measles
- c. Rubella, tetanus diphtheria
- d. Whooping cough, rubella, diphtheria

Answer: A

Reference: Toronto notes, pediatrics p4

60. Bilateral parotid swelling.

Answer: ? since there is no answers here is some DDX

Reference: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3528147/>

<ul style="list-style-type: none"> • mumps - more commonly children than adults • parotitis • uveoparotid fever • sialectasis - especially if related to eating • Sjogren's syndrome • tumour infiltration 	<ul style="list-style-type: none"> • sarcoidosis • tuberculosis • alcoholism • myxoedema • cushing's disease • diabetes/insulin resistance - about 25% of patients with overt or latent diabetes have bilateral asymptomatic enlargement of the parotid glands • liver cirrhosis • gout • bulimia nervosa • HIV in children may cause bilateral parotid enlargement
local disease	systemic disease

61. Child presented with recurrent nasal congestion, rhinorrhea, sneezing, tearing eyes,..What is the diagnosis?

A. allergic rhinitis

Answer: A

Explanation: Allergic rhinitis is characterized by paroxysms of sneezing , rhinorrhea, nasal obstruction , postnasal drainage , and itching of the eyes, nose, and palate with a pattern of allergic triggers. More insidious effects of the disorder include fatigue, irritability, reduced performance at school and work, and depression

Definitive diagnosis would require specific IgE reactivity during skin-prick or in vitro testing , but a therapeutic trial may be ordered on the basis of clinical diagnosis.

Treatment consists of allergen avoidance where possible and pharmacotherapy (antihistamines, corticosteroids, cromoglicate, decongestants, leukotriene receptor antagonists). Intranasal corticosteroids remain the single most effective class of medications for treating allergic rhinitis.

References:

<http://www.uptodate.com/contents/allergic-rhinitis-clinical-manifestations-epidemiology-and-diagnosis>
<http://bestpractice.bmj.com.ezp.uod.edu.sa/best-practice/monograph/232/highlights/summary.html>

62. What is the causative organism of croup or typical symptoms of croup (laryngotracheobronchitis)?

A. Parainfluenza virus

Answer: A

Explanation: Croup is usually caused by viruses. Bacterial infection may occur secondarily. Parainfluenza virus type 1 is the most common cause of croup; other causes include respiratory syncytial virus and influenza virus.

● Croup most commonly occurs in children 6 to 36 months of age. Most cases occur in the fall or early winter.

Treatment :Orally administered corticosteroids are the mainstay for all levels of severity, combined with nebulised epinephrine (adrenaline) in moderate to severe croup to provide temporary relief of the symptoms of upper-airway obstruction.

Reference: <http://emedicine.medscape.com/article/962972-overview#showall>

63. child with croup what is the best initial investigation to diagnosis?

a-c x-ray

b-pharyngeal swab c-?

d-?

Answer: A

Explanation : Answers are missing but, it is clinical diagnosis and an x-ray lateral view is diagnostic showing steeple sign.

Reference: Toronto Notes Pediatrics p85.

Clinical Presentation	Common prodrome: rhinorrhea, pharyngitis, cough \pm low-grade fever Hoarse voice Barking cough Stridor Worse at night
Investigations	Clinical diagnosis CXR in atypical presentation: "steeple sign" from subglottic narrowing
Treatment	Stridor at rest is an EMERGENCY No evidence for humidified O ₂ Dexamethasone: PO 1 dose Racemic epinephrine: nebulized, 1-3 doses, q1-2h Intubation if unresponsive to treatment

64. Rheumatic fever prophylaxis?

a. IM penicillin monthly

Answer: A

An injection of 0.6-1.2 million units of benzathine penicillin G intramuscularly every 4 weeks is the recommended regimen for secondary prophylaxis for most US patients. Administer the same dosage every 3 weeks in areas where rheumatic fever is endemic, in patients with residual carditis, and in high-risk patients.

References: <http://emedicine.medscape.com/article/891897-treatment>

65. 11 years old patient with rheumatic fever and cardiac involvement. For how long he will require prophylaxis?

- a. 5 years
- b. 6 years
- c. 10 years
- d. 15 years

Answer: c

Explanation: this child falls in the 2nd category.

1- Rheumatic fever with carditis and clinically significant residual heart disease requires anti- otic treatment for a minimum of 10 years after the latest episode; prophylaxis is required until the patient is aged at least 40-45 years and is often continued for life.

2- Rheumatic fever with carditis and no residual heart disease aside from mild mitral regurgitation requires antibiotic treatment for 10 years or until age 21 years (whichever is longer).

3- Rheumatic fever without carditis requires antibiotic treatment for 5 years or until the patient is aged 18-21 years (whichever is longer).

Reference: <http://www.aafp.org/afp/2010/0201/p346.html>

66. Which of the following congenital heart disease is the least associated with infective endocarditis?

- a. ASD
- b. VSD
- c. PDA
- d. Pulmonary stenosis

Answer: A

Similar question: <http://gradestack.com/Dr-Bhatia-Medical/Infective-endocarditis-is/0-3042-3177-15646-sf>

Valvular aortic stenosis – 13.3 percent

Coarctation of the aorta – 3.5 percent

Primum atrial septal defect – 2.8 percent

Ventricular septal defect (VSD) – 2.7 percent

Tetralogy of Fallot (TOF) – 1.7 percent

No child with secundum atrial septal defect, patent ductus arteriosus (PDA), or pulmonic stenosis had IE after surgery.

67. 8 years old boy with petechiae all over his body. Lab results: low platelets and high creatinine level. what is the diagnosis?

- A. ITP
- B. TTP

Answer: HUS

Explanation: HUS if no fever or altered mental status

HUS = Microangiopathic hemolytic anemia + thrombocytopenia + renal failure
TTP = HUS + fever and/ or altered mental status.

Reference: <http://emedicine.medscape.com/article/206598-clinical>

68. A boy came to your clinic with yellow discoloration of the eyes noticed 3 days back and hepatomegaly. His liver enzymes are increased. What is the diagnosis?

- A. Hepatitis A
- B. Hepatitis B
- C. Hepatitis C
- D. Hepatitis D

Answer: A

Explanation: its hep A because it is transmitted via fecal-orally. and in the question it is not mentioned that there is any kind of abuse or Hx of vertical transmission to consider hep B or C.

References: <http://www.uptodate.com/contents/overview-of-hepatitis-a-virus-infection-in-children>

69. What can increase fetal hemoglobin in sickle cell anemia (no hydroxyurea in the options)

- A. Folic acid

Answer: ? we have to know the multiple choices to be more sure.

Explanation:

The hbf inducers: - can be grouped in several classes based on their chemical structures and mechanisms of action including

Hypomethylating agents (eg; 5-azacytidine and decitabine)

Short chain fatty acids: histone deacetylase inhibitors (eg; sodium butyrate)

Chemotherapeutic agents (eg; hydroxyurea)

Stem cell factor and erythropoietin

Reference: *Advances in Pediatric*

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3139383/>

70. (long scenario) baby with cavernous hemangioma and have pleural effusion. (he have other findings). What you will find in this baby?

A. Pulmonary hemangioma.

Answer:?

Explanation: part of the Q is missing. But if there is mediastinal hemangioma in the answers it would be correct based on the literature(it present with unilateral pleural effusion)..

References:

<http://www.uptodate.com/contents/tufted-angioma-kaposiform-hemangioendothelioma-and-the-kasabach-merritt-phenomenon?>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3853862/>

71. A child is always using abnormal sitting habits (W-Setting), what is the effect on the bones?

Answer: Internal femoral torsion(Femoral Anteversion)

Explanation: Internal Femoral Torsion (Femoral Anteversion), it's the most common cause of intoeing > 2 years of age.

Management: Observation, takes 1-3 years to resolve. Surgery only if significant at > 10 years of age.

Reference: *USMLE Step2 CK pediatrics p172.*

72. What is the Triple Antitoxoid?

- A. Tetanus, Diphtheria, Whooping cough
- B. Tetanus, Diphtheria, TB
- C. Diphtheria, Pertussis, Colorectal CA
- D. Diphtheria, Tetanus, Rabies.

Answer: A

References http://www.who.int/vaccine_safety/initiative/tools/DTP_vaccine_rates_information_sheet.pdf

73. 2 weeks neonate passed unformed stool. What will you do?

- A. Prescribe formula milk.
- B. Give oral rehydration solution.
- C. Prescribe Lactose-free milk.

Answer: B

References <http://www.babycenter.ca/a82/diarrhea-in-babies>

74. (long scenario) child have 1mm defect in muscular atrial septum. What you will do?

- A. Surgical repair.
- B. Catheter repair.
- C. Reduce after load.
- D. Watchful waiting.

Answer: D

Explanation: 80-100% spontaneous closure rate if ASD diameter <8mm. if remains patent, CHF and pulmonary HTN can develop in adult life. Elective surgical or catheter closure btw 2-5 yrs of age.

Reference: Toronto Notes pediatrics p17.

75. 7 month baby with you discover that the baby has VSD and Asymptomatic otherwise healthy what are you going to do?

- A. Close observation
- B. Surgery
- C. F/u after 6 month

Answer: C

Explanation: No intervention is usually required for patients with small defects. These patients are typically asymptomatic and have a reasonable expectation of spontaneous closure or decrease in the size of the defect 1-2 yrs over time.

-Patients who continue to have a murmur, but are otherwise asymptomatic and growing well at the 8- to 10-week visit, are seen again by the pediatric cardiologist at approximately 12 months of age.

-If the murmur persists at the 12-month and the patient remains asymptomatic and clinically stable, no further intervention is required. Echo follow-up is typically performed at three years of age for patients with membranous defects. In those with a muscular defect, no echo is required if the patient remains asymptomatic

-Asymptomatic patients with residual small defects are usually followed every two to five

Reference: <http://emedicine.medscape.com/article/892980-treatment>

Toronto notes pediatrics p17

76. A baby 8 month old breastfeed for 6 month normally. He devolved vomiting and jaundice after fruit juice. What component in the juice the baby is allergic to?

- A. Glucose
- B. Fructose
- C. Sucrose
- D. galactose
- E. phenylalanine

Answer: B

Exolanation: fructose intolerance; Affected individuals are completely asymptomatic until they ingest fructose. Thus, homozygous neonates remain clinically well until confronted with dietary sources of fructose.

Reference: <http://reference.medscape.com/article/944548-overview#a5>

77. What is the most common cause of acute bronchiolitis?

- A. Respiratory Syncytial virus (RSV)
- B. Adenovirus
- C. parainfluenza
- D. Mycoplasma pneumonia.

Answer: A.

Reference: <http://emedicine.medscape.com/article/961963-overview#a4>

78. To which part of body it can go ? (continuation of the previous question)

- A. Spleen.
- B. Bladder.
- C. kidney.
- Liver.

Answer: D

Explanation: Recently, extrapulmonary manifestations (central nervous system, cardiovascular system, endocrine system and liver) of RSV-infection are described.

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3900097/#b5-biochem-med-23-1-112-13>

79. What is the gene responsible for neurofibromatosis?

Answer: ? there is no answers provided.

Explanation: The NF1 (peripheral neurofibromatosis or von Recklinghausen disease) gene is located on the long (q) arm of chromosome 17, band q11.2 (17q11.2).

The NF1 gene encodes for a cytoplasmic protein called neurofibromin 1, which is a ras -GT- Pase-activating protein that suppresses tumor growth, primarily by inhibiting ras activity.

The gene for NF2 (bilateral acoustic neurofibromatosis or central neurofibromatosis) is located on the long (q) arm of chromosome 22, band q12.2 (22q12.2).

The NF2 gene codes for the protein neurofibromin 2, also called merlin or schwannomin.

Reference: <http://emedicine.medscape.com/article/950151-overview#a2>

80. NF1 gene responsible for?

- a. Neurofibromatosis

Answer: A

Nf1 Gene located on chromosome 17q11.2 And coding for a tumor suppressor gene Responsible for Neurofibromatosis type 1

Reference : Toronto notes pediatrics p84.

81. A child came to you with Café au lait spots in face and neck. Which of the following features can strengthen your diagnosis?

- A. Port-wine stain.
- B. Axillary freckling.

Answer: B

Explanation: Clinical diagnosis requires the presence of at least 2 of 7 criteria to confirm the presence of NF1. The 7 clinical criteria used to diagnose NF1 are as follows, in the absence of alternative diagnoses:

Six or more café-au-lait spots or hyperpigmented macules =5 mm in diameter in pre- pubertal children and 15 mm postpubertal

Axillary or inguinal freckles (>2 freckles)

Two or more typical neurofibromas or one plexiform neurofibroma

Two or more iris hamartomas (Lisch nodules)

Optic nerve glioma

Sphenoid dysplasia or typical long-bone abnormalities such as pseudarthrosis

First-degree relative (eg, mother, father, sister, brother) with NF1

Reference:<http://emedicine.medscape.com/article/1177266-clinical>

NF2: meningioma, schwannoma, glioma, neurofibroma, posterior subcapsular lenticular opacities accompanied by external signs: hearing loss, ringing in the ears, and balance problems associated with vestibular nerve lesions, visual deficits and cranial nerve palsies.

82. Breastfeeding after delivery should start:

- A. Immediately
- B. 6 hr
- C. 8hr
- D. 24 hr

Answer: A

Reference:<https://www.betterhealth.vic.gov.au/health/healthyliving/breastfeeding-when-to-start>

83. (long scenario) Child brought by his father in wheelchair complaining of knee swelling and history of falling on his knee. What is the best investigation ?

- A. Joint Aspiration.
- B. X-ray.

Answer: B

A plain radiograph of the affected joint should be performed to rule out fractures, periostitis, avascular necrosis, bone tumors, and bone dysplasias. Joint aspiration if there is fever, signs of inflammation (hotness, redness, ...).

Reference: Uptodate, Toronto notes orthopedics p10.

84. A case of ambiguous genitalia. Which hormone you would like to check?

Answer: 17-hydroxyprogesterone (Hormone)

should be measured promptly in all infants with non palpable gonads presenting with genital ambiguity to exclude congenital adrenal hyperplasia (CAH) due to 21-hydroxylase deficiency. This is the most common cause of genital ambiguity and can lead to life-threatening adrenal insufficiency within the first weeks of life.

Reference: Toronto notes p29 pediatrics.

85. 26 years old female G1P1 brought her two weeks old baby who cries a lot. He is on breastfeeding since birth, he stops crying at night when she gave him formula milk. On examination, the baby looks normal except for increase gurgle sound. What is the most likely diagnosis?

- A. Paralytic ileus.
- B. Lactose malabsorption.
- C. Increase bowel gases.
- D. Breast milk jaundice.

Answer: B

Explanation: he stops crying after formula milk. Should specify the kind of formula milk as soy infant formula or lactose-free formulas are both tolerated by lactose intolerance patients.

Reference: <http://emedicine.medscape.com/article/930971-overview#showall>

86. 5 years old girl with uncomplicated cystitis. what is the management?

- A. Oral amoxicillin
- B. IV cephalosporin
- C. IM ceftriaxone
- D. Sodium ...

Answer: A

Explanation: This is an oral therapy for infection with susceptible organisms. Amoxicillin inhibits bacterial

cell-wall synthesis by binding to penicillin-binding proteins. The addition of clavulanate inhibits beta-lactamase-producing bacteria.

Reference: USMLE step2 CK pediatrics p150.

87. Pediatric patient with classical symptoms of Diabetes + elevated blood glucose . What will you do next?

- A. Urine dipstick
- B. Genetic testing
- C. HbA1c

Answer: A

Urine dipstick to pick up DKA early and to prevent further complications. Reference: <http://guidelines.diabetes.ca/browse/Chapter34>

<http://emedicine.medscape.com/article/118361-workup#c9>

88. Case of croup ,what is symptoms associated :

- A- Cyanosis
- B- wheezing
- C- dysphonia

Answer: C.

Explanation: characteristic signs of hoarseness(dysphonia), barking cough, and inspiratory stridor develop, often suddenly, along with a variable degree of respiratory distress. The only book who emphasized the signs of hypoxia (cyanosis) is Masters of the boards"the child will have more difficulty breathing when laying down and may show signs of hypoxia such as peripheral cyanosis".

Reference: <http://emedicine.medscape.com/article/962972-clinical>

89. pediatric patient come with barking cough what is the best diagnosis ?

Answer: chest x ray

Explanation: it is clinical diagnosis, we do CXR in atypical presentation. and it show steeple sign in croup patients.

Reference: <http://emedicine.medscape.com/article/962972-workup>

90. Child presented with bronchiolitis. What is your management?

- A. Give Oxygen
- Answer: A

Explanation: Bronchiolitis management:

mild to moderate distress: supportive; PO or IV hydration, antipyretics for fever, reg or humidified high flow O2.

Severe distress: as above+ intubation and ventilation as needed. Consider Rebetol(Ribavirin) in high risk groups(bronchopulmonary dysplasia, CHF, congenital lung disease, immunodef).

Bronchodilators and steroids are not recommended.
Reference: Toronto notes p86 Pediatrics.

91. A child presented with Croup. What to give in ER?

A. epinephrine

Answer: A

Explanation: Croup Tx: Stridor at rest is an EMERGENCY, No evidence for Humidified O2.
Dexamethasone PO 1 dose
Racemic epinephrine: Nebulized 1-3 doses, q1-2h
Intubation if unresponsive to Tx.
Refer to the table at the end of Pediatrics section
Reference: Toronto Notes p85 pediatrics.

92. Epiglottitis case.

a) intubate

Answer: A

Refer to the table at the end of Pediatrics section
Explanation: Tx of epiglottitis: intubation, antibiotics, prevented by HIB vaccine.
Reference: Toronto notes p85 Pediatrics.

93. Case of drooling of saliva?

Answer: Epiglottitis

Explanation: Epiglottitis clinical presentation; 4 Ds: Drooling, Dysphagia, Ddysphonia, Distress.
Causes of drooling
Developmental
Physiological Teething Nausea
Foods
Emotional stimuli
Central nervous system and muscular disorders
Mental retardation
Oropharyngeal lesions
Esophageal lesions
Gastroesophageal reflux
Drugs and chemicals
Familial dysautonomia (Riley-Day syndrome)
Wilson disease
Rett syndrome

Reference: Toronto notes p85 Pediatrics.

94. Pediatric case of bronchiectasis what is the most important ?

Answer: Physiotherapy or home oxygen or steroid

Explanation: not sure really if this is the multiple choices or the possible answers. But regarding bronchiectasis management. See the reference.

Reference: <http://emedicine.medscape.com/article/296961-treatment>

95. 7 years old girl was brought by her mother, she developed pubic hair and her height 70th percentile and weight 50th percentile. On examination there are no signs of puberty except pubic hair. Abdominal, chest, cardiac and renal examination were normal. What is the most likely diagnosis?

- A. Congenital Adrenal hyperplasia
- B. 45X (Turner syndrome).

- C. Premature Adrenarche.
- D. Normal puberty.

Answer: C

Explanation: Premature adrenarche is when these changes begin early, before age 8 for girls and age 9 for boys.

Reference: http://www.medscape.com/viewarticle/759350_3

96. Malnourished baby with fair coiled hair and abdominal distention. What is the most likely diagnosis?

- A. Kwashiorkor
- B. Marasmus

Answer: A

97. treatment of choice for kawasaki ?

Answer: there was no answers available.

Explanation: the recommended initial therapy for Kawasaki disease includes intravenous immune globulin (IVIG; 2 g/kg) administered as a single infusion over 8 to 12 hours and aspirin (initial dose of 30 to 50 mg/kg daily divided into four doses).

IVIG : to reduce risk of coronary artery aneurysm Aspirin :

reduce risk of thrombosis

at risk of coronary arteries aneurysm within the first week of illness in about one third of affected children

Reference: http://www.uptodate.com/contents/kawasaki-disease-initial-treatment-and-prognosis?source=search_result&search=kawasaki&selectedTitle=2%7E150

98. Pediatric blunt trauma with duodenal coiled spring sign. what will you do ?

Answer: Duodenal hematoma:

Explanation: management in such case is Total parenteral nutrition and gastric decompression provide an effective conservative treatment of the gastric outlet obstruction associated with this injury.

Surgical intervention is only reserved for those patients who continue to show the clinical and radiological signs of complete high obstruction despite conservative management for three weeks.

important clues to the diagnosis include the history of upper abdominal trauma, persistent vomiting, and air-fluid levels in both the stomach and duodenum (the so called double bubble) in a plain erect abdominal x ray film. If doubt still exists, contrast study of the upper gastrointestinal tract will show partial to complete obstruction of the duodenum, with a "stacked coins" or "coiled spring" appearance caused by oedematous mucosal folds proximal and distal to the point of maximum obstruction

In the pediatric age group, duodenal injury from a blunt abdominal trauma resulting in an intramural hematoma is rare. This case illustrates the characteristic delayed presentation of a duodenal hematoma following a blunt injury from a motor vehicle accident and the associated sequelae of delayed pancreatitis.

Reference: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3088392/>

99. Baby with tachypnea, cough, hemoptysis and bilateral lung infiltrates. what is the treatment ?

- A. Steroid
- B. Antibiotic
- C. Surgery

Answer: B

Explanation: Minor hemoptysis is managed symptomatically, by giving cough suppressants like dextromethorphan and oral/parental haemostatic agents like ethamsylate or Botropase, reassurance

of the patient and parents, and the treatment of the underlying cause. If a specific etiology is identified, appropriate therapy of the underlying disease should be initiated. Pulmonary infections are treated with appropriate antibiotics. Cystic fibrosis exacerbations are managed with antibiotics and corticosteroids.

Reference: Hemoptysis in Children; See: <http://medind.nic.in/ibv/t10/i3/ibvt10i3p245.pdf>

100- Baby with tachypnea, cough, hemoptysis and bilateral lung infiltrates. what is the treatment ?

- A. Steroid
- B. Antibiotic
- C. Surgery

Answer: B

Explanation: the (bilateral lung infiltrates) on CXR suggests the diagnosis of lower respiratory tract infection, and antibiotics should be considered.

However, life-threatening hemorrhage (>8 mL/kg every 24 hours or 200 mL every 24 hrs) can occur in small number of children. Massive hemoptysis, can quickly progress to acute respiratory distress in a child. These children require multiple procedures to stabilize the airways and to control blood loss.

Reference: Hemoptysis in Children; See: <http://medind.nic.in/ibv/t10/i3/ibvt10i3p245.pdf>

101- Child with meningitis what to do immediately?

- A. Antibiotics
- B. Lumbar puncture

Answer: B

Explanation: you do LP first, then you start the empiric Abx while waiting the results (you do not start empiric Abx before taking the LP because single injection of abx could clear the CSF results).

Reference: Toronto notes, pediatric consultant.

102- Child sucking his thumb what to do?

Answer: ...

Explanation: The American Dental Association says most children can safely suck their thumb – without damaging the alignment of their teeth or jaws – until their permanent teeth begin to appear. (Permanent teeth don't usually start to erupt until around age 6.)

Thumb sucking is a common, generally harmless child behavior whose persistent practice occasionally leads to dental, dermatological, orthopedic, and psychological problems. When to treat thumb sucking should be determined by risk potential. With a few rare exceptions (e.g., hair pulling), thumb sucking related problems do not occur until after the age of four years and therefore, treatment is rarely necessary before then. Even after this age, treatment is not recommended unless physical and/or emotional sequelae are imminent or a thumb sucking child requests help in quitting. Thus, in most cases parents should be instructed to ignore thumb sucking. When intervention is necessary, it should be preceded by a 1-month moratorium on parental attention. Treatment should include a combination of monitoring with charts, incentives for successful days and various external cues to remind the child who forgets.

Reference: <https://www.ncbi.nlm.nih.gov/pubmed/2676311>

103- Which of the following is a cyanotic heart disease in children?

- A. ASD
- B. VSD
- C. Tetralogy of fallot

Answer: C

Explanation: cyanotic heart diseases include: Teratology of fallot, Tricuspid atresia, Transposition of great vessels, Truncus arteriosus, Total anomalous pulmonary venous return, Ebstein anomaly.

Teratology of fallot components are: pulmonary stenosis and infundibular stenosis (obstruction to right ventricular outflow), VSD, overriding aorta (overrides the VSD), and right ventricular hypertrophy.

Reference: Illustrated textbook of paediatrics, Kaplan step 2 CK for Pediatrics 2016.

104- A child with developmental delay and constipation. Labs: low Na , low K and low ..?? what is the most likely diagnosis ?

- A. CAH
 - B. Congenital chloride diarrhea
- *other choices include syndromes.

Answer:

Explanation: Bartter syndrome?

Some hypokalemic patients develop rhabdomyolysis, especially following exercise. Hypokalemia slows gastrointestinal motility; potassium levels less than 2.5 meq/l may cause an ileus.

Hypokalemia impairs bladder function, potentially leading to urinary retention. Hypokalemia causes polyuria by producing secondary nephrogenic diabetes insipidus. Chronic hypokalemia may cause kidney damage, including interstitial nephritis and renal cysts. In children, chronic hypokalemia, as in Bartter syndrome, leads to poor growth.

Bartter syndrome is characterized by fluid, electrolyte, urinary, and hormonal abnormalities, including renal potassium, sodium, chloride, and hydrogen wasting; hypokalemia; hyperreninemia and hyperaldosteronism without hypertension; and metabolic alkalosis. Findings include electrolyte, growth, and sometimes neuromuscular abnormalities. Diagnosis is assisted by urine electrolyte measurements and hormone assays but is typically a diagnosis of exclusion. Treatment consists of NSAIDs, potassium-sparing diuretics, low-dose ACE inhibitors, and electrolyte replacement.

*Developmental delay, Low K⁺ and Na⁺ give hints towards the diagnosis of Bartter syndrome.

Reference: <http://emedicine.medscape.com/article/238670-overview#showall>;
<http://www.msdmanuals.com/professional/pediatrics/congenital-renal-transport-abnormalities/bartter-syndrome-and-gitelman-syndrome>

105- A child with normochromic normocytic anemia + splenomegaly. Blood smear was attached showing clear spherocytosis. which of the following will be abnormal?

- A. plt
- B. reticulocytes.
- C. wbc
- D. mcv

Answer: B

Explanation: hereditary spherocytosis (increased reticulocytes and bilirubin).

Reference: Kaplan step 2 CK for Pediatrics 2016.

106- What is the most common intra-abdominal tumor in children?

- A. hepatoma
- B. rhabdomyosarcoma
- C. Ewing tumor
- D. Wilms tumor

Answer: D

Explanation: Neuroblastoma is the most common tumor constituting, followed by Wilms' tumor (aka: nephroblastoma).

Reference: <http://www.ncbi.nlm.nih.gov/pubmed/15321038>; Kaplan step 2 CK for Pediatrics 2016.

107- What is the single most important risk factor for cerebral palsy?

- A. prematurity
- B. birth weight less than 1.5 kg
- C. prenatal asphyxia
- D. genetic mutations.

Answer: A

Explanation: The etiology of cerebral palsy (CP) is multifactorial. Known causes account for only a small proportion of cases. Most cases are thought to be due to prenatal factors, although perinatal asphyxia plays a role in some; prematurity is a common association.

The multifactorial etiology was illustrated in a series of 213 children diagnosed with CP in Australia. Major CP-associated pathologies other than acute intrapartum hypoxia were identified in 98 percent of cases; some children had more than one associated pathology:

Prematurity (78 percent)

Intrauterine growth restriction (34 percent)

Intrauterine infection (28 percent)

Antepartum hemorrhage (27 percent)

Severe placental pathology (21 percent)

Multiple pregnancy (20 percent)

A few studies have suggested that heavy maternal alcohol consumption is a risk factor for CP.

Epidemiologic studies suggest that heavy maternal alcohol consumption increases the risk for CP more than threefold. In addition, between 2 and 10 percent of children with fetal alcohol syndrome also have CP.

Reference: uptodate

108- A child with flat buttocks. What investigation will you do (celiac)?

- A. Antibody...
- B. Intestine biopsy

Answer: A

Explanation: Antibody testing, especially immunoglobulin A anti-tissue transglutaminase antibody (IgA TTG), is the best first test, although biopsies are needed for confirmation; in children younger than 2 years, the IgA TTG test should be combined with testing for IgG-deamidated gliadin peptides.

Reference: <http://emedicine.medscape.com/article/171805-workup>

109- child with bad smell and tooth is good :::: tonsillitis with crept

Answer: Tonsilloliths

Explanation: Tonsils — The tonsils may be involved in the pathogenesis of bad breath in a small percentage of cases (perhaps 3 percent). Tonsillectomy based solely upon a complaint of bad breath should be avoided.

Some patients complain of small stones on their tongue or tonsils when they cough that have a foul odor (and often lead patients to assume that they must have terrible breath). These stones are "tonsilloliths" that form in crypts of the tonsils.

Reference: uptodate

110 child with chronic diarrhea , endoscopy showed sickle shaped parasite adherent to the bowl wall , what is it?

- A. Giardia
- B. Entemebea histolytica

Answer: A

Explanation: Biopsy specimens from duodenum are often teeming with sickle-shaped Giardia trophozoites, which are tightly bound by the concave attachment disc to the villus surface of the intestinal epithelial cells.

Reference: medscape

111 scenario a child didn't take HBV VACCINE what u will give him

Answer: If the vaccine is not given after birth the baby may start the course of hepatitis B vaccines (in combination with other childhood vaccines) beginning at six weeks (2 months), then at four and six months of age.

112 2Q about coarctation of Aorta (straight forward)

Coarctation of aorta: radio femoral delay

Baby with Deference in the Bp in upper and lower Extremities

Answer: both answers are correct.

Explanation: A clinical diagnosis of coarctation of Aorta is made if there is an absent or delayed femoral pulse (when compared with the brachial pulse). if there's a murmur may be associated with other cardiac defects, such as PDA, aortic stenosis, or ventricular septal defect (VSD).

The classic findings of coarctation of the aorta are systolic hypertension in the upper extremities, diminished or delayed femoral pulses (brachial-femoral delay), and low or unobtainable arterial blood pressure in the lower extremities.

Reference: uptodate;

http://www.uptodate.com/contents/clinical-manifestations-and-diagnosis-of-coarctation-of-the-aorta?source=search_result&search=coarctation+of+Aorta&selectedTitle=1~126

113 Formula milk comparing to Breast milk contain morewhat

Answer: ...

Explanation: It contains more protein 1.5-1.9 g , Carbohydrate 7-8.6 g , sodium 0.65-1.1 mmol , Calcium 0.88-2.1 mmol , phosphorus 0.9-1.8 mmol and Iron 8-12.5 umol

Reference: illustrated textbook of pediatrics page 206 - Table 12.2

114 breast feeding mother known history of seizure with phenytoin ask about breast feed?

A. Reassurance

B. feeding after 8 hrs

Answer: A.

Explanation: Breast-Feeding Considerations: Phenytoin is excreted in breast milk; however, the amount to which the infant is exposed is considered small. The manufacturers of phenytoin do not recommend breast-feeding during therapy. Phenytoin, carbamazepine and valproate are probably safe. The traditional anticonvulsants, such as phenytoin, carbamazepine and valproic acid (valproate sodium), are generally considered safe for use during breast feeding; however, observation for adverse effects is recommended. Weighing the benefits of breast feeding against the potential risk to the nursing infant, breast feeding is considered to be safe when the mother is taking carbamazepine, valproic acid or phenytoin.

Reference: http://www.uptodate.com/contents/phenytoin-drug-information?source=see_link&utd-Popup=true; <https://www.ncbi.nlm.nih.gov/pubmed/10937463>

115 child with jaundice, elevated direct bilirubin

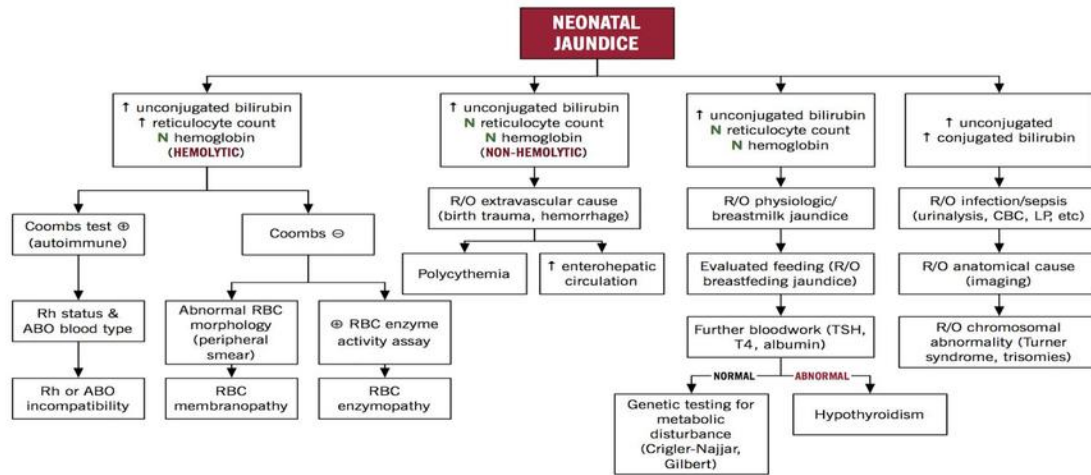
Answer:

Explanation: (Two notes '1 and 2'):

1- toronto notes P72 (check the picture below)

NEONATAL HYPERBILIRUBINEMIA | Approach to neonatal jaundice

Amanda Yaworski



2- <http://www.pathophys.org/neonatal-hyperbilirubinemia/>

116 -Case of gonorrhoea eye infection in a newborn.. What to give?

Answer:

Explanation: gonorrhoea eye infection= copious, purulent discharge, swelling of the lids and conjunctivae, corneal involvement common (risk for perforation). Appear one to two week afterbirth uni or bilateral.

Infants with gonococcal ophthalmic disease should be hospitalized and observed for response to therapy and for disseminated disease. Presumptive treatment should be started after obtaining cultures in infants with organisms seen on gram stain or in those with negative gram stain, but who are considered to be at high risk (eg, mother with no prenatal care, history of stds, or substance abuse).

Treatment consists of a single dose of ceftriaxone (25 to 50 mg/kg, not to exceed 125 mg, intravenously or intramuscularly). A single dose of cefotaxime (100 mg/kg, intravenously or intramuscularly) is an alternative option and is preferred for neonates with hyperbilirubinemia and those receiving calcium-containing intravenous (iv) solutions (eg, parenteral nutrition).

*Ceftriaxone X 1 dose IM + saline irrigation until clear (Kaplan).

Topical antibiotic therapy alone is inadequate and is not necessary when systemic treatment is provided. The eyes should be irrigated frequently with saline until the discharge clears.

Asymptomatic infants of untreated mothers — asymptomatic infants whose mothers have untreated gonococcal infection are at high risk for acquiring infection. These infants also should receive systemic treatment with a single dose of ceftriaxone (25 to 50 mg/kg, up to a total dose of 125 mg, administered intravenously or intramuscularly) or cefotaxime (100 mg/kg, administered intravenously or intramuscularly) and should be evaluated for chlamydial infection.

Prevention — the most effective measure to prevent both gonococcal and chlamydial infections is to diagnosis and treat these infections in pregnant women. In addition, prophylactic antibiotic eye therapy reduces the risk of gonococcal conjunctivitis; however, it is not effective in preventing c. Trachomatis conjunctivitis.

Neonatal prophylaxis — Prophylaxis can be administered up to one hour after birth to facilitate infant-family attachment. The following are regimens recommended by the american academy of pediatrics.

- erythromycin (0.5 percent) ophthalmic ointment
- tetracycline (1 percent) ophthalmic ointment; tetracycline ophthalmic ointment is not available in the united states

Reference: <http://www.uptodate.com/contents/gonococcal-infection-in-the-newborn>; Kaplan step 2 CK for Pediatrics 2016.

117 2 month boy present with 2 cm of hemangioma in the back .. Wt is the ttt?

- A. close f/u
- B. excision
- C. b-blocker

Answer: A

Explanation: Infantile hemangiomas are benign vascular neoplasms that have a characteristic clinical course marked by early proliferation and followed by spontaneous involution. Hemangiomas are the most common tumors of infancy and usually are medically insignificant. The vast majority of infantile hemangiomas do not require any medical or surgical intervention. Treatment options for clinically significant hemangiomas include the following:

- Laser surgery
- Surgical excision
- Medication

Reference: <http://emedicine.medscape.com/article/1083849-overview>

118 mother came to you that her child compline of spells for seconds ?

Answer:

Explanation: absence (petit mal): usually only seen in children, unresponsive for 5-10 s with arrest of activity, staring, blinking or eye-rolling, no post-ictal confusion; 3 Hz spike and slow wave activity on EEG.

Seizure Mimics:

- Benign paroxysmal vertigo
- Breath holding
- Hypoglycemia
- Narcolepsy
- Night terror
- Pseudoseizure
- Syncope
- TIA
- Tic

Reference: toronto note and nelson p679

119 20 days infant diagnosis as meningitis, his culture show gram negative bacilli. Which of following could be the organism?

- A. hemophiles influenza
- B. E.coli
- C. neisseria meningitides

Answer: B

Explanation: group B streptococci (GBS) are the most commonly identified causes of bacterial meningitis, implicated in roughly 50% of all cases. Escherichia coli accounts for another 20%. Thus, identification and treatment of maternal genitourinary infections is an important prevention strategy. [5] Listeria monocytogenes is the third most common pathogen, accounting for 5-10% of cases; it is unique in that it exhibits transplacental transmission.[6]

- N . Meningitides it is gram negative diplococcus
- H . Influenza it is gram negative coccobacilli
- E coli: gram negative bacilli.

Reference: nelson p381

120 young patient complains of scrotal pain, examination is normal, US normal, urine analysis show pyuria. what is the next step :

- A. Refer to surgery
- B. Give him azithromycine and cefxime

Answer: B.

Explanation: This is a case of epididymitis. This patient has epididymitis. In males 14-35 years of age, the most common causes are *Neisseria gonorrhoeae* and *Chlamydia trachomatis*. The recommended treatment in this age group is ceftriaxone, 250 mg intramuscularly, and doxycycline, 100 mg twice daily for 10 days. A single 1-g dose of azithromycin may be substituted for doxycycline. In those under age 14 or over age 35, the infection is usually caused by one of the common urinary tract pathogens, and levofloxacin, 500 mg once daily for 10 days, would be the appropriate treatment. But testicular torsion cause severe pain without urinary symptoms diagnosis by Color Doppler ultrasonography will show a normal-appearing testis with decreased blood flow. And it need urgent surgical intervention.

* Guidelines from the Centers for Disease Control and Prevention (CDC) recommend the following regimen for acute epididymitis most likely caused by sexually transmitted chlamydia and gonorrhea [1, 2] :

- Ceftriaxone 250 mg IM in a single dose **plus**
- Doxycycline 100 mg orally twice a day for 10 days

For acute epididymitis most likely caused by sexually-transmitted chlamydia and gonorrhea and enteric organisms (eg, in men who practice insertive anal sex), CDC recommendations are as follows:

- Ceftriaxone 250 mg IM in a single dose **plus**
- Levofloxacin 500 mg orally once a day for 10 days **or**
- Ofloxacin 300 mg orally twice a day for 10 days

For acute epididymitis most likely caused by enteric organisms (eg, cases that develop after prostate biopsy, vasectomy, and other urinary-tract instrumentation procedures, with sexually transmitted organisms ruled out) CDC recommendations are as follows:

- Levofloxacin 500 mg orally once daily for 10 days **or**
- Ofloxacin 300 mg orally twice a day for 10 days

In addition to antibiotics (except in viral epididymitis), supportive therapy is needed for acute epididymitis and orchitis: Reduction in physical activity, Scrotal support and elevation, Ice packs, Anti-inflammatory agents, Analgesics, including nerve blocks, Avoidance of urethral instrumentation, Sitz baths.

Reference: <http://emedicine.medscape.com/article/436154-treatment#showall>

121 Patient with Ostium secundum atrial septal defect What you will see in his ECG

- A- prolonged PR interval
- B-left axis deviation
- C- right axis deviation

Answer: C

Explanation: An ECG demonstrates sinus rhythm, often with evidence of right atrial enlargement manifest- ed by tall, peaked P waves (usually best seen in leads II and V2) and prolongation of the PR interval. The QRS axis is slightly directed to the right (+100°), and the precordial leads reveal

right ventricular enlargement of the so-called volume overload type that is characterized by an rSR' pattern in leads V3 R and V1 with normal T waves.

The QRS duration may be mildly prolonged because of right ventricular dilation. This mimics the finding in right ventricular conduction delay. A significant proportion (20-40%) of children with secundum atrial septal defect may not have abnormal ECG findings.[14] Uncommonly, a patient with a secundum atrial septal defect may demonstrate a superior QRS axis with right ventricular enlargement, mimicking findings observed in the ECG of a patient with an ostium primum atrial septal defect.

Reference: <http://emedicine.medscape.com/article/890991-workup#c6>

122 -best way to take urine sample:::

- A. midstream
- B. foley catheter
- C. bag

Answer: A.

Explanation: Midstream clean catch mid-stream urine sample means that you don't collect the first or last part of urine that comes out. This reduces the risk of the sample being contaminated with bacteria from:

- your hands
- the skin around the urethra (tube that carries urine out of the body)
- But in general collection of urine sample depend on the age.

Midstream is the best in toilet trained patient. Supra pubic bladder aspiration is the best in neonate and young children. Bag never used nowadays. Edited and Confirmed.

Reference: [Alhowasi 6th edition 15](#)

123- Picture of growth chart all parameters was low what is the Dx?

- A-Genetic
- B- GH Def

Answer: ...

Explanation: depends on the chart

- If the weight and height proportionally small >> Chromosomal "genetic"
- If the weight fall more that the height "FTT" >> due to chronic illness , lack of intake
- if height fall more than the weight "short stature" >> endocrine .

Reference: [uptodate](#)

124- How to diagnose Giardia lamblia?

- A- three consecutive stool analysis
- B- three separate stool analysis

Answer: B

Explanation: Ideally, 3 specimens from different days should be examined because of potential variations in fecal excretion of cysts. G intestinalis is identified in 50-70% of patients after a single stool examination and in more than 90% after 3 stool examinations.

Reference: <http://emedicine.medscape.com/article/176718-workup>

125- Which of the following influenza vaccines is given intranasally?

Answer: [Live attenuated influenza vaccine](#)

Reference: <http://www.cdc.gov/flu/about/qa/nasalspray.htm>

126- Young patient swallowed pins, what are you going to do. (serial x-rays)

Answer:

Explanation: The peak incidence of foreign body ingestion is between the ages of 6 months and 3 years. Most ingested foreign bodies pass through the gastrointestinal tract without difficulty, especially once they have reached the stomach. Children with foreign body ingestion typically do not require laboratory testing. Laboratory studies may be indicated for workup of specific complications, such as potential infection Chest/abdominal radiography Most foreign bodies ingested by children are radiopaque (in contrast to inhalation, in which most are radiolucent).

Reference: <http://adc.bmj.com/content/84/2/165.full>; <http://emedicine.medscape.com/article/801821-workup>

127 apgar score :

Answer: ...

Explanation:

Rapid scoring system that helps evaluate the need for neonatal resuscitation.

Each of 5 parameters: appearance (blue/pale, pink trunk, all pink), pulse (0, < 100, > 100), grimace with stimulation (0, grimace, grimace and cough), activity (limp, some, active), respiratory effort (0, irregular, regular) is assigned a score of 0–2

At 1 and 5 minutes after birth.

n Scores of 8–10: Typically reflect good cardiopulmonary adaptation.

n Scores of 4–7: Indicate the possible need for resuscitation. Infants should be observed, stimulated, and possibly given ventilatory support.

n Scores of 0–3: Indicate the need for immediate resuscitation.

Reference: first aid

128 Pneumococcal conjugate 13 what type of vaccination?

Answer:

Explanation: Pneumococcal conjugate vaccine (called PCV13) is 23 Strain Polysaccharide that protects against 13 types of pneumococcal bacteria.

PCV13 is routinely given to children at 2, 4, 6, and 12–15 months of age. It is also recommended for children and adults 2 to 64 years of age with certain health conditions, and for all adults 65 years of age and older. Your doctor can give you details.

Its type is: subunit purified antigen.

Reference: <http://www.cdc.gov/vaccines/hcp/vis/vis-statements/pcv13.html>; <http://vaccine-safety-training.org/types-of-vaccine.html>

129- Q down syndrome have bilateral ventricular enlargement

Answer:...

Explanation: Children with Down syndrome are at a much higher risk for congenital heart disease. As a comparison: the incidence of congenital heart disease in the general population is 0.8 percent. The incidence of congenital heart disease in children with Down syndrome is between 40-60 percent. Some heart defects can be left alone with careful monitoring while others require surgery to correct the problem.

The following types of heart defects in children with Down syndrome are discussed below.

- Atrioventricular Septal Defects (AVSDs), known as endocardial cushion defect (ECD): These are the most common in children with Down syndrome.
- Ventricular Septal Defects (VSDs)
- Atrial Septal Defects
- Patent Ductus Arteriosus

- Tetralogy of Fallot

Reference: http://downsyndrome.nacd.org/heart_disease.php; Kaplan step 2 CK for Pediatrics 2016.

130. baby with recurrent infection TB, aspergillosis all type of infection with history of brothers death at 3 year with same pt give?

- A. Influenza
- B. BCG
- C. Varicella
- D. Polio

Answer: A (IM influenza).

Explanation: This baby is immunodeficiency patient so he need annual influenza vaccine.. Most immunocompromised patients 6 months of age or older should receive annual influenza vaccination as an injection; these patients should not receive live attenuated influenza vaccine administered as a nasal spray.

Reference: <http://emedicine.medscape.com/article/973120-overview#a1>

131- 2 year old complains of papule on the foot no itching pink pale not respond for antifungal?

- A. Granuloma.

(Answer: not clear question and no found answer!!)

132- A 7 y child and an U & L respiratory tract infection since birth with generalized joint pain aches his uncle and brother have the same condition labs show high creatinine and BUN and +ve urine protein. Repeated

- A. idiopathic fibrosis
- B. Autoimmune

Answer: B. (** With broad Ddx like HSP , WG , SLE and also glomerulonephritis)

133- a child have come to take the 6 month vaccination the mother mention on 4th month vaccination he developed an anaphylactic What to do now ?

- A. Do allergen test
- B. Give vaccine without DTP
- C. Give vaccine with reassurance
- D. Give vaccine and observe for 1h

Answer: A

Explanation: Skin testing to vaccines should be performed and interpreted by an allergy specialist. If skin testing with the vaccine is negative, it is recommended that the patient receive the vaccine in the usual manner. For safety, such patients are usually given the vaccine under the supervision of the allergy specialist. If skin testing to a constituent (gelatin, egg, etc) or the vaccine is positive, it may still be possible for the patient to receive the vaccine in a graded manner.

Reference: <http://www.uptodate.com/contents/allergic-reactions-to-vaccines>

134- Nine month child .. Take all vaccine regularly what vaccine should be given ?

Answer: 9 months vaccines: Measles, Meningococcal conjugate quadrivalent (MCV4)

Reference: Saudi national vaccination schedule

135- Neonate with deafness, rash .. What the cause ?

- A. Rubella
- B. measles
- C. CMV

Answer: A

Explanation: Rubella infection Manifestations:

1. "Blueberry Muffin" rash due to extramedullary hematopoiesis
2. Cataracts
3. "Salt and Pepper" retinopathy
4. Radiolucent bone disease (long bones)
5. UGR, glaucoma, hearing loss, pulmonic stenosis, patent ductus arteriosus, lymphadenopathy, jaundice, hepatosplenomegaly, thrombocytopenia, interstitial pneumonitis, diabetes mellitus

Reference: <https://pedclerk.bsd.uchicago.edu/page/torch-infections>

136- 6 month baby can't sit , hypotonia , crossed lower limb .. Which vaccine should be modified?

A .change opv vaccine to ipv

Answer: ...

Explanation: In this case regarding the hx given the Dx is cerebral palsy. So no need to modify the vaccine and there is no contraindications for vaccination in this group of patients. However, any hospitalized pt, regardless of which diseases s/he's having, should get ipv instead of opv which's a live attenuated vaccine (so if the question mentioned the pt is hospitalized, choose "change opv to ipv", otherwise nothing to be modified of his vaccines).

Reference: [pediatric consultant](#).

137- 12 yo , mild jaundice, splenomegaly , echogenic shadow of gall bladder

- A. SCA
- B. Thalassemia
- C. hereditary spherocytosis

Answer: C.

Reference: <http://emedicine.medscape.com/article/206107-clinical>

138- 15 kg child .. What is the daily water requirement ?

Answer: 15Kg = 1250 ml.

Explanation:

- For infants 3.5 to 10 kg the daily fluid requirement is 100 mL/kg.
- For children 11-20 kg the daily fluid requirement is 1000 mL + 50 mL/kg for every kg over 10.
- For children > 20 kg the daily fluid requirement is 1500 mL + 20 mL/kg for every kg over 20, up to a maximum of 2400 mL daily.

Please note that this calculation does not apply to newborn infants (ie, from 0 to 28 days after full term delivery).

Reference: Holliday MA, Segar WE. The maintenance need for water in parenteral fluid therapy. Pediatrics. Vol. 19, 1957 823-832.; <http://reference.medscape.com/calculator/maintenance-fluid-calculation-child>.

139- What is characterized about x fragile syndrome?

- A. Obesity
- B. Macrogonadism
- C. Small

Answer: A & B are both correct (BUT B is more common, hence, a closer answer) Fragile X syndrome (FRAX).

Explanation:

Fragile X syndrome

One in 200 in frequency.

The 2nd Most common cause inherited mental retardation.

FEATURES :

A) Characteristic craniofacial finding (large head, prominent forehead, jaw, ear)

B) Characteristic neurobehavioral profile including (mental retardation, autism spectrum disorder, pervasive developmental disorder)

C) Macro-orchidism

D) Mild connective tissue disorder including (joint laxity, patulous eustachian tubes, mitral valve prolapse)

Reference: ESSENTIAL NELSON OF PEDIATRICS

140- Typical case of turner what another finding you find?

- A. Cardiovascular abnormality.

Answer: A

Explanation:

Turner syndrome

FEATURES :

A) Characteristic facial appearance (low set mildly malformed ears, triangular face, flattened nasal bridge, epicanthal fold)

B) Webbing of the neck with or without cystic hygroma

C) Shield like chest with widened internipple distance

D) Internal malformations may include congenital heart defect (coarctation of the aorta is most common anomaly Followed by bicuspid aortic valve, post stenotic aortic dilation with aneurysm may develop) and renal anomaly (horseshoe kidney).

*according to Kaplan 2016: bicuspid aortic valve is the commonest heart defect, followed by coarctation.

E) short stature is cardinal feature

F) hypothyroidism

Reference: ESSENTIAL NELSON OF PEDIATRICS; Kaplan step 2 CK for Pediatrics 2016.

142- cat bite Child ,, In Site of bite developed infection ,,What is the bacteria ?

- A.
- B. pasteurilla.

Answer: B

Reference: http://www.uptodate.com/contents/soft-tissue-infections-due-to-dog-and-cat-bites?source=out-line_link&view=text&anchor=H3#H3

143- What come with Turner syndrome?

- A.Hypothyroid
- B.DM

C. Addison's

Answer: A

Reference: nelson essential of pediatric

144- A baby 6 month show regurgitation after every meal he esophagus ph is low he is normally developing what is the Rx?

A. Close follow up

B. Surgical fundal

C. Esophageal manometry

Answer: A

Explanation: no treatment is required may be A because I think this is a case of normal physiological gas- troesophageal reflux which happen in baby younger than 8 months & presented with effortless regurgitation but otherwise the baby is normal

Reference: nelson

145- Child ingested a caustic material he present to ER crying drooling what to do 1st ?

A. Maintain airway

B. Activated charcoal

Answer: A

Explanation: I think because activated charcol is contraindicated in causatic material ingestion, And Because of the risk of rapidly developing airway edema, the patient's airway and mental status should be immediately assessed and continually monitored.

Reference: <http://emedicine.medscape.com/article/813772-treatment#d10>

146-A baby with bilateral renal agenesis: (oligohydramnios)

Answer: with bilateral renal agenesis: oligohydramnios which is a sign for the disease during prenatal diagnosis.

Reference: <http://emedicine.medscape.com/article/983477-overview>

147- A child alert, anterior fontanelle depressed, how much dehydration:

A. 5 - 9

B. >9

Answer: A

Explanation: Mild 5%, normal fontanelle.. Moderate 6-10%, Sunken slightly.. Severe >10 %, sunken significantly.

Reference: http://www.utmb.edu/pedi_ed/CORE/Fluids&Electyolytes/page_09.htm;
<http://emedicine.medscape.com/article/801012-clinical#b3>

148- A child with hepatosplenomegaly, current infection. Brother died at 3 years with septic shock. How to give vaccination?

A. Give all.

B. Don't give until 3 years.

C. Don't give live vaccines.

D. Don't give killed vaccines.

Answer: C

149- patient can't take BCG vaccine Because he deficiency in

A. IL

B. TNF gama

C. IFN gama

Answer: C

Explanation: BCG Vaccine for prevention of tuberculosis should not be given to persons whose immunologic responses are impaired because of HIV infections, congenital immunodeficiency such as chronic granulomatous disease or **interferon gamma receptor deficiency**, leukemia, lymphoma, or generalized malignancy.

Reference: <https://www.drugs.com/pro/bcg-vaccine.html>

150- Child ride tricycle can't copy square what is the age

Answer: 3 years

151- Child can know color but with difficulty in making square

A. 2 y

B. 3 y

C. 4 y

D. 5 y

Answer: B

152- Baby wave his hand bye bye, which developmental milestone does it reflect?

Answer: 9 months

Reference: First aid.

153- what is the age of child should be know few word ?

A. 6 month

B. 8 month

C. 12 month

D. 24 month

Answer: should be 18 months.

154- child can support his head when sit and laughing when stare to him or cooing

A. 4wk

B. 8wk

C. 12month

Answer: B

155- Developmental milestones 5 words, hop on one leg?

A. 48 m

B. 36 m

C. 24 m

Answer A (he should be able to say sentences).

Reference: http://www.clinicaexam.com/pda/peds_ref_developmental_milestones.htm#9_ - months

156- Milestone, baby pull him self to stand crawl without difficulty, which age ?

A. 8 months

B. 10 months

C. 12 months

D. 14months

Answer: B and to be more specific 9 months

Reference: First aid

157- ER Child can roll over, sit tripod, attempt to take object Which month?

A. 6

B. 9

C. 2

Answer: A

Reference: First aid

158- Child tells stories runs and plays father -role.. What's the age?

Answer: 5 yrs

Reference: Kaplan for pediatrics 2016.

159- Baby setting in mother's lap unsupported, when the doctor spoke the baby turned around and laughed and babbled to the doctor, baby's age?

A:2m

B:4m

C:6m

Answer: C (according to Kaplan: 7 mons).

160- 18 months baby says baba mama what you will do for him

A. Developmental assessment

B. Bone age

Answer: A

Explanation: Baby at 18 months should say several single words. Saying mama baba should be at 12 months.

Reference: <http://www.cdc.gov/ncbddd/actearly/milestones/index.html>

161- Baby can walk when he held by one hand and good pincer grasp but he can not put things in the bottle What is his age:

A . 9 m

B. 12 m

C. 15 m

Answer: B

Reference: First aid

162- Milestone baby can hold his head and when he looks at his flying hand he laughs and coos?

Answer: 4m

Reference: First aid; Kaplan step 2 CK for Pediatrics 2016.

163- Milestone said baba and walk holding furniture and a lot of other features

A. 12M

B. 10M

Answer: A

Explanation: Saying mama/baba is at 9-12 mo but it is not specific because he may walk alone at 12 mon.

Reference: First aid; Kaplan step 2 CK for Pediatrics 2016.

164- Adolescent male with swollen parotid and salivary gland with dry eye and dry mouth, labs HLA, ANA and RF are positive which of the following is appropriate treatment?

- A. Physostigmine
- B. Artificial eye and saliva drops

Answer: B

Explanation: this is case of sjogren's syndrome which's treated symptomatically.

Reference: up to date; http://www.uptodate.com/contents/treatment-of-dry-eye-in-sjogrens-syndrome?source=out-line_link&view=text&anchor=H3377156#H3377156

165- 9 month old baby cannot sit by himself he is fisting his hand and crossing his leg Most likely his presentation of?

- A. Normal child
- B. CP
- C. Down syndrome

Answer: B

Explanation: Signs of hypertonia include keeping the hands fisted, keeping the legs extended and crossing the legs or ankles. (Delay in attaining normal milestones suggests central hypotonia)

166- child with high fever 2 wk and abdominal distention and wt loss

A. bm

Answer: ???

167- Child with typical symptoms of epiglottitis. (Tripod position) Diagnosis?

Reference: <https://www.merckmanuals.com/professional/ear,-nose,-and-throat-disorders/oral-and-pharyngeal-disorders/epiglottitis#v947007>

168- 16 years old female . Fever and Chronic diarrhea for 10 months, Post meal perium- bilical pain, Sometimes blood mixed with stool?

- A. crohn
- B. chronic pancreatitis

Answer: A

169- baby was playing with his father watch, suddenly his father looks the watch is not working baby become agitated and refuse food what you will do :

- A. upper Gi endo

Answer: A

Explanation: Battery Ingestion

Reference: <http://www.emedicinehealth.com/script/main/mobileart-emh.asp?articlekey=58824&page=7>; <http://emedicine.medscape.com/article/774838-treatment#showall>

169- the most part in impaction of foreign body in the :

- A. left bronch
- B. right bronch
- C. bifurcation

Answer: b

170- boy with glomerulonephritis after week he developed hemoptysis :

- A. heno choinlin purpra
- B. good pasture syndrome.
- C. rapid deterioration

Answer: B

Explanation: Goodpasture syndrome, a subtype of pulmonary-renal syndrome, is an autoimmune syndrome of alveolar hemorrhage and glomerulonephritis caused by circulating anti-glomerular basement membrane (anti-GBM) antibodies. Goodpasture syndrome most often develops in genetically susceptible people who smoke cigarettes, but hydrocarbon exposure and viral respiratory infections are additional possible triggers. Symptoms are dyspnea, cough, fatigue, hemoptysis, and hematuria. Goodpasture syndrome is suspected in patients with hemoptysis or hematuria and is confirmed by the presence of anti-GBM antibodies in the blood or in a renal biopsy specimen.

Prognosis is good when treatment is begun before onset of respiratory or renal failure. Treatment includes plasma exchange, corticosteroids, and immunosuppressants, such as cyclophosphamide.

Reference: <http://emedicine.medscape.com/article/240556-overview>;

<https://www.merckmanuals.com/professional/pulmonary-disorders/diffuse-alveolar-hemorrhage-and-pulmonary-renal-syndrome/goodpasture-syndrome>

171- Qs about osteosarcoma

Answer: ...

Reference: http://www.uptodate.com/contents/osteosarcoma-epidemiology-pathogenesis-clinical-presentation-diagnosis-and-histology?source=search_result&search=osteosarcoma&selectedTitle=1~105

172- bacterial meningitis in 14 month child , Gram positive cocci, what is the management?

- A. amoxicillin
- B. amoxicillin and gentamicin
- C. ceftriaxone and vancomycin
- D. vancomycin

Answer: C

Reference: <http://www.fpnotebook.com/mobile/neuro/ID/BctrlMngtsMngmnt.htm>

173- 3 year old child with UTI admitted what investigation to be done ?

- A. US
- B. Cystoscope

Answer:....

Explanation:

*pediatric consultant: first u should do analysis and culture, if its not in the chooses go with us.

*If imaging studies of the urinary tract are warranted, they should not be obtained until the diagnosis of UTI is confirmed. Indications for renal and bladder ultrasonography are as follows:

- Febrile UTI in infants aged 2-24 months
- Delayed or unsatisfactory response to treatment of a first febrile UTI
- An abdominal mass or abnormal voiding (dribbling of urine)
- Recurrence of febrile UTI after a satisfactory response to treatment

Reference:

<http://www.uptodate.com/contents/urinary-tract-infections-in-infants-older-than-one-month-and-young-children-acute-management-imaging-and-prognosis>;
<http://emedicine.medscape.com/article/969643-overview>

- 174- child with fever, general swelling and dark colored urine which best evaluate this pt:
- a- US
 - b- RFT
 - c- urine culture
 - d- urine specimen

Answer: D

Explanation: *this Q there is hematuria we will do Urine analysis to confirm hematuria and to look for microscopic examination and also will give us a hint about the origin of hematuria (is it glomerular or non glomerular) then if it is glomerular hematuria requires more extensive evaluation (renal ultrasound; CBC; complement levels; antinuclear antibody (ANA), antineu- trophilic cytoplasmic antibody (ANCA), and ASO titers; hepatitis B screen; and possibly renal biopsy).

* Urinalysis and sediment examination are crucial in the evaluation of patients with acute nephritic syndrome. Look for the following:

- Protein
- Blood
- Red blood cells (RBCs)
- White blood cells (WBCs)
- Dysmorphic RBCs
- Acanthocytes
- Cellular (ie, RBC, WBC) casts
- Granular casts
- Oval fat bodies

Reference: The Washington Manual of Pediatrics; <http://emedicine.medscape.com/article/239278-workup>

- 175- Child history of hip pain x-ray of hip shows effusion What is the next step of management?
- a- Aspiration
 - b- Antibiotic
 - c- US

Answer: A

Reference : The Washington Manual of Pediatrics &
<http://eradiology.bidmc.harvard.edu/LearningLab/musculo/Easter.pdf>;
<Http://www.orthobullets.com/pediatrics/4030/transient-synovitis-of-hip>

176- Case about neonate algorithm for resuscitation?

177- Mother and her child visited the pediatrician for 6 months vaccination, however the mother stated that her child was hospitalized after receiving the 4 months vaccination he developed anaphylaxis , what is the right thing to do?

A-Test the child for which antigen is he allergic from

- B-Give him steroid/antihistamine post the vaccination
- C-Vaccinate him and discharge home
- D-Vaccinate him and hospitalize the child for 1 hour

Answer: A

Explanation: Skin testing to vaccines should be performed and interpreted by an allergy specialist. If skin testing with the vaccine is negative, it is recommended that the patient receive the vaccine in the usual manner. For safety, such patients are usually given the vaccine under the supervision of the allergy specialist. If skin testing to a constituent (gelatin, egg, etc) or the vaccine is positive, it may still be possible for the patient to receive the vaccine in a graded manner.

Reference: <http://www.uptodate.com/contents/allergic-reactions-to-vaccines>

178- Hypertension in child?

- A. More than 120/70
- B. More than 140/90
- C. More than 90th percentile
- D. More than 95th

Answer: D

Explanation: Stage I hypertension is diagnosed if a child's BP is greater than the 95th percentile but less than or equal to the 99th percentile plus 5 mm Hg. Stage II hypertension is diagnosed if a child's BP is greater than the 99th percentile plus 5 mm Hg. It may be categorized as prehypertension if the BP is between 90th to 95th percentiles.

Reference: <http://emedicine.medscape.com/article/889877-overview>

179- What is the injection that is routinely given to new-born to inhibit haemorrhage:

- A-Vitamin K
- B-Vitamin C
- C-Vitamin D
- D-Vitamin E

Answer: A

Reference: As the neonate's colonic flora has not adequately colonized, E.coli is not present in sufficient quantities to make enough vitamin K to produce clotting factors II, VII, IX and X and protein C and S. without such factors, the newborn is more likely to have bleeding from GI tract, belly button and urinary tract.

To prevent Vit K deficient bleeding (hemorrhagic disease of the newborn), a single intramuscular dose of vitamin K (Phytonadione) is recommended for all neonates within 6 h of birth.

Reference: master the board +toronto note + <http://www.msdmanuals.com/professional/nutritional-disorders/vitamin-deficiency,-dependency,-and-toxicity/vitamin-k>

180- Child with URTI is complaining of bleeding from nose, gum and bruising the treatment is:

- A-Prednisolone
- B-IVIG

Answer: A

Explanation: ITP (idiopathic thrombocytopenic purpura) can occur in anyone at almost any age, but these factors increase your risk:

1. Women are about twice as likely to develop ITP as men are.
2. Recent viral infection. Many children with ITP develop the disorder after a viral illness, such as mumps, measles or a respiratory infection.

-Common medications used to treat idiopathic thrombocytopenic purpura include:

- Corticosteroids. The first line of therapy for ITP is a corticosteroid, usually prednisone, which can help raise your platelet count by decreasing the activity of your immune system. Once your platelet count is back to a safe level, you can gradually discontinue taking the drug..
- Intravenous immune globulin (IVIG). If you have critical bleeding or need to quickly increase your blood count before surgery, you may receive medications, such as immune globulin, given intravenously.
- Thrombopoietin receptor agonists. The newest medications approved to treat ITP are romiplostim (Nplate) and eltrombopag (Promacta). These drugs help your bone marrow produce more platelets, which helps prevent bruising and bleeding. Possible side effects include headache, joint or muscle pain, dizziness, nausea or vomiting, and an increased risk of blood clots.
- Biologic therapy. Rituximab (Rituxan) helps reduce the immune system response. It's generally used for people with severe ITP, and in those who corticosteroids don't help. Possible side effects include low blood pressure, fever, sore throat and rash

Reference: <http://www.mayoclinic.org/diseases-conditions/idiopathic-thrombocytopenic-purpura/basics/treatment/con-20034239>

181- Cellulitis occurring about the face in young children (6-24 months) and associated with fever and purple skin discoloration is MOST often caused by

- A- group A beta hemolytic streptococci
- B- staph

Answer: A

Explanation: In individuals with normal host defenses, the most common causative organisms are group A streptococci (GAS) and S aureus. Group B Streptococcus cellulitis occurs in infants younger than 6 months, because their immune responses are not fully developed and it may also be seen in adults with comorbidities such as diabetes or liver disease. For infantile cellulitis, presentations may include sepsis.

Impetigo is commonly caused by strains of S aureus and/or S pyogenes, and erysipelas (acute infection of the upper dermis, characterized by a sharply demarcated, raised border) is more commonly caused by streptococcal species such as S pyogenes.

Reference: <http://emedicine.medscape.com/article/214222-overview#a4>

182- 12 years old with myopia, pectus excavatum , congenital heart disease, Height > 90th percentile weight <50th percentile, what's your diagnosis?

A- Marphan's Syndrome*

Answer: A

Reference: Kaplan step 2 CK for Pediatrics 2016.

183- 5 years old girl presenting with hepatosplenomegally, pale, decreased level of conscious, V\S indicating shock

labs: Hb: 5 Platlets: 65

what's your important next investigation?

- A- Abdomen US
- B- Reticulocytes count* (patient has splenic sequestration)

C- BM biopsy

Answer: B

Explanation: The patient has splenic sequestration. Splenic sequestration occurs with highest frequency during the first 5 years of life in children with sickle cell anemia. It is a medical emergency. This complication is characterized by the onset of life-threatening anemia with rapid enlargement of the spleen and high reticulocyte count.

Acute splenic sequestration crisis ASSC is characterized by a precipitous drop in hemoglobin concentration, tender splenomegaly, thrombocytopenia, and reticulocytosis. Effective circulating blood volume is reduced, sometimes leading to hemodynamic instability. Fever, leukocytosis, splenic rupture, and death may occur. Mortality has been estimated at 15%. We present a case of ASSC with sickle cell anemia who suddenly developed tender splenomegaly, high fever, acute anemia, thrombocytopenia, leukocytosis, jaundice, hypoxia, and tachycardia. He was thought to have sepsis, but this diagnosis was ruled out after microbiologic evaluation and invasive testing.

Reference: <http://www.medscape.com/viewarticle/475043>

184- 5 years old, with recurrent infection, greasy diarrhea, slow growing, he's jaundiced with positive sweat chloride test?

A- Cystic Fibrosis

Answer: A.

Explanation: Cystic fibrosis (cf) is a disease of exocrine gland function that involves multiple organ systems but chiefly results in chronic respiratory infections, pancreatic enzyme insufficiency.

Requirements for a cf diagnosis include either positive genetic testing or positive sweat chloride test findings and 1 of the following: typical chronic obstructive pulmonary disease (copd), documented exocrine pancreatic insufficiency & positive family history.

- GI symptoms: meconium ileus, abdominal distention, intestinal obstruction, increased frequency of stools, failure to thrive (despite adequate appetite), flatulence or foul-smelling flatus, steatorrhea (greasy stool), recurrent abdominal pain, jaundice, gi bleeding.

- Respiratory symptoms: cough, recurrent wheezing, recurrent pneumonia, atypical asthma, dyspnea on exertion, chest pain.

- Genitourinary symptoms: undescended testicles or hydrocele, delayed secondary sexual development, amenorrhea.

Reference: <http://emedicine.medscape.com/article/1001602-overview>

185- 4 weeks old infant, mother happy he never cries. On examination: Jaundice + Umbilical hernia + Distended Abdomen + Coarse face features + Bulging frontal fontanel. Diagnosis?

A- Congenital Hypothyroidism

B- Gilbert's Syndrome

C- Cerebral Palsy

D- Rickets

Answer: A

Explanation: Infants with congenital hypothyroidism are usually born at term or after term. Symptoms and signs include the following:

- Decreased activity
- Large anterior fontanelle
- Poor feeding and weight gain
- Small stature or poor growth
- Jaundice
- Decreased stooling or constipation

- Hypotonia
- Hoarse cry

Often, affected infants are described as "good babies" because they rarely cry and they sleep most of the time.

The physical findings of hypothyroidism may or may not be present at birth. Signs include the following:

- Coarse facial features
- Macroglossia
- Large fontanelles
- Umbilical hernia
- Mottled, cool, and dry skin
- Developmental delay
- Pallor
- Myxedema
- Goiter

Anemia may occur, due to decreased oxygen carrying requirement. A small but significant number (3-7%) of infants with congenital hypothyroidism have other birth defects, mainly atrial and ventricular septal defects.

Reference: <http://emedicine.medscape.com/article/919758-overview>

186- Recived antibiotics and went home . Now improving but The culture then was اعتقد
N.meningitidis What you will do ?

- A. rifambicin for 7 days
- B. one dose ceftriaxone IM (correct).
- C. Tell family to come to hospital
- D.

اظن قصدهم كيف تشيل البكتيريا من
Nose carrier يكون راح النه

Answer: B (q's not clear).

Explanation: Antibiotics should be started as soon as possible. Ceftriaxone is one of the most commonly used antibiotics for meningococcal meningitis. Penicillin in high doses is almost always effective, too. If the patient is allergic to penicillin, chloramphenicol may be used. Sometimes corticosteroids may be used, especially in children.

People in close contact with someone who has meningococcal meningitis should be given oral rifampicin or ciprofloxacin is an alternative drug to prevent infection.

Reference: <https://www.nlm.nih.gov/medlineplus/ency/article/000608.htm> & Danish Book ..

187- New born with meningitis organism + cocci??

- N . Meningitides it is gram negative diplococcus
- H . Influenza it is gram negative coccobacili

188- pneumocyte type 1 features? 95% of the alveolar surface

Reference: <http://www.ncbi.nlm.nih.gov/pubmed/3285521>

189- Child his teacher noticed decrease concentration with 15-10 seconds up ward staring of eyes . His unaware of that what is treatment of choice ?

- A. carbamezabine
- B. ethosuxamide (correct)
- C. lamotrigene

Answer: B

Explanation: Absence seizure

Reference: http://www.uptodate.com/contents/childhood-absence-epilepsy?source=outline_link&view=text&anchor=H383785509#H383785509

190- 11 years old child obese with abdominal stria what is investigation you do :

- A. Adrenal CT
- B. morning & evening urine cortisol.

Answer: B

Explanation: The case is most likely Cushing then, first we establish the presence of hypercortisolism. The best initial test is 24 hr urine cortisol (more specific). If this is not in the choices, then 1 mg overnight dexamethasone suppression test.

Reference: Master the boards: USMLE step 2 CK 3rd edition page No. 133

191- Sickler PT with recurrent cholecystitis what is management:

- A. cholecystectomy

Answer: A

192- Case of SCA . What is the most important on long term ?

- A. Penicilline
- B. Hydroxyurea

Answer: A

Explanation: Hydroxyurea increases total and fetal hemoglobin in children with SCD. The increase in fetal hemoglobin retards gelation and sickling of RBCs. Hydroxyurea also reduces levels of circulating leukocytes, which decreases the adherence of neutrophils to the vascular endothelium. In turn, these effects reduce the incidence of pain episodes and acute chest syndrome episodes. Hydroxyurea may decrease the frequency and severity of pain episodes. The safety of long-term hydroxyurea use in children remains uncertain.

Penicillin prophylaxis significantly reduces the incidence of infection with encapsulated organisms—in particular, *S pneumoniae*—and may decrease the mortality rate. Begin at age 2 months and continue until age 5 years or the early teens.

Reference: <http://emedicine.medscape.com/article/205926-treatment#showall>; Nelson Essentials of Pediatrics 7th edition page No. 519 Step-up to pediatrics page No.239

193- Guillain-Barré syndrome prognosis (Scenario of child with guillain-barre syndrome had viral gastroenteritis 3 weeks ago, asked about prognosis) ?

Answer: ...

Explanation:

1/ Uptodate: 90% of children are symptom-free or no disability despite residual symptoms 2/

Medscape: In general, the outcome of GBS is more favorable in children than in adults. Deaths are relatively rare, especially if the disorder is diagnosed and treated early. Overall mortality rate in childhood GBS is estimated to be less than 5%; mortality rates are higher in medically underserved areas. Deaths are usually caused by respiratory failure, often in association with cardiac arrhythmias and dysautonomia.

However, the recovery period is long, often weeks to months, with a median estimated recovery time of 6-12 months. In one small pediatric series, between 5% and 10% of individuals have significant permanent disability.

Recurrence of GBS occurs in approximately 5% of cases, sometimes many years after the initial bout.

3/ Kaplan: spontaneous recovery begins in 2-3 weeks; some have residual weakness; improvement in inverse direction.

Reference: Step-up to pediatrics page No.143, uptodate, medscape, Kaplan step 2 CK for Pediatrics 2016.

194- Child came with rhinorrhea, cough, respiratory distress, which vaccine can prevent this disease?

Answer:...

Explanation:

The symptoms and signs are not sufficient to make dx, and to decide which vaccine we choose, (if the q was: Child was having rhinorrhea and then developed episodes of cough followed by vomiting. Which of these vaccination may prevent him from having this disease? Answer: DTaP)

However there are some DD :

*Croup : barking cough, croup, inspiratory stridor, peripheral cyanosis, CXR shows steeple sign and commonly caused by parainfluenza (no vaccine for parainfluenza)

*Pertussis : caused by bordetella pertussis. Pt. presents with :

-catarrhal stage: congestion + rhinorrhea (14days)

-Paroxysmal stage: whooping cough + inspiratory whooping followed by vomiting (14-30 days)

-Convalescent stage: decrease of coughing (14days) DTaP vaccine has decreased incidence

*Bronchiolitis caused by RSV Pr. Present with wheezing + apnea

We can prevent such a disease by giving RSV specific monoclonal antibody(palivizumab) + all children older than 6 months should take influenza vaccine to prevent influenza associated diseases

*Pneumonia we give

-Hib and s.pneumonia vaccination

-influenza vaccine Palivizumab

Reference: Nelson Essentials of Pediatrics 7th edition pages: 354-364

195- Baby with delayed sitting, labs showed normal calcium, low PO₄, what is the diagnosis ?

Answer: Vitamin D deficiency

Explanation: in vit D deficiency, there's low serum phosphate and normal to low serum calcium leading to increase PTH and increased alkaline phosphatase.

Reference: Nelson Essentials of Pediatrics 7th edition page No. 603; Kaplan step 2 CK for Pediatrics 2016.

196- GBS i think , Distal progresses paralysis upper and lower limb ,What will you find on CSF?

A. increased protein

B. decreased glucose

C. other

Answer: A

Explanation: Lumbar puncture in patients with GBS classically shows elevated protein and normal WBC count in CSF called albuminocytologic dissociation. Glucose in CSF is normal.

Reference: Step-up to pediatrics page No.143, Kaplan step 2 CK for Pediatrics 2016.

197- Pathogenesis of jaundice in newborn from a mother has - blood group and the newborn has +o ?

Reference: <http://emedicine.medscape.com/article/797150-overview#a5>

198- Child with recurrent URTI with pseudomonas, and atypical organism. What's the cause:

A. CF (cystic fibrosis).

B. low CD4

Answer: A

Explanation: Pseudomonas aeruginosa is the most prevalent organism in the airway colonization of CF patients, and its persistence in the airways has been related to greater morbidity with a more rapid deterioration in lung function.

Reference: Illustrated textbook of pediatrics 4th edition page No.295;

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3108754/>

199- Pt with red points in palms and hands, buttocks, fever. Turned into vesicles

A. herpes simplex (not sure about this question)

Answer: ...

Explanation: herpes simplex virus if the presentation were (Sore Throat Dysuria Vaginal Discharge Vesicles and Bullae Fever and Rash Lymphadenopathy), Primary illness lasts 10 to 20 days with recurrences in 50% to 80% of patients. Or may be it is henoch-schonlein purpura if there is hx. Abdominal pain with Melana or haematemesis, ankle & knee joint pain and haematuria.

Reference: Illustrated textbook of pediatrics 4th edition page No.339; Nelson Essentials of Pediatrics 7th edition pages No. 336-338 & 380

200- child with oral and tonsillar ulcers and vesicles, fever. Dx:

a. Herpangia

Answer: a

Reference: Illustrated textbook of pediatrics 4th edition page No.255

201- Which one of these disease likely to exhibit cyanosis in later life ?

A. 6 year with coarctation of aorta (lower limbs only)

B. VSD (reversal of the shunt occurs early in childhood)

C. Transcatheter aortic stenosis (early cyanotic)

D. ASD (reversal of the shunt occurs late in adulthood)

Answer: D

Explanation:

look at the brackets beside each option. Cyanosis in patients with ASD is usually associated with either concomitant pulmonary valve stenosis resulting in elevated right heart pressures, and thus right-to-left shunt, or Eisenmenger syndrome. In addition, transient reversal of the atrial pressure gradient and transient cyanosis can be induced by respiratory maneuvers such as Valsalva and cough.

202- Scale for questioning parents about development of their child With only questioning them?

Answer: Developmental milestones

Reference: Illustrated textbook of pediatrics 4th edition page No.32

203- To confirm Down syndrome?

Answer: Definitive testing is chorionic villus sampling or amniocentesis and chromosomal analysis.

Reference: Toronto note; <http://emedicine.medscape.com/article/943216-workup#showall>.

204- baby missed vaccine developed bilateral parotid swelling what is the likely complication

- A-Hearing loss
- B-Encephalitis
- C-Sterility
- D-Facial nerve paralysis

Answer: ...

Explanation: The most common complication of mumps in children is meningitis, sometimes associated with encephalitis, and in young adults orchitis. Most complications due to mumps infection resolve without permanent damage. Death following mumps is rare and is mostly due to mumps encephalitis.

CNS involvement is the most common extrasalivary complication of mumps. Its presentation is most often as aseptic meningitis rather than as a true encephalitis. This complication occurs up to 3 times more often in males when compared with females. [6] It may precede parotitis or occur in its absence, but it usually presents within the first week after parotid swelling.

Reference: <http://www.who.int/biologicals/areas/vaccines/mmr/mumps/en/>;
<http://reference.medscape.com/article/966678-overview#showall>

205- x-linked a gamma globulinemia

- A. cd 19 and 20
- B. Cd40 mutation

Answer: A

Reference: <http://emedicine.medscape.com/article/1050956-overview>)

206- Baby 18 month old with Delay speech other exam normal

- A. hearing
- B. development

Answer: A

Reference: Toronto note p24

207- A 6 year old girl, brought by parents to ER with history of falling from Height ... Not talking but crying, withdrawal from pain, open her eye only in response to Doctor talking... Calculate GCS

- A) 9
- B) 10
- C) 11
- D) 12

Answer: B

Explanation: eye (open to talks=3), motor (withdraw from pain=4), verbal (cries=3).

Reference: <http://emedicine.medscape.com/article/2058902-overview>

208- Early sign of puberty in Male?

- a) Hair in the face
- b) Hair in the genitalia
- c) Hoarseness of voice
- d) Penile enlargement

Answer: C

Explanation: Enlargement of the Testicles and Scrotum; near doubling in the size of the testicles and the scrotal sac; is the first sign of male puberty. (According to merck's manual: testicular and scrotal enlargement > change in voice > penile lengthening > pubic hair > growth spurt > change in body shape > growth of facial and underarm hair).

Reference: <https://www.healthychildren.org/English/ages-stages/gradeschool/puberty/Pages/Physical-Development-Boys-What-to-Expect.aspx>;
<http://www.merckmanuals.com/home/men-s-health-issues/biology-of-the-male-reproductive-system/puberty-in-boys>

209- Child with episodic of Cyanotic lip with cold extremities, what is the diagnostic investigation:

Answer: Echocardiography

Reference: Toronto note

210- newborn baby complain of (many signs that indicate distress likes tachypnea) pt was unwell on examination left side no breath sound and the heart sound heard in right side whats Dx?

a-situs inversus

b-pneumothorax

c-bowl hernia (diaphragmatic hernia).

d-another not related answer

Answer: C.

Explanation: infants with CDH most often present with respiratory distress in the first few hours or days of life. Physical findings include a barrel-shaped chest, a scaphoid-appearing abdomen (because of loss of the abdominal contents into the chest), and absence of breath sounds on the ipsilateral side. In patients with a left-sided CDH, the heartbeat is displaced to the right because of a shift in the mediastinum.

Reference: uptodate.

211- Obese, diabetic, acne, young age gave normal FSH, LH:

A- ACTH

B- 24h cortisol

C- morning cortisol

D- urine metanorphines

Answer: b

212 Rep- Mother brought her 2 years old child to the ER with history of upper respiratory tract infection for the last 3 days with mild respiratory distress. This evening the child started to have hard barking cough with respiratory distress. On examination: RR 40/min, associated with nasal flaring, suprasternal & intercostal recessions. What is the most likely diagnosis?

A. Viral Pneumonia

B. Bacterial Pneumonia

C. Bronchiolitis

D. Acute epiglottitis

E. Tracheobronchitis

Answer: E

212- Child with barking cough and another sign indicate respiratory infection what cause this pt illness. NO croups or laryngotracheitis in answers

F. Pertussis

G. Epiglottitis

Answer: b

Barking cough is classic for croup which presents along with stridor. Pertussis presents with a whooping cough. In epiglottitis the patient looks toxic, in sniffing position and drooling. Barking cough differential diagnosis includes epiglottitis.

Reference: Toronto notes 2015.

213- Baby one month with total bilirubin 200 and direct 80. What's the cause?

A. Gilbert syndrome

B. Crigler–Najjar syndrome

C. Choledochal cyst (Biliary cyst)

D. Abo incompatibility

Answer: C

Reference: https://en.wikipedia.org/wiki/Choledochal_cysts

All options are examples of unconjugated hyperbilirubinemia except for choledochal cyst. It presents as jaundice, acholic stools in early infancy and palpable mass in right upper quadrant with hepatomegaly.

214- 18 month-old female child presents with anemia. What is the most likely diagnosis?

A. Homozygous β thalassemia

B. Homozygous α thalassemia

C. Carrier α thalassemia

Answer: A

- Patients develop severe microcytic anemia in the first year of life and need chronic transfusions or marrow transplant to survive. FAU216

- B-thalassemia major manifests by age 1-2 years old with symptoms of severe anemia.

215- Child with typical absence seizure, what would happen if he were given fentanyl?

A. Demyelination

B. Increase stimulation of excitatory GABA.

C. Glutamate receptors activation

D. Seizure activity due to toxic neurotransmitters release.

Answer: C

has been reported that mu-opioid receptor activation leads to a sustained increase in glutamate synaptic effectiveness at the N-methyl-D-aspartate (NMDA) receptor level, a system associated with central hypersensitivity to pain.

216- Infant in respiratory distress, hypercapnia, acidosis & have rhinitis and persistent cough, positive agglutination test, what treatment?

A. Ribavirin

Answer: A

- We recommend not using corticosteroids in infants and young children (<24 months) with RSV bronchiolitis or pneumonia.

Reference: UpToDate.

- Ribavirin, a broad-spectrum antiviral agent in vitro, is licensed by the US Food and Drug Administration (FDA) for the aerosolized treatment of children with severe RSV disease.

Reference: Medscape.

217- Bronchiolitis (Read about it):

Self-limiting disease with peak symptoms usually lasting 2-3 wk

- Mild to moderate distress:

Supportive: PO or IV hydration, antipyretics for fever, regular or humidified high flow O2

- Severe distress:

as above ± intubation and ventilation as needed

In high risk groups: bronchopulmonary dysplasia, CHD, congenital lung disease, immunodeficient patient, consider rebetol (Ribavirin®).

218- 4 years old child c/o fever and maculopapular rash associated with auricular and occipital lymph node, he only received his birth vaccines. diagnosis?

A. Mumps

B. Measles

C. Rubella

D. Chicken pox

Answer: C

The clinical manifestations of postnatal rubella infection among children typically include the acute onset of a maculopapular rash with minimal systemic symptoms. Low grade fever and lymphadenopathy may occur concurrently or one to five days prior to the appearance of the exanthem. The lymphadenopathy characteristically involves the posterior cervical, posterior auricular, and suboccipital lymph nodes.

Reference: UpToDate.

Rubella clinical picture is asymptomatic infection, mild coryza, erythematous discrete skin rashes usually fade after 3 days, lymphadenopathy (most common) sub-occipital, post-auricular, and cervical. +\- splenomegaly

219- Neonate + prolonged bleeding after circumcision, aPTT high, PT, BT and plt are normal, condition is most likely due to deficiency in?

- A. V
- B. VII
- C. VIII
- D. X

Answer: C

Reference: [Illustrated textbook of Pediatrics](#)

Prolonged PT	Prolonged aPTT	Prolonged PT and aPTT
Inherited		
Factor VII deficiency	vWF, factor VIII, IX, XI, or XII deficiency	Prothrombin, fibrinogen, factor V, X or combined factor deficiency
Acquired		
Vitamin K deficiency	Heparin use	Liver disease
Liver disease	Inhibitor of vWF, factors VIII, IX, XI or XII	DIC
Warfarin use	Antiphospholipid antibodies	Supratherapeutic heparin or warfarin
Factor VII inhibitor		<ul style="list-style-type: none"> • Combined heparin or warfarin use • Inhibitor of prothrombin, fibrinogen, factor V or X • Direct thrombin inhibitor

220- Child c/o bilateral knee swelling, fever, pharyngitis, “all at the same time I think”, high ESR no other labs, what diagnosis?

- A. Juvenile RA
- B. Septic arthritis,
- C. Acute rheumatic fever
- D. Infectious mono

Answer: C

Acute rheumatic fever is diagnosed according to modified Jones criteria: 2 major or 1 major 2 minor plus evidence of preceding streptococcal infection (history of scarlet fever, group A strep pharyngitis culture, positive rapid antigen detection test, anti-streptolysin O titers).

Reference: [Illustrated textbook of Pediatrics](#)

Read the American Heart Association (AHA) to establish guidelines for the diagnosis of ARF.

221- Child c/o fever, bloody stool, and tenesmus, abdominal exam showed abdominal distention, diagnosis?

- A. Ascaris
- B. Amebiasis
- C. Giardiasis

Answer: B

Clinical amebiasis generally has a subacute onset, usually over one to three weeks. Symptoms range from mild diarrhea to severe dysentery, producing abdominal pain, diarrhea, and bloody stools.

Reference: [UpToDate](#).

222- Neonate developed cyanosis (in 2nd or 3rd week after delivery) and there is finding on auscultation I cannot remember exactly but they didn't mention about machinery murmur the question about the management

- A. NSAID
- B. Steroid
- C. Prostaglandin E1

Answer: C

Prostaglandins are utilized to maintain the patency of the ductus arteriosus until surgical ligation is performed. When surgical ligation is not indicated, prostaglandin inhibitors (e.g. nonsteroidal anti-inflammatory drugs [NSAIDs]) are used to close the ductus arteriosus.

223- 11 years old child had severe diarrhea 3 weeks ago, now the child presented with bi- lateral lower limbs weakness and numbness, diagnosis?

- A. Polio
- B. Guillain-Barré syndrome
- C. Muscular dystrophy

Answer: B

Guillain-Barré syndrome (GBS) is a clinical syndrome with a number of variant forms. In patients with acute inflammatory demyelinating polyradiculopathy (AIDP), the most common form of GBS, two-thirds develop the neurologic symptoms two to four weeks after what initially appears to be a benign febrile respiratory or gastrointestinal infection.

Reference: UpToDate.

224- 6 years old child, came for preschool checkup, on exam he looks normal except for grade III heart murmur along the sternal border "no specific location or timing of the murmur provided", no thrill, the murmur accentuated with supine position, diagnosis?

- A. Innocent Still's murmur
- B. VSD
- C. ASD

Answer: A

The innocent Still's murmur is a systolic murmur with maximum intensity at the left lower sternal border or between the left lower sternal border and apex, and has minimal radiation. The murmur has a characteristic vibratory or musical quality, is louder in the supine than sitting position, is louder in hyperdynamic states (fever, anxiety), and usually is grade 1 or grade 2 in intensity. This murmur usually resolves by early adolescence, if not sooner.

Reference: UpToDate.

225- 12 years old with myopia, pectus excavatum, congenital heart disease, height > 90th percentile (tall) weight <50th percentile (thin), what's your diagnosis?

- A. Marfan syndrome
- B. CHARG syndrome

Answer: A

Marfan syndrome is a spectrum of disorders caused by a heritable genetic defect of connective tissue that has an autosomal dominant mode of transmission. The defect itself has been isolated to the *fbn1* gene on chromosome 15, which codes for the connective tissue protein fibrillin. Abnormalities in this protein cause clinical problems of the musculoskeletal, cardiac, and ocular system. Skeletal deformities such as thoracolumbar scoliosis, thoracic lordosis, and pectus excavatum. In the cardiovascular system, aortic dilatation, aortic regurgitation, and aneurysms. Ocular findings include myopia, cataracts, retinal detachment, and superior dislocation of the lens.
Reference: Nelson essential

226- 9 years' child weight > 95th and height less than 50th percentile parents short, all hormonal investigations normal but bone age 7 years old:

- A. CAH
- B. familial short stature
- C. Constitutional

Answer: C

227- Scenario of child with Guillain barre syndrome had viral gastroenteritis 3 weeks ago, ask about prognosis?

- A. No residual weakness

Answer: A

Reference: Medscape

<http://emedicine.medscape.com/article/315632-overview#a6>

228- Pediatric patient is complaining of red eye and fever, later he develops pink rash on the face which spreads to upper and lower limbs there is also white papule in the mouth, what is the diagnosis?

- A. Rubella
- B. Meningococcal rash

Answer: A

The exanthem consists of pinpoint, pink maculopapular. The rash first appears on the face, spreads caudally to the trunk and extremities, and becomes generalized within 24 hours.

Reference: UpToDate

229- Child with left sided abdominal mass, other features?

- A. Wilms tumor.!!

230- Child with epiglottitis (with swollen epi..) with its s&s , what is ttt?

- A. Vancomycin.
- B. Ceftriaxone.!!!

Answer: B

We suggest combination therapy with a third-generation cephalosporin (e.g., ceftriaxone or cefotaxime) AND an antistaphylococcal agent active against MRSA (e.g., clindamycin, vancomycin).

Reference: UpToDate

231- 11 years old female with jaundice and splenomegaly?

- A. SCA.
- B. Spherocytosis

Answer: A

@@@

232- Child hematuria. Hearing loss?

- A. Alport syndrome

Answer: A

Alport syndrome: is a group of inherited, heterogeneous disorders involving the basement membranes of the kidney and frequently affecting the cochlea and eye as well.

-Renal manifestations:

- Hematuria - Most common and earliest manifestation of Alport syndrome
- Proteinuria - Develops in males with XLAS and in males and females with ARAS and ADAS
- Hypertension - Usually present in males with XLAS and in males and females with ARAS and ADAS

-Hearing impairment: Sensorineural deafness is a characteristic feature observed frequently, but not universally

-Ocular manifestations.

Reference: Medscape

233- A child with gum bleeding, erythema papules in mouth. Swab show multinucleated giant cell. Which organism?

- A. Coxsackieviruses
- B. Staphylococcus aureus
- C. Herpes Simplex virus

Answer: C

Dx HSV 1 in Tzanck smear Multinucleated giant cells and epithelial cells containing eosinophilic intranuclear inclusion bodies distinguish the lesions of herpesviruses.

In the absence of cutaneous lesions, the oral lesions of *Hand, foot and mouth disease* may be mistaken for Aphthous ulcers, Herpes simplex gingivostomatitis or oral varicella lesions. However, the oral erosions in HFMD are usually smaller, more uniform and asymptomatic unlike those in herpetic gingivostomatitis which are painful and coalesces, and those of varicella usually last longer and always crust. Unlike HFMD, both varicella and herpes lesions will also show multinucleated giant cells in Tzanck smears. Herpangina, another self-limiting disease in children due to multiple types of coxsackie viruses and echoviruses and characterized by acute febrile illness with headache, sore throat, dysphagia, anorexia, occasionally stiff neck, and small yellowish-white vesicles/ulcers with erythematous areola distributed irregularly over posterior oropharynx (anterior faucial pillars, tonsils, uvula, or soft palate), closely mimics HFMD. However, absence of skin lesions and

characteristic distribution of oral lesions in herpangina are diagnostic. The skin lesions of HFMD can be distinguished from Herpes simplex associated erythema multiform by the skin lesions which are round/oval, grey and targetoid.

Reference: <http://medind.nic.in/ibv/t10/i4/ibvt10i4p345.pdf>

For more reading about these: <http://emedicine.medscape.com/article/1079920-overview#a1>

234- Child with facial swelling hypoalbuminemia, high cholesterol?

A. Nephrotic syndrome.

Answer: A

Nephrotic syndrome is defined by the presence of nephrotic-range proteinuria, edema, hyperlipidemia, and hypoalbuminemia.

Reference: Medscape

Features of Nephrotic syndrome – NAPROTIC

- **N**a⁺ decrease (Hyponatremia)
- **A**lbumin decrease (Hypoalbuminemia)
- **P**roteinuria >3.5 g/day
- **H**yperlipidemia
- **R**enal vein thrombosis
- **O**rbital edema
- **T**hromboembolism
- **I**nfection (due to loss of Immunoglobulins in urine)
- **C**oagulability (due to loss of Antithrombin III in urine)



www.medical-institution.com

235- Child with gradual developing of cyanosis and ejection systolic murmur of left upper sternal?

A. Tetralogy of Fallot (TOF).

Answer: A

A harsh systolic ejection murmur (SEM) is heard over the pulmonic area and left sternal border.

Reference: Medscape

<http://emedicine.medscape.com/article/2035949-clinical#b3>

236- Child with morning stiffness and joint pain of wrist and ankle?

A. Juvenile rheumatoid arthritis.

Answer: A

Reference: <http://www.kidsgetarthritistoo.org/about-ja/juvenile-arthritis-early-signs-and-symptoms.php>

237- Child bilious vomiting and constipation since birth diagnosis?

A. Rectum biopsy.

B. Barium enema

C. Plain x-ray.

Answer: A

- Hirschsprung disease (Congenital aganglionic megacolon) is suspected based on clinical features, usually supported by contrast enema or anorectal manometry. The diagnosis is established by rectal biopsy.

Reference: UpToDate

- An enema examination performed with water-soluble contrast material is the most valuable initial screening diagnostic test for this condition. This is performed if the plain abdominal x-ray suggests obstruction and/or if clinical evaluation is highly suggestive of Hirschsprung's disease.

Reference: BMJ

238- 1 month Baby come with abdominal distension and constipation since birth what you do next?

A. X-ray

B. biopsy

C. rectal manometry

Answer: B

Definitive diagnosis of HD is made by rectal biopsy, which may be supported by findings on abdominal radiographs, contrast enema, or anorectal manometry

In Hirschsprung's disease the imaging study of choice is Barium enema which help delineate the location of the transition zone and length of aganglionic colon but can also appear normal, especially in the infant <3 months of age., and to confirm the diagnosis we must do rectal biopsy (RSB) demonstrating absence of submucosal ganglion cells.

Reference: The Washington Manual of Pediatrics.

<https://www.cincinnatichildrens.org/health/h/hirschsprung>

239- 4 weeks old boy with acute onset forceful non-bilious vomiting after feeding. On abdominal examination: there is olive mass at epigastric area. What is the 1st investigation should you do?

A. Ph monitoring

B. Sonography

Answer: B

Dx Infantile hypertrophic pyloric stenosis. The best initial test is an abdominal ultrasound that will show a thickened pyloric sphincter.

Reference: MasterTheBoards

240- Patient post-delivery by one week presented with orthopnea and increase JVP symptoms of heart failure the x-ray will show:

A. Bilateral infiltration

B. Cardiothoracic ratio <50%

Answer: A

Not B because in heart failure there is cardiomegaly so the cardiothoracic ratio is more than 50 % and in Investigations of HF, CXR: cardiomegaly, pulmonary venous congestion.

Reference: TorontoNote

241- Child with eczema use topical steroid not effective what we add:

- A. Oral Antibiotic
- B. Topical Antibiotics
- C. Sulfa
- D. Tacrolimus

Answer: D

We suggest that patients with atopic dermatitis involving the face or skin folds that is not controlled with topical corticosteroids, be treated with a topical calcineurin inhibitor (ie, tacrolimus or Pimecrolimus).

Reference: UpToDate

Reference: <https://nationaleczema.org/eczema/treatment/topical-calcineurin-inhibitors/>

242- 14 years old boy with follow up asymptomatic by examination\ arrhythmia and (picture of ECG which show irregular rate and t wave elevation). What's the diagnosis?!!!

The diagnosis according to the picture came in the question, But the DDx of irregular rate arrhythmia

Narrow complex irregular tachycardia:

- A. Atrial fibrillation
- B. Ectopic atrial tachycardia (irregular)
- C. Atrial flutter with variable AV conduction

Wide complex irregular tachycardia:

- A. Ventricular fibrillation/fast polymorphic ventricular tachycardia
- B. Torsade de pointes
- C. Atrial fibrillation with WPW
- D. Ectopic atrial tachycardia, irregular, with aberrancy

Reference: The Washington Manual of Pediatrics

243- Child with meningitis treated with antibiotics see report what is the cause?!!!

Table 25. Antibiotic Management of Bacterial Meningitis

Age	Main Pathogens	Antibiotics
0 to 28 d	GBS, <i>E. coli</i> , <i>Listeria</i> Other: Gram-negative bacilli	Ampicillin + cefotaxime
28 to 90 d	Overlap of neonatal pathogens and those seen in older children	Cefotaxime + Vancomycin (+ Ampicillin If immunocompromised)
>90 d	<i>S. pneumoniae</i> , <i>N. meningitidis</i>	Ceftriaxone ± vancomycin If Penicillin allergic: Vancomycin + Rifampin

244- Cardiac defect communication between aortic arch and pulmonary vessels?

- A. PDA (Patent Ductus Arteriosus).

Answer: A

PDA: patent vessel between descending aorta and left pulmonary artery (normally, functional closure

within first 15 h of life, anatomical closure within first days of life).

Reference: [TorontoNote](#)

245- What is the effect of polio (IPV& OPV) on body?

- A. All lead to the formation of Ag in the anterior horn.
- B. All lead to the formation of the antibody in the serum which fight the virus.
- C. All of them enter the intestinal mucosa where the entry of the virus.
- D. All lead to the formation of interferon gamma.

Answer: B

Parenteral inactivated poliovirus vaccine (IPV) chiefly induces formation of serum antibody. Infection, with oral poliovirus vaccine (OPV) or wild poliovirus, also induces development of secretory IgA antibody.

Reference: <https://www.ncbi.nlm.nih.gov/pubmed/6740072>

OPV induces intestinal immunity against poliovirus reinfection, which explains its effectiveness in controlling the wild-type poliovirus circulation. In addition, OPV persists in the pharynx for 1 to 2 weeks and is excreted in the feces for several weeks or longer after administration. Consequently, the vaccine virus can be transmitted to contacts and results in their immunization.

However, in rare cases, vaccine-associated paralytic poliomyelitis (VAPP) can occur in these contacts as well as in those vaccinated.

Mucosal immunity is induced by IPV and eIPV but to a lesser extent than with OPV. IPV and eIPV inhibit pharyngeal acquisition of poliovirus and, to a lesser extent, intestinal acquisition.

Reference: <https://www.drugs.com/mmx/ipv.html>

246- Child with head trauma, admitted to ICU and received fluid after hours she started to have high urine output 100ml/hr. What would be the cause?

- A. Nephrogenic DI
- B. Central DI
- C. SIADH

Answer: B

DI is due either to (1) deficient secretion of arginine vasopressin (AVP)—also known as antidiuretic hormone (ADH)—by the pituitary gland (central or neurogenic DI) or to (2) renal tubular unresponsiveness to ADH (nephrogenic DI).

Nongenetic causes of DI include injuries. Typical injuries include head trauma, tumor, and neurosurgical procedures. At all ages, destructive lesions of the pituitary, the hypothalamus, or both are the most common cause of DI.

Reference: [Medscape](#)

247- Regarding PALS, which is true in pediatric resuscitation for one rescuer?

- A. 30 compression 2 breath
- B. 15 compression 1 breath
- C. 10 compression 2 breath

D. 5 compression 1 breath

Answer: A

Two breaths can be given after every 30 chest compressions. If someone else is helping you, you

should give 15 compressions, then 2 breaths.

Reference: <https://www.resus.org.uk/resuscitation-guidelines/paediatric-advanced-life-support> & Oxford of Pediatric & <https://eccguidelines.heart.org/wp-content/themes/eccstaging/dompdf-master/pdffiles/part-11-pediatric-basic-life-support-and-cardiopulmonary-resuscitation-quality.pdf>

248- Bilateral periauricular enlargement and tenderness with fever:

A. Mumps

B. Periauricular lymphadenitis

Answer: A

Mumps usually involves pain, tenderness, and swelling in one or both parotid salivary glands (cheek and jaw area).

Reference: <https://www.cdc.gov/mumps/hcp.html>

249- Child with renal disease, his family are afraid that he become like his father on dialysis. He is also known to have SNHL (sensorineural hearing loss), what is the dz?

A. Alport syndrome

Answer: A

Reference: <http://emedicine.medscape.com/article/238260-overview#a1>

250- Child with vomiting presented with dehydration and a small mass was felt in the epigastric area ... what is his acid-base balance?

A. Hypochloremic metabolic alkalosis

B. Metabolic acidosis

Answer: A

This child has Hypertrophic Pyloric Stenosis (HPS): The classic biochemical abnormality in HPS is hypochloremic, hypokalemic metabolic alkalosis.

Reference: <http://emedicine.medscape.com/article/929829-overview#a1>

251- Neonate continuously crying, US should donut sign, what is the most important step in management of this case?

A. Urgent surgery referral

B. NGT decompression

C. IV fluid resuscitation

D. Barium enema

Answer: C

Dx intussusception. Fluid resuscitation and balancing of electrolytes (K +, Ca +2, Mg +2 important initial steps, followed by NGT decompression of the bowel. then Barium Enema If not curative, then emergent surgical intervention is necessary to prevent bowel necrosis.

Reference: MasterTheBoards

252- 15 years old male come for routine checkup, his labs showed Hb: 10, MCV: 69, MCH: 20, WBC: Normal Diagnosis?

- A. IDA
- B. Beta thalassemia trait
- C. Anemia of chronic Disease
- D. SCD

Answer: B

The patient is having hypochromic microcytic anemia. that's mean thalassemia.

Lab Value w/ norm:	(IDA)*	(BT)**	(Lead)	(SA)***	(CI)****
Hgb *see Table 2 for references by age	↓	N (or ↓)	N (or ↓)	—	↓
Ferritin 100 +/- 60 mcg/dl	↓	N	N	N (or T)	N (or ↓)
Serum Iron 115 +/- 50 mcg/dl	↓	N	N	N (or T)	↓
FEP	↑	N	↑	—	↑
MCV 70-100 fL	↓	↓	N (or -)	N	N (or ↓)
RDW < 15%	↑	N	N	—	N
Reticulocyte 1-5%	↓	—	—	—	N (or ↓)
MCV: RBC (Mentzer Index) Normal: 13	↑	↓	—	—	—
Lead < 10 mcg/dl	—	—	↑	—	—

Smear
IDA: Hypochromia, microcytosis, target cells, elliptocytes
BT: Hypochromia, microcytosis, target cells, basophilic stippling
Lead: Hypochromia, microcytosis, target cells, basophilic stippling
SA: Iron laden mitochondria
CI: Hypochromia, microcytosis

Legend:
IDA* (Iron Deficiency Anemia)
BT** (Beta-Thalassemia Trait)
SA*** (Sideroblastic Anemia)
CI**** (Chronic inflammation, illness or infection)
N = Normal

Note: Adapted from Ioli (2002); Johnson & Oski (1997); Kazal (2002); Lesperance, Wu, & Bernstein (2002); Segel, Hirsh, & Feig (2002); Tender & Cheng (2002).

Source: Pediatr Nurs © 2003 Jannetti Publications, Inc.

253- 5 years old girl presenting with hepatosplenomegaly, pale, decreased level of conscious, V\S indicating shock labs: Hb: 5 Platelets: 65 what's your important next investigation?

- A. Abdominal US
- B. Reticulocytes count
- C. BM biopsy

Answer: B

Patient has splenic sequestration, we do Reticulocytes count to differentiate, if it was low that means Aplastic Anemia and Bone biopsy is needed to confirm the diagnosis, if it was high that means hypersplenism.

Reference: <http://www.medscape.com/viewarticle/475043>

254- Pediatric patient with abdominal distention and severe foul smelling flatus?

- A. Giardia lamblia

Answer: A

Foul-smelling and fatty stools (steatorrhea), Chronic giardiasis is usually associated with intermittent, loose, foul-smelling stools that resemble those of malabsorption states. Abdominal distension, sulfurous belching, flatulence, epigastric pain, substernal burning, nausea, anorexia, and failure to thrive may occur

Reference: <http://emedicine.medscape.com/article/999282-clinical#b1>

255- Infant with high grade fever, Irritability, sick looking, complaining of anuria for 4 hour with multiple Petechiae and purpura on his body, He was tachycardia and hypotensive, diagnosis?

- A. Renal failure
- B. Septic shock

Answer: B

256- child presented with convulsion after GI symptoms:

- A. Salmonella
- B. Shigella

Answer: B

Seizures are the most common neurologic complication associated with Shigella infection. They tend to be generalized and are not associated with specific neurologic deficits but have been associated with a higher risk of death.

Reference: UpToDate

Seizures. Generalized seizures have been reported occasionally among young children with shigellosis, and usually resolve without treatment. Children who experience seizures while infected with Shigella typically have a high fever or abnormal blood electrolytes (salts), but it is not well understood why the seizures occur.

Reference: <https://www.cdc.gov/shigella/general-information.html#definitions-symptoms>

257- 4 years old child developed resistance or not respond to Chloramphenicol in Salmonella infection, what you will give:

- A. Repeated dose of Chloramphenicol
- B. Ciprofloxacin
- C. IM Ceftriaxone

Answer: B

If the strain is sensitive to all antibiotics, **ciprofloxacin** should be the first-line treatment. Chloramphenicol, ampicillin, or trimethoprim/sulfamethoxazole may be appropriate alternatives for treatment.

If the infection is resistant to fluoroquinolones (or to nalidixic acid), ceftriaxone should be prescribed (**IV not IM**).

Azithromycin is another alternative. This agent has shown similar results in comparison to ciprofloxacin and ofloxacin

There is a high rate of resistance to fluoroquinolones in the Indian subcontinent so they are not recommended (unless the infection is subsequently proven to be sensitive in vitro). Ceftriaxone or azithromycin is recommended in these patients.

Because ceftriaxone failure is common and mean defervescence is long (despite in vitro sensitivity), there has been a move towards a combined therapy approach with ceftriaxone and azithromycin in patients living in the Indian subcontinent. The rationale behind this approach is based on the fact that typhoid bacteria shift between the blood and the intracellular compartments, and since ceftriaxone is highly active in blood, and azithromycin in the intracellular compartment, the combination may confer a clinical benefit. Indeed, defervescence was found to be less than 4 days. Oral cefixime (also a cephalosporin) was proven to be effective in children with typhoid.

Reference: BMJ

258- Child brought to you with complain of yellowish occlusive area of the teeth what u will give:

- A. Antiseptic mouth wash
- B. Fluoride supplement

Answer: B

Fluoride supplementation, if indicated based upon fluoride intake and caries risk, should begin at six months of age. Fluoride supplementation is only necessary if the child is at high risk for caries.

Reference: UpToDate

259- 2 months old child, complaining of spitting of food, abdominal examination was unremarkable (soft & lax), occult blood: – ve, 50th centile, normal looking no dehydration what you will do?

- A. Reassure the parents
- B. Abdominal CT

Answer: A

260- Parents brought their baby to you who is on bottle feeding, on exam he has whitish lesion on either side of teeth seen with blackish lesion on maxillary incisors and second molar teeth, there is history of leaving the baby with bottle in his mouth during sleeping. The diagnosis?

- A. Nursery dental caries
- B. Gingivostomatitis

Answer: A

261- 10 years old baby boy diagnosed with type 1 diabetes, presented to emergency department with 3 days' history of not feeling well and losing weight, Investigations showing high blood sugar and ketone in the urine. What is best initial thing to do:

- A. Electrolyte replacement
- B. Fluid replacement
- C. Insulin

Answer: B

Fluid repletion should be initiated using an isotonic crystalloid solution at a rate of 10 mL/kg in the first hour. Repeat this regimen if the effective circulatory volume remains compromised.

Reference: UpToDate

262- 10 years old girl has type 1 DM, her weight is 40 kg (below 50th percentile) and her height 150 cm (below 95th percentile), she has no signs of secondary sexual characteristics of puberty, you want to perform annual screening in clinic for:

- A. Ophthalmology
- B. Growth hormone
- C. Renal CT

Answer: B

263- Mother changes her baby diaper many times a day Labs all within the normal except low Na. what is your diagnosis?

- A. Acute proximal renal tubular acidosis
- B. Acute distal renal tubular acidosis
- C. Congenital Chloride diarrhea

Answer: C

Congenital chloride diarrhea (CCD) is caused by a variety of mutations in the SLC26A3, there is excessive fecal losses of fluid and electrolytes, affected individuals present in the neonatal period with hyponatremia, hypochloremia, and metabolic alkalosis (unlike the metabolic acidosis present in most chronic diarrheas); there may be a history of polyhydramnios.

Reference: UpToDate

Congenital chloride diarrhea: serum electrolyte levels may be within the reference range, especially in neonates and treated patients. However, typical findings include low concentrations of serum chloride, sodium, and potassium.

Reference: <http://emedicine.medscape.com/article/945263-workup>

264-17 years old boy with Audiogram shows conductive hearing loss in the left ear.

- A. Left Otosclerosis

Answer: A

If Carhart's notch is there in the audiogram, it is otosclerosis. The Carhart's notch is a depression in the bone-conduction audiogram of patients with clinical otosclerosis. The middle frequencies from 0.5 to 2 kHz, which correspond to the resonance frequency of the middle ear.

265- Overweight child with increase in height and weight more than other children and BMI 30. What you will do?

- A. Follow up after 12 months
- B. life's style modification
- C. No treatment
- D. Anti-obesity medication

Answer: A

2 weeks old (or 2 months not sure) with frequent vomiting showing significant Lower esophageal pH, how would you manage? !!!

- A. PPI
- B. Surgical fundoplication
- C. Manometry
- D. Close observation

Answer: D

266- baby diagnosed with Cystic fibrosis. He has positive sweat chloride test his brother is normal. To confirm diagnosis of cystic fibrosis?

- A. CTRF gene in parent
- B. CTRF in sibling

- C. Chloride test in parent
- D. Chloride test in sibling

Answer: A

Most states now perform mandatory newborn screening, but occasional false positive occur, so children must be brought in for a sweat test to distinguish disease from a carrier state.

Reference: First Aid USMLE 2 p.364

267- After doing CPR on an infant, then showing asystole. What to give?

- A. Atropine
- B. Epinephrine
- C. Lidocaine

Answer: B

Epinephrine (Adrenaline) is the most frequently used medication during pediatric cardiopulmonary resuscitation. It is the first drug used in children with severe hypotension, bradycardia, asystole, or pulseless arrest. It is to be used for infants/children with bradycardia and poor perfusion that is unresponsive to ventilation and oxygenation.

Atropine: is to be used in bradycardia caused by increased vagal tone or cholinergic drug toxicity.

Lidocaine: although not commonly used in pediatric emergencies, lidocaine may play a role in the management of patients with ventricular arrhythmias who do not respond to amiodarone

Reference: http://www.medscape.com/viewarticle/726741_3

268- Failure of obliteration of pharyngeal 2,3,4 arch lead to:

- A. Branchial Cleft Cyst
- B. Ectopic Thymus
- C. Ectopic Parathyroid
- D. Fistula

Answer: A

Reference: <http://emedicine.medscape.com/article/1110351-overview>

269- Child had constipation after few days he develop bloody urine and lower abdominal pain!!!

- A. Autoimmune hemolytic anemia
- B. UTI

Answer: A

Reference: <http://www.merckmanuals.com/home/blood-disorders/anemia/autoimmune-hemolytic-anemia>

270- Best way to prevent Tetanus Neonatorum is to:

- A. Give anti tetanus 72 h before delivery
- B. Vaccinate the mother during her pregnancy

Answer: B

Reference: <http://bestpractice.bmj.com/best-practice/monograph/220/prevention/primary.html>

271- A 46y woman presented following 6 weeks postpartum with insomnia, palpitation and tremor. What is your most likely diagnosis

- A. Postpartum blues
- B. Postpartum thyroiditis
- C. Hashimoto thyroiditis
- D. Dyshormonogenesis

Answer: B

Postpartum thyroiditis is a destructive thyroiditis induced by an autoimmune mechanism within one year after parturition. Postpartum thyroiditis can also occur after spontaneous or induced abortion.

Reference: UpToDate

272- Which enzyme is deficient in Phenylketonuria?

- A. Phenylalanine hydroxylase (PAH).

Answer: A

Phenylketonuria (PKU) is a disorder affecting the aromatic amino acid, phenylalanine. It results from a deficiency of phenylalanine hydroxylase (PAH) and if untreated is characterized by intellectual disability.

Reference: <http://emedicine.medscape.com/article/947781-overview>

273- A Dehydrated child 25 kg, daily maintenance fluid is?

- A. 1500
- B. 1750
- C. 1600

Answer: C

For infants 3.5 to 10 kg the daily fluid requirement is 100 mL/kg.

For children 11-20 kg the daily fluid requirement is 1000 mL + 50 mL/kg for every kg over 10.

For children > 20 kg the daily fluid requirement is 1500 mL + 20 mL/kg for every kg over 20, up to a maximum of 2400 mL daily

Reference: <http://www.slideshare.net/golwalkar/maintainance-replacement-fluid-therapy-pediatrics-ag>

274- Child went for summer vacations to a place with rest of the students. Upon return he developed fever and sore throat. Was given amoxicillin 250mg but progressed to develop maculopapular rash on face and trunk with hepatosplenomegaly. Which test is appropriate?

- A. CBC
- B. Monospot test

Answer: B

Dx Infectious mononucleosis. Diagnosed by the heterophile antibody (Monospot) test (may be negative in the first few weeks after symptoms begin).

- EBV-specific antibodies can be ordered in patients with suspected mononucleosis and a negative Monospot test.

- Infectious mononucleosis syndromes that are Monospot negative and EBV antibody negative are most often due to CMV.

Reference: First Aid USMLE 2 p206

The child has past history of infectious mononucleosis and he is suffering from URTI. So, I believe here the aim is to detect the level of antibodies by Monospot test (Heterophile test antibodies) are sensitive and specific for EBV heterophile antibodies, they are present in peak levels 2-6 weeks after primary EBV infection, and they may remain positive in low levels for up to a year.

Reference: <http://emedicine.medscape.com/article/222040-overview>

275- Problem in the phagocytosis in a child with normal immunoglobulin. Which protein defect gives problem in oxygenation?

- A. Cytochrome 460
- B. Lysosomal
- C. Something with nitric
- D. Decrease in NADH

Answer: D

Chronic granulomatous disease (CGD) is a rare (~1:250,000 births) disease caused by mutations in any one of the five components of the nicotinamide adenine dinucleotide phosphate (NADPH) oxidase in phagocytes. This enzyme generates superoxide and is essential for intracellular killing of pathogens by phagocytes.

It is a genetically heterogeneous condition characterized by recurrent, life-threatening bacterial and fungal infections and granuloma formation.

276- 5 years old child presented with constipation, polyuria and growth retardation. You found Na 130, K 3.1, Cl normal, HCO₃ above 40 high, the defect in:

- A. NaCl channel excretion
- B. H ion absorption
- C. H ion excretion
- D. Chloride reabsorption

Answer: D

Bartter Syndrome: represents a set of closely related, autosomal recessive renal tubular disorders characterized by hypokalemia, hypochloremia, metabolic alkalosis, and hyperreninemia with normal blood pressure. The underlying renal abnormality results in excessive urinary losses of sodium, chloride, and potassium.

Reference: <http://emedicine.medscape.com/article/238670-clinical>

277- History of child with multiple Osteochondroma he presented in the imaging with huge mass from the left hip with calcification?

- A. Chondrosarcoma
- B. Ewing carcinoma

Answer: A

Osteochondromas are benign lesions and do not affect life expectancy. The risk of malignant transformation is 1–5%. The prognosis for secondary peripheral chondrosarcoma is depending on histological grade: 10-year survival rates are 83% for grade I chondrosarcomas compared to 29% for grade III chondrosarcomas.

Reference: <https://ojrd.biomedcentral.com/articles/10.1186/1750-1172-3-3>

In this study, Ewing sarcoma, has never been reported superimposed on an Osteochondroma

Reference: <https://www.healio.com/orthopedics/journals/ortho/2014-4-37-4/%7B060e9345-37e1-45d7-b8c9-7ee71ce6502d%7D/ewing-sarcoma-superimposed-on-a-previous-osteochondroma-in-multiple-osteochondromatosis>

278- child with history of cancer on chemotherapy he had insertion of venous line, he develops gram negative sepsis, what could be the organism?

- A. E-coli
- B. N. Meningitidis
- C. Pseudomonas

Answer: C

Increasing antimicrobial resistance among gram-negative enteric bacteria and opportunistic gram-negative pathogens (e.g., Pseudomonas, Acinetobacter, Burkholderia spp.), also raises the risk of mortality among infected children by delay of effective antibiotic treatment and/or from increased virulence that is observed in some multidrug-resistant organisms. Such organisms are most commonly identified in children hospitalized for prolonged periods with persistent indwelling devices such as intravascular catheters or tracheostomies, and in oncology and other immunosuppressed patients who have had multiple courses of broad-spectrum antibiotics.

Reference: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3916372/>

279- child receive his hep A first dose. He presents to the clinic to receive his second dose, mother gave you a history of sickle cell crises 3 weeks ago, and he received blood transfusion upon that, otherwise he is fine now examination normal what you going to do?

- A. Give him the scheduled vaccine.
- B. Give him after 3 months.
- C. Give him after 6 months.
- D. Do hep A serology level.

Answer: A

For blood product recipients, certain live-virus vaccines (MMR and varicella) may need to be deferred depending on the time interval and the blood product received. Live vaccines are deferred after blood products because they decrease the effectiveness of the live vaccines. If an outbreak situation occurs, it is important to vaccinate individuals, but this dose will not count as effective.

Reference: http://www.medscape.com/viewarticle/720175_8

Children with SCD should receive all standard childhood vaccinations, including those against hepatitis A and B; measles, mumps, and rubella; varicella; rotavirus; H. influenza; tetanus, diphtheria, and pertussis; and poliovirus in countries where it is still endemic.

Reference: UpToDate

280- Infant sit in tripod position, rolls prone to supine, reach for objects. Estimated age?

- A. 4 months
- B. 6 months
- C. 12 months
- D. 24 months

Answer: B

Reference: Illustrated Textbook of Pediatrics.

281- Infant recently shifted to cow's milk presented with abdominal pain and diarrhea:

- A. Continue cow milk
- B. Milk-free diet
- C. Stop cow milk

Answer: C

In Infants, up to age 12 Months, If the diagnosis of Cow milk protein allergy is confirmed, then the infant should be maintained on an elimination diet using a therapeutic formula for at least 6 months or until 9 to 12 months of age. Infants/children with severe immediate IgE-mediated reactions may remain on the elimination diet for 12 or even 18 months before they are re challenged after repeated testing for specific IgE.

Reference:

[http://www.espghan.org/fileadmin/user_upload/guidelines_pdf/Diagnostic Approach and Management of Cow s Milk.28.pdf](http://www.espghan.org/fileadmin/user_upload/guidelines_pdf/Diagnostic_Approach_and_Management_of_Cow_s_Milk.28.pdf)

282- Child with iron toxicity what best to do?

- A. Syrup ipecac
- B. Gastric lavage (no activated charcoal in choices).
- C. Magnesium citrate
- D. Deferoxamine

Answer: D

- Deferoxamine is the iron-chelating agent of choice. Deferoxamine binds absorbed iron, and the iron-deferoxamine complex is excreted in the urine. Deferoxamine does not bind iron in hemoglobin, myoglobin, or other iron-carrying proteins.

- Ipecac-induced emesis is not recommended and may cloud the clinical picture.

- Gastric lavage is not recommended because iron tablets are relatively large and become sticky in gastric fluid, making lavage unlikely to be of benefit.

- Whole bowel irrigation has been used to speed the passage of undissolved iron tablets through

the GI tract, although there is no convincing evidence from clinical studies that it improves the outcome.

Reference: <http://emedicine.medscape.com/article/1011689-treatment>

283- Child with growth retardation in addition to GH, what you going to check?

A. Somatomedin C

Answer: A

Somatomedin C (which is another name for insulin-like growth factor 1).

The determination of IGF-I (somatomedin C) and IGFBP-3 levels has become a widely-used tool in the diagnostic evaluation of growth disorders.

Reference: UpToDate

Growth Failure Workup:

- Thyroxine (T4) and thyroid-stimulating hormone (TSH).
- Serum electrolytes.
- CBC count and sedimentation rate.
- IGF-1 and IGFBP-3: Both are growth hormone dependent.
- Karyotype.
- Celiac serology screening

Reference: <http://emedicine.medscape.com/article/920446-workup>

284- 8 years old girl brought by her parents for waddling gait. Hip examination show trendelenburg gait and + Galeazzi sign. All labs are normal. X-ray show wide hip. Diagnosis?!!!

A. Rickets

B. CHD (congenital dislocation of the hip).

C. Achondroplasia

Answer: B

Reference: <http://www.aafp.org/afp/2009/0201/p215.html>

285- Child present with rash and vesicles on his trunk, chest & upper limbs with fever. Which one of the following antibodies will confirm your diagnosis?

A. Mumps antibody test

B. VZV antibodies

Answer: B

Diagnosis is chicken pox. Small, erythematous macules appear on the scalp, face, trunk, and proximal limbs, with rapid sequential progression over 12-14 hours to papules, clear vesicles, and pustules and subsequent central umbilication and crust formation.

Reference: <http://emedicine.medscape.com/article/1131785-clinical>

286- Child come with painless whitish patches in later side of tongue and posterior palate...diagnosis?

- A. Metal ingestion
- B. Oral Hairy Leukoplakia

Answer: B

Oral Hairy Leukoplakia: is characterized by white, hairy appearing lesions localized to the lateral margins of the tongue, in a unilateral or bilateral fashion. It is caused by Epstein-Barr virus infection

Reference: <http://www.aafp.org/afp/2010/0301/p627.html>

287- young girl her height is 167 and her BMI is 24 she classified as:

- A. Normal
- B. Obese
- C. morbid obesity
- D. Underweight

Answer: A

Reference: http://apps.who.int/bmi/index.jsp?introPage=intro_3.html

288- Young patient with symptoms of GBS ascending paralysis. Lab showed CSF: high protein. What other features you will find?

- A. high cell count in CSF
- B. Cranial nerve involvement
- C. Fever

Answer: B

Cranial nerve involvement is observed in 45-75% of patients with GBS. Cranial nerves III-VII and IX-XII may be affected.

Reference: <http://emedicine.medscape.com/article/315632-clinical>

289- Young Patient with nephritic syndrome, came with abdominal guarding and tenderness, you should suspect?

- A. Peritonitis
- B. Appendicitis
- C. Pancreatitis

Answer: A

Infection – Children with nephrotic syndrome have increased susceptibility to encapsulated bacterial infection, particularly peritonitis because of defects in humoral immunity. Although antibiotics have reduced the mortality rate of nephrotic syndrome due to infection, infection remains a cause of death in children with nephrotic syndrome.

Reference: UpToDate

290- Can't sit without support, coos and laughs. Estimated age?

- A. 6 months
- B. 3 months
- C. 1 months

D. 9 months

Answer: B

Reference: Illustrated Textbook of Pediatrics

291- child with sickle cell anemia, presented with bilateral hip pain. diagnosis?

A. AVN (Avascular necrosis).

Answer: A

292- child brought with diarrhea and abdominal pain. Distended abdomen. Lab otherwise normal. diagnosis?

A. IBD

B. carbohydrates intolerance.

Answer: B

Symptoms of intolerance to carbohydrates are primarily due to deficiency of enzymes or transporters or overloading of a transport system located on the brush border of the epithelium lining the small intestine. Non-absorbed carbohydrates in the intestinal tract drive fluids into the lumen through an osmotic force, causing osmotic diarrhea. Moreover, non-absorbed carbohydrates are fermented by gut microbiota to gas.

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4808885/pdf/nutrients-08-00157.pdf>

293- 6 years old with blood pressure above 95th percentile with family history of HTN. On examination, his radial pulse is intact but femoral pulse is absent. What could be the cause?

A. Essential hypertension

B. Renal artery stenosis

C. Coarctation of the aorta

Answer: C

Reference: <http://emedicine.medscape.com/article/895502-clinical#b4>

294- Child with CROUP. What will you find in chest auscultation?

A. Wheezing

B. Crepitation

C. Gasp

D. Silent chest

Answer: A

Given the wide clinical spectrum of croup, the patient's symptoms can range from minimal inspiratory stridor to severe respiratory failure. In mild cases, respiratory sounds at rest are normal; however, mild expiratory wheezing may be heard. Children with more severe cases have inspiratory and expiratory stridor at rest with visible suprasternal, intercostal, and subcostal retractions.

Reference: <http://emedicine.medscape.com/article/962972-clinical#b3>

295- Child presented with dyspnea. On Examination: he has parasternal heave, ECG shows RBBB, ECHO shows Right ventricular wall motion abnormality and Right ventricle hypertrophy. What is the most likely cause?

A. Mitral prolapse

B. ASD

- C. VSD
- D. Coarctation of aorta

Answer: B

- Characteristic findings in patients with secundum ASD are a normal sinus rhythm, right-axis deviation, and an rSR' pattern in V1, an interventricular conduction delay or right bundle branch block (which represents delayed posterobasal activation of the ventricular septum and enlargement of the right ventricular outflow tract).

- Left-axis deviation and an rSR' pattern in V1, an interventricular conduction delay or right bundle branch block suggests an ostium primum defect.

Reference: <http://emedicine.medscape.com/article/162914-workup#c7>

296- Surgeon want to treat child diagnosed with PDA. During procedure, the surgeon is at risk to injure which of the following nerves?

- A. Left Phrenic Nerve
- B. Vagus Nerve
- C. Left Recurrent Laryngeal Nerve

Answer: C

Surgical ligation of a patent ductus arteriosus (PDA) is a commonly performed procedure. Complications are infrequent and most commonly include recurrent laryngeal nerve injury and rarely ligation of left pulmonary artery.

Reference: <https://www.hindawi.com/journals/cripe/2017/2647353/>

297- Child can know the color when you point at it, ride tricycle but cannot copy square what is his age?

- A. 2 years
- B. 3 years
- C. 4 years
- D. 5 years

Answer: B

Reference: USMLE Step 2 CK Lecture Notes 2017

298- 10 years old child with difficulty to eat for 2 years, multiple time aspiration in the past two weeks, he is on Total Parenteral Nutrition 1000 calorie and protein daily with lab result attached (low albumin and anemia) what is your action?

- A. continue same TPN dose
- B. continue TPN with increase dose to 2000
- C. Insert gastrostomy tube, continue same calorie
- D. Insert gastrostomy tube, decrease calorie to 80

Answer: B

The patient is complaining of aspiration; gastronomy can cause aspiration as a complication. Since the patient is anemic and has hypoalbuminemia continuing the same dose is wrong.

Reference: Toronto Notes

299- What is the type of murmur in atrial septal defect?

- A. Fixed split in S2

B. Ejection systolic click

Answer: A

The heart sound of ASDs with large left-to-right shunts and normal pulmonary artery pressure is characterized by wide, fixed splitting of the second sound (S2), in contrast to the normal variation in splitting during the respiratory cycle.

Reference: UpToDate

300- Neonate with gradual cyanosis, in the beginning there is parasternal murmur without cyanosis, there is right ventricular hypertrophy, right axis deviation, on x-ray there is small heart with pulmonary vessel (something I didn't recall) what is the diagnosis? !!!

A. Transposition of great vessels

B. Tetralogy of Fallot

C. Acyanotic heart disease

Answer: A

Transposition of the great vessels is the most common cyanotic heart disease of newborns. Tetralogy of Fallot is the most common cyanotic heart disease of childhood.

301- 4-month child which developmental milestone?

A. Start crawling

B. Roll over from side to side

C. Sit without support

D. Complete fixation of the head

Answer: D

Reference: USMLE Step 2 CK Lecture Notes 2017

302- Neonate with white eye reflex bilaterally:

A. Congenital Cataract

Answer: A

Bilateral cataracts are often inherited and associated with other diseases. They require a full metabolic, infectious, systemic, and genetic workup. The common causes are hypoglycemia, trisomy (eg, Down, Edward, and Patau syndromes), myotonic dystrophy, infectious diseases (eg, toxoplasmosis, rubella, cytomegalovirus, and herpes simplex [TORCH]), and prematurity.

Reference: <http://emedicine.medscape.com/article/1210837-overview>

303- Pt with hematuria and Aniridia.

A. Nephroblastoma (Wilms Tumor).

Answer: A

WAGR Syndrome Patients with an unusual complex of congenital developmental abnormalities, such as aniridia (see the image below), genitourinary (GU) malformations, and mental retardation, are at high risk (>30%) of having a Wilms tumor.

Reference: <http://emedicine.medscape.com/article/989329-overview>

Q. neonate with bilious vomiting, he passed meconium in day 2 what is the cause?

A. Hirschsprung disease

B. Allergy to formula milk

Answer: A

- Most cases of Hirschsprung disease are diagnosed in the newborn period. Hirschsprung disease should be considered in any newborn that fails to pass meconium within 24-48 hours of birth. Although contrast enema is useful in establishing the diagnosis, full thickness rectal biopsy remains the criterion standard.

Reference: <http://emedicine.medscape.com/article/178493-overview>

Q. child with bronchiolitis what is the treatment?

A. ribavirin

B. acyclovir

Answer: A

- Treatment is primarily supportive; treat mild disease with outpatient management using fluids and nebulizers if needed. Hospitalize if signs of severe illness are present.

- The AAP suggests that ribavirin aerosol therapy may be considered in selected groups of infants and young children at high risk for potentially life-threatening RSV disease.

Reference: <http://emedicine.medscape.com/article/961963-treatment#d10>

304- Initial management of Juvenile Idiopathic Arthritis:

A. Intra-articular corticosteroids

B. Paracetamol

Answer: A

In Juvenile Idiopathic arthritis, 1st line drug therapy: NSAIDs, intra-articular corticosteroids.

2nd line drug therapy: DMARDs (methotrexate, sulfasalazine, lefunamide), corticosteroids (acute management of severe arthritis, systemic symptoms of JIA, topical eye drops for uveitis), biologic agents.

Reference: Toronto Notes 2017

305- Child with red urine, constipation, Urine analysis show increase RBCs, WBC, protein:

A. Urinary Tract Infection (UTI)

B. Henoch-Schonlein purpura (HSP)

C. Hemolytic uremic syndrome (HUS)

D. Acute Post Streptococcal Glomerulonephritis (APSGN)

Answer: D

In urinalysis PSG Results are always abnormal Hematuria and proteinuria are present in all cases, Urine sediment has red blood cells, red blood cell casts, white blood cells, granular casts, and, rarely, white blood cell casts.

306- Child with arthritis, fever, epistaxis, gingival bleeding, results PLT is low, HGB is low. What is the appropriate investigation?

A. Bone marrow aspiration

B. Electrophoresis

C. Anti dsDNA

Answer: A

The causes of pancytopenia are: aplastic anemia, myelofibrosis, leukemia, TB, amyloidosis, sarcoidosis or drugs (e.g. Chemotherapy).

Aplastic anemia is confirmed by excluding all the causes of pancytopenia. The most accurate test

is a bone marrow biopsy.

307- six-year-old girl with pan-systolic murmur she had which of the following valve abnormality?!!!

- A. VSD
- B. MR
- C. TR

Answer: ALL

All of the following are causes of holosystolic (pansystolic) murmur: mitral regurgitation, tricuspid regurgitation and VSD.

308- 12-year-old boy complaining of Right groin pain associated with limping from 2 days ago with no fever. O/E Right hip tenderness, hip is held in abduction and external rotation and painful internal rotation, sensation is normal. What is the most likely diagnosis?

- A. Osgood–Schlatter disease
- B. Perth's disease
- C. Slipped capital femoral epiphysis
- D. Septic arthritis
- E. Toxic transient synovitis

Answer: C

Reference: <http://orthoinfo.aaos.org/topic.cfm?topic=a00052>

309- In which situation, the hepatitis C positive mother should not breastfeed her infant?

- A. Lack of hepatitis c vaccine
- B. Cracked nipples

Answer: B

There is no documented evidence that breastfeeding spreads HCV. Therefore, having HCV-infection is not a contraindication to breastfeed. HCV is transmitted by infected blood, not by human breast milk. There are no current data to suggest that HCV is transmitted by human breast milk.

Reference: <https://www.cdc.gov/breastfeeding/disease/hepatitis.htm>

310- Child was diagnosed with DM type 1 presented with frequent hypoglycemic attack at different time during the day, he was diagnosed 6 month back, and he is compliance to his diet and treatment, the most likely cause of his symptoms is:

- A. Brittle diabetes
- B. Down phenomena
- C. Somogyi phenomena
- D. Honeymoon period

Answer: D

The Honeymoon Phase (or Honeymoon Period) amongst people with type 1 diabetes refers to the period of time shortly following diabetes diagnosis when the pancreas is still able to produce a significant enough amount of insulin to reduce insulin needs and aid blood glucose control.

Reference: <http://www.diabetes.co.uk/blood-glucose/honeymoon-phase.html>

Brittle diabetes mellitus (or labile diabetes) is a term used to describe particularly hard to control type 1 diabetes. Those people who have brittle diabetes will experience frequent, extreme swings in blood glucose levels, causing hyperglycemia or hypoglycemia.

Reference: <http://www.diabetes.co.uk/brittle-diabetes.html>

311- Adolescent with fever, headache, meningism after swimming in a river; causative organism:

- A. Streptococcus
- B. H. Influenza
- C. N. Meningitidis
- D. Naegleria fowleri

Answer: D

Naegleria fowleri (commonly referred to as the “brain-eating amoeba” or “brain-eating ameba”), is a free-living microscopic amoeba*, (single-celled living organism). It can cause a rare** and devastating infection of the brain called primary amebic meningoencephalitis (PAM). The amoeba is commonly found in warm freshwater (e.g. lakes, rivers, and hot springs) and soil. Naegleria fowleri usually infects people when contaminated water enters the body through the nose. Once the amoeba enters the nose, it travels to the brain where it causes PAM, which is usually fatal. Infection typically occurs when people go swimming or diving in warm freshwater places, like lakes and rivers. Reference: <http://www.cdc.gov/parasites/naegleria/>

312- 7 days old baby presented with vomiting and fever, culture shows catalase positive, gram positive in chain, beta hemolytic. Mother had history of infection before delivery. the treatment is:

- A. Ampicillin.

This is a case of neonatal sepsis caused by group b streptococcus. The treatment if no evidence of meningitis: ampicillin and aminoglycoside until 48–72-hour cultures are negative.

313- Most causes of FTT:

- A. Psychosocial
- B. Cystic fibrosis
- C. Asthma

Answer: A

Reference: <http://emedicine.medscape.com/article/915575-clinical#b1>

The majority of cases in primary care practice are secondary to inadequate dietary intake, usually related to psychosocial factors or disturbance in feeding behavior.

Insufficient dietary intake is also a common cause of FTT among infants referred to specialty clinics.

Reference: UpToDate

314- 8-month child presented with high fever 39.5 for 2 days. Examination is normal. BP is 120\80 HR is 120 what is the organism?

- A. E.coli
- B. H. influenza
- C. Listeria monocytogenes
- D. Streptococcus pneumonia

Answer: D

In children older than 4 weeks, S. Pneumoniae and N. Meningitidis are the most common etiologic agents for Bacterial Meningitis.

Reference: <http://emedicine.medscape.com/article/961497-overview#a4>

315- Long scenario about child with dysmorphic features, developmental delay seizure disorder on anticonvulsant therapy other details ... !!!

- A. IPV instead of OPV
- B. Deter DTP
- C. Deter all live vaccine
- D. Deter all vaccine

Answer: B

Progressive neurologic disorder, including infantile spasms, uncontrolled epilepsy, progressive encephalopathy; defer DTaP until neurologic status clarified and stabilized.

Reference: <https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html>

316- inflammation there is internal rotation with 30-degree fixed flexion of left hip ...

- A. Developmental dysplasia of the hip (DDH).

Answer: A

- Patients with unilateral DDH may have increased internal rotation of the hip because increased femoral anteversion is often associated with DDH.

Reference: UpToDate

317- when to give both heparin and FFP:

- A. DIC and thrombosis

Answer: A

Treat underlying disorder; platelets, FFP, cryoprecipitate; heparin may be needed for chronic thrombi.

318- Pediatric with holosystolic murmur in left 3rd intercostal space, with hyper dynamic heart and loud S2 what's the diagnosis:

- A. VSD
- B. ASD
- C. PDA

Answer: A

Reference: Nelson essential

319- 3 years old with UTI, febrile what to do:

- A. Renal US

Answer: A

Renal ultrasonography should be considered for any child with a first febrile UTI in whom good follow-up cannot be ensured.

VCUG is indicated if renal and bladder ultrasonography reveals hydronephrosis, scarring, or other findings that suggest either high-grade VUR or obstructive uropathy. VCUG should also be performed if a patient has a recurrence of a febrile UTI, even if previous ultrasonographic examination findings were unremarkable.

Reference: <http://emedicine.medscape.com/article/969643-workup#c10>

320- child with anemia a picture showed spherocytosis, what investigation you will do?

- A. Electrophoresis
- B. Osmotic fragility test
- C. G6PD level

Answer: B

Reference: <http://emedicine.medscape.com/article/206107-workup>

Diagnosis is hereditary spherocytosis. The most accurate test is osmotic fragility. When cells are placed in a slightly hypotonic solution, the increased swelling of the cells leads to hemolysis.

Reference: Master the Boards.

321- young child presented with painful lesion in the back of her mouth and soft palate?

- A. Herpangina

Answer: A

Herpangina is an acute febrile illness associated with small vesicular or ulcerative lesions on the posterior oropharyngeal structures (enanthem)

Reference: <http://emedicine.medscape.com/article/218502-clinical>

Herpangina is a benign clinical syndrome characterized by fever and a painful papulovesicular-ulcerative oral enanthem.

Reference: UpToDate

322- newborn scrotal swelling tenderness in both testis what is the next investigation:

- A. Trans-illumination
- B. Wait till the patient coughs or cries.
- C. Watch voiding

Answer: A

Reference: Nelson essential p227

323- development child walk alone & Builds tower with 3-4 blocks?

- A. 18 months

Answer: A

Reference: <https://www.verywell.com/developmental-milestones-three-months-to-five-years-1449132>

324- Newborn with congenital adrenal hyperplasia present with:

- A. Hirsutism
- B. Infantile acne
- C. Abdominal striae
- D. Dehydration

Answer: D

Reference: <http://emedicine.medscape.com/article/919218-overview>

If these male neonates present at age 1-4 weeks with failure to thrive, recurrent vomiting, dehydration, hypotension, hyponatremia, hyperkalemia, and shock (classic salt-wasting adrenal hyperplasia).

Reference: UpToDate

325- Child can say few words. What is the estimated age?

- A. 12 months
- B. 24 months

Answer: A

Reference: <http://www.webmd.com/parenting/baby-talk-your-babys-first-words#1>

326- child after history of URTI developed ascending muscle weakness?

- A. Guillain barre syndrome

Answer: A

Reference: <http://emedicine.medscape.com/article/315632-clinical>

327- Child with severe rheumatic fever & cardiac involvement what to give for short period?

- A. IM penicillin monthly
- B. Large dose aspirin + Oral steroid

Answer: B

Reference: <http://emedicine.medscape.com/article/891897-treatment>

328- Baby can sit roll from prone to supine and back, play and handle object but can't pick things between 2 fingers, what is his age?

- A. 4 months
- B. 6 months
- C. 9 months

Answer: ?

329- 2 months old baby brought to the hospital. Parents complain that the baby is spitting what you will do?

- A. Reassurance
- B. CT abdomen

Answer: A

Spitting up, sometimes called physiological or uncomplicated reflux, is common in babies and is usually (but not always) normal. Babies often spit up when they get too much milk too fast. This may happen when baby feeds very quickly or aggressively, or when mom's breasts are overfull.

330- Infantile colic:

- A. Decreased peristalsis.
- B. Increased gases

Answer: B

Excessive gas is produced when the unabsorbed carbohydrate is fermented by colonic bacteria.

Reference: UpToDate

Q. Asthmatic child with prodromal symptoms: !!!

- A. Venal conjunctivitis
- B. bacterial conjunctivitis

Answer: A

332- The most common drug used to treat juveniles rheumatoid arthritis: (re-corrected)

- A. Paracetamol
- B. Penicillamine
- C. Systemic steroid
- D. Aspirin

Answer: D (The management should consist of an NSAID see below and the only NSAID here is Aspirin)

The management of Juvenile idiopathic arthritis (JIA) consists of:

- a) NSAIDs (for symptomatic relief, but they do not delay or prevent joint damage)
- b) Drugs that slow disease progression (particularly methotrexate, etanercept, and anakinra)
- c) Intra-articular corticosteroid injections (if needed)
 - Except for severe **systemic disease**, systemic corticosteroids **can usually be avoided**.
 - References: https://www.uptodate.com/contents/polyarticular-juvenile-idiopathic-arthritis-treatment?source=search_result&search=Juvenile+Idiopathic+Arthritis&selectedTitle=8~150
 - <http://www.merckmanuals.com/professional/pediatrics/juvenile-idiopathic-arthritis/juvenile-idiopathic-arthritis-jia>

333- IDA in 2 year old child hg 9 what to give? (IDA : Iron deficiency anemia)(re-corrected)

- A-Oral
- B-IV
- C-Transfusion

Answer: A

Explanation:

- Successful treatment of IDA in infants and young children lies in appropriate dosing and scheduling of oral iron therapy, dietary modifications and follow-up assessment for response.
- **Parenteral iron therapy** should be reserved for patients with severe, persistent anaemia who have proven intolerance to oral supplements, malabsorption, or poor compliance to oral therapy.
- **Red cell transfusions** should only be reserved for patients with severe, symptomatic anaemia compromising end-organ function.

Reference: Article called: Diagnosis and Management of Iron Deficiency Anaemia in Children — A Clinical Update-> **Link:** <http://journals.sagepub.com/doi/pdf/10.1177/201010581202100410>

334- Complication of screening for down syndrome? (re-corrected)

- A- rupture of membrane
- B- abortion
- Answer: B**

Explanation: Diagnosis of Down syndrome:

If Down syndrome was **suspected** based on maternal serum screening tests or ultrasonography, fetal or neonatal **confirmatory testing** is recommended. **Confirmatory methods** include chorionic villus sampling and/or amniocentesis with testing by karyotype analysis and/or chromosomal microarray analysis (CMA). The question wants to demonstrate your ability to recognize the possible risks associated with Chorionic villus sampling carries various risks/ amniocentesis which include:

- **Miscarriage.**
- **Rh sensitization.**
- **Infection.**
 - Reference: <http://www.mayoclinic.org/tests-procedures/chorionic-villus-sampling/basics/risks/prc-20013566> , <https://patient.info/doctor/amniocentesis-pro>

335- Child come with severe symptom of croup, the doctor gave epinephrine then relive but after time again symptom? What will do? (re-corrected)

- A- repeated epinephrine
- B- steroid

Answer: A

Explanation: The treatment of croup and the setting in which the child is initially evaluated depend upon the severity of symptoms and the presence of risk factors for rapid progression:

A- MILD CROUP: Should be **treated symptomatically with humidity, fever reduction with antipyretics, and oral fluids. Can be done as outpatient.**

B- MODERATE CROUP/ SEVERE CROUP:

1)Monitoring (It include pulse oximetry and close observation of respiratory status.) If oxygen saturation falls below 92%, **humidified oxygen** should be given and ABGs should be measured to assess CO₂ retention. **CO₂ retention (Paco₂>45 mm Hg)** generally indicates fatigue and the need for **endotracheal intubation**, as does inability to maintain oxygenation.

2)Supportive care

- Administration of **humidified air or humidified oxygen** as indicated for hypoxemia (oxygen saturation <92 percent in room air) or respiratory distress.
- **Comforting the child** (any increase in anxiety may worsen airway obstruction)

3) Fluids: If necessary in some children

4)Intubation is required in less than 1 percent of those who are seen in the ER

5) Pharmacotherapy:

- For children with moderate stridor at rest and moderate retractions or more severe symptoms, we recommend administration of **dexamethasone**.
- For children with moderate stridor at rest and moderate retractions, or more severe symptoms, we recommend **nebulized epinephrine in addition to dexamethasone**.
- **Nebulized epinephrine** can be repeated every 15 to 20 minutes. The administration of three or more doses within a two- to three-hour time period should prompt initiation of close cardiac monitoring.
- References: <https://www.uptodate.com/contents/croup-approach-to-management>
- <http://www.merckmanuals.com/professional/pediatrics/respiratory-disorders-in-young-children/croup>

336- Adolescent with recurrent swelling of lips gene affected? (re-corrected)

a) **SERPING1 gene**

Answer: A

Explanation: Hereditary angioedema has 2 types:

- Type 1 (85%): Characterized by **C1 inhibitor deficiency**
- Type 2 (15%): Characterized by **C1 inhibitor dysfunction**

✚ Inheritance is **autosomal dominant**.

✚ Clinical presentation is usually during childhood or adolescence.

✚ Mutations in the ***SERPING1*** gene cause hereditary angioedema **type I and type II**.

The *SERPING1* gene provides instructions for making the C1 inhibitor protein, which is important for controlling inflammation.

✚ C1 inhibitor deficiency or dysfunction results in increased levels of bradykinin because C1 inhibitor inhibits activated kallikrein (required for the generation of bradykinin) in the kinin system pathway.

✚ Mutations in the *F12* gene are associated with some cases of hereditary angioedema type III.

✚ References: <https://ghr.nlm.nih.gov/condition/hereditary-angioedema#genes>

✚ <http://www.merckmanuals.com/professional/immunology-allergic-disorders/allergic,-autoimmune,-and-other-hypersensitivity-disorders/hereditary-and-acquired-angioedema>

337- baby with 5 min after birth assessing (HR 120 ,breath irregular and grasping, acrocynotic , cough and grimace , flexing all limbs not moving) apgar score : (re-corrected)

- A. 6
- B. 7
- C. 8
- D. 9

Answer: B

Explanation:

APGAR SCORE

SIGN	0	1	2
COLOR	Blue or Pale	Acrocyanotic	Completely Pink
HEART RATE	Absent	<100 minute	>100 minute
REFLEX IRRITABILITY	No Response	Grimace	Cry or Active Withdrawal
MUSCLE TONE	Limp	Some Flexion	Active Motion
RESPIRATION	Absent	Weak Cry; Hypoventilation	Good, crying

Color: 1/2
Heart rate: 2/2
Reflex irritability: 2/2 (here they said cough which is 2 and grimace as well which gives him 1).
Muscle tone: 1/2
Respiration: 1/2
Total: 7 if u take cough if grimace it's 6

Reference: <http://pediatrics.aappublications.org/content/pediatrics/117/4/1444.full.pdf>

338- Mother wants to screen her fetus for thalassemia : (re-corrected)

- A. chorionic villus sampling at 16 week
- B. amniotic fluid with something at 15 week
- C. amniotic fluid with 2 other things at 16 week

Answer: B

Explanation: CVS is done at **10-12 weeks' gestation**, and amniocentesis is done at **15-18 weeks' gestation**

Reference: <https://www.cdc.gov/mmwr/preview/mmwrhtml/00038393.htm>

339- Baby presented with abdominal bloating and constipation , inv shows increase ca+ . I forgot the choices

Answer:

Causes of pediatrics hypercalcemia are listed in the link bellow:

<http://emedicine.medscape.com/article/920955-clinical#b5>

Also causes of constipation in pediatrics are listed in the following link:

<http://www.msmanuals.com/professional/pediatrics/symptoms-in-infants-and-children/constipation-in-children#v1082335>

340- 4 years old boy was found on the floor of the kitchen , cyanosed , has peanut bean on his hand : (old correction approved)

Answer: aspiration

<http://emedicine.medscape.com/article/764615-overview#a3>

341- full term baby on breast milk and gaining weight, presented 10 days after birth with yellowish discoloration, indirect bilirubin 19.5, direct 2.7, what to do next : (old correction approved)

- A. blood exchange
- B. phototherapy

Answer: B

Explanation: phototherapy is an effective and safe method for reducing indirect bilirubin levels. In term infants, phototherapy is begun when indirect bilirubin levels are between 16 and 18 mg/ dl. For blood exchange, a level of 20 mg/dl for indirect bilirubin for hemolytic infants weighing more than 2000 g. Asymptomatic infants with physiologic or breast milk jaundice may not require exchange transfusion, unless the indirect bilirubin level exceeds 25 mg/dl.

Reference: <http://www.uptodate.com/contents/jaundice-in-newborn-infants-beyond-the-basics>

342- baby was jaundiced then become greenish :

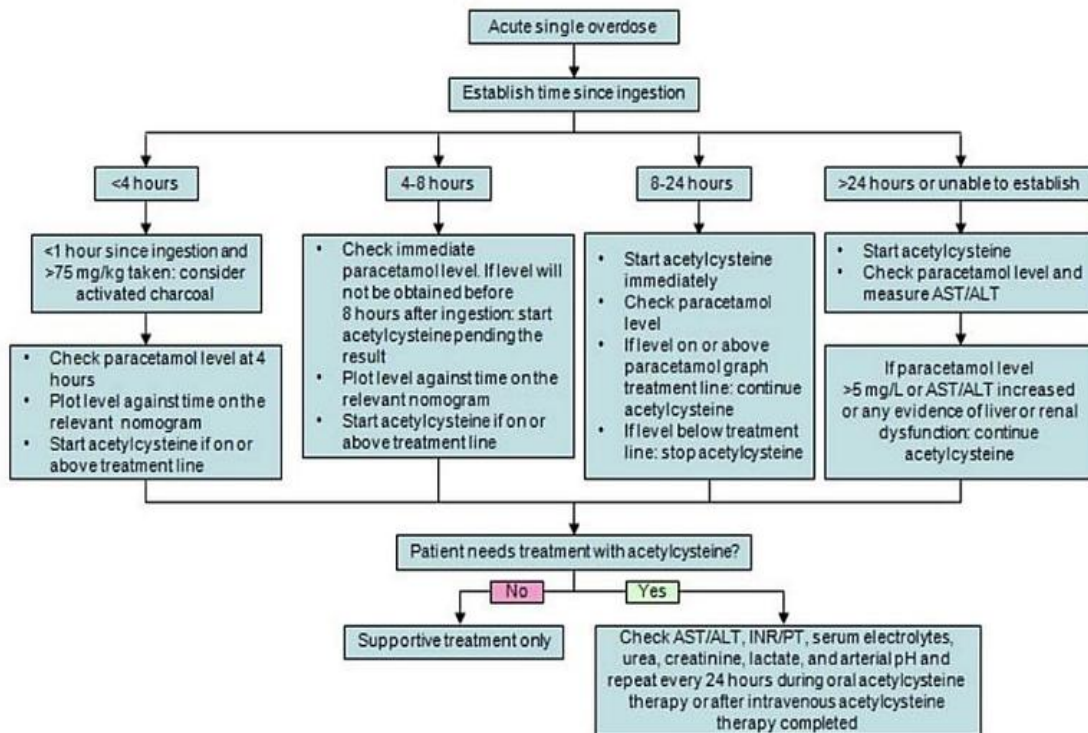
Answer: Oxidation of the bilirubin

343- Baby with unknown numbers of paracetamol pills ingestion presented after 10 or 4 hours
what to do: (re-corrected)

- A. N. acetylcystin
- B. Drug level

Answer: depends on the time. If the patient presented within 10 hours of ingestion I will go with A regardless of drug level. If the patient presented between 4-8 hours you only start N. acetylcystin if paracetamol is on or above treatment line. (SEE DIAGRAM BELOW)

Reference: <http://bestpractice.bmj.com/best-practice/monograph/337/treatment/step-by-step.html>



344- Baby with diarrhea , no vomiting , how to manage ? (re-corrected)

Answer: ORS

explanation: Oral rehydration Solution (ORS) is recommended by the WHO in cases with mild diarrhea. Resource: <http://www.merckmanuals.com/professional/pediatrics/symptoms-in-infants-and-children/diarrhea-in-children>

346- child acute rheumatic fever with cardiac affections ttt:

- a- oral penicillin + large dose aspirin
- b- I.V penicillin + corticosteroids

Answer: B

Usually the treatment is antibiotics and aspirin. Corticosteroids are reserved for cases with moderate to severe carditis (as judged by a combination of clinical findings, presence of cardiac enlargement,

and possibly by severely abnormal echocardiography results). In the scenario they say cardiac affection so I will go with B, however even if I will give antibiotics, it should be oral and not IV check the link:

<http://www.merckmanuals.com/professional/pediatrics/miscellaneous-bacterial-infections-in-infants-and-children/rheumatic-fever>

Also this is from **Toronto notes**: treatment of Rheumatic fever : penicillin or erythromycin for acute course x 10 d, prednisone if severe carditis

347- scenario about renal tubular acidosis in a child: (no options/ incomplete questions)

Some Features of Different Types of Renal Tubular Acidosis*



Feature	Type 1	Type 2	Type 4
Incidence	Rare	Very rare	Common
Mechanism	Impaired hydrogen ion excretion	Impaired bicarbonate resorption	Decrease in aldosterone secretion or activity
Plasma bicarbonate (mEq/L)	Frequently <15, occasionally < 10	Usually 12-20	Usually > 17
Plasma potassium	Usually low but tends to normalize with alkalinization	Usually low and decreased further by alkalinization	High
Urine pH	> 5.5	> 7 if plasma bicarbonate is normal < 5.5 if plasma bicarbonate is depleted (eg, < 15 mEq/L)	< 5.5

*Type 3 is very rare.

348- monozygot twin presentation (twin A/twin B) will be dangerous in : (re-corrected)

- A. Cephalic. Cephalic
- B. transverse. Cephalic
- C. Breech Cephalic

Answer: C {Twin interlocking (twin A breech, twin B vertex/cephalic)}

Recourse: Toronto notes -obstetrics-2017

349- child parents Have TB- You read a PPD result after 48 hours. It showed 10 mm in- duration. What does that indicate? (rec-corrected)

- a. negative
- b. weakly positive
- c. strongly positive

Answer: C

Positive PPD Test If induration at 48-72 h

≥5 mm is considered positive in:

- HIV-infected persons
- A recent contact of a person with TB disease
- Persons with fibrotic changes on chest radiograph consistent with prior TB
- Patients with organ transplants
- Persons who are immunosuppressed for other reasons (e.g., taking the equivalent of >15

mg/day of prednisone for 1 month or longer, taking TNF-a antagonists)

≥10 mm is considered positive in:

- Recent immigrants (i.e., within the last 5 years) from countries with a high prevalence of TB
- Injection drug users
- Residents and employees of the following high-risk congregate settings: (prisons and jails - nursing homes and other long-term facilities for the elderly - hospitals and other health care facilities - residential facilities for patients with acquired immunodeficiency syndrome (AIDS) - homeless shelters)
- Mycobacteriology lab personnel.
- Injection drug users
- Children less than 4 years of age
- Infants, children, and adolescents exposed to adults at high risk for developing active TB

≥ 15 mm is considered positive in: Persons with no known risk factors for TB

Reference: <https://www.cdc.gov/tb/publications/factsheets/testing/skintesting.htm>

350- The person's medical risk factors determine the size of induration the result is positive (5 mm, 10 mm, or 15 mm).

See previous question's explanation

351- sabin (polio vaccine) IV & oral both do: (re-corrected)

A. Increase Intestinal IgA secretion

B. Attack on anterior horn to prevent viral attachment

Answer: A (those are the only options here although if u find serum antibodies go with that choice)

- **Parenteral inactivated poliovirus vaccine (IPV)** induces formation of serum antibody.
- Infection, with oral poliovirus vaccine (OPV) or wild poliovirus, also induces development of **secretory IgA antibody**.
- **IPV** induces a high level (90%-95%) of protection against disease, which presumably is mediated by **serum antibody** that prevents CNS invasion resulting from viremia.
- Reference: <https://www.ncbi.nlm.nih.gov/pubmed/6740072>

352- child with fever. Rash. Grysh macul in moth dx??? (old correction approved)

Answer: measles consist of bluish-gray specks against an erythematous background.

Reference: <http://emedicine.medscape.com/article/1079920-overview>

353- Baby brought by his parents to ER complaining of SOB & drooling saliva ... diagnosis : (re-corrected)

A. croups.

B. epiglottitis.

Answer: B.

Reference: <http://www.merckmanuals.com/professional/ear,-nose,-and-throat-disorders/oral-and-pharyngeal-disorders/epiglottitis>

354- Dignosis of coarcitation aorta done by : (x - ray not in choices) (re-corrected)

- a) C.T. May be
- b) MRI

Answer: answer is B (so for diagnosis Cardiac catheterization is usually done in kids and if not enough to establish the diagnosis u go for MRI)

Explanation: In children with coarctation, echocardiography often is adequate for the surgeon or interventional cardiologist **without the need for a further imaging study**. However, echocardiography may be insufficient to confirm the diagnosis, especially in adolescent and adult patients. In the 2008 American College of Cardiology and American Heart Association (ACC/AHA) adult congenital heart disease guidelines, it is recommended that every adult patient with coarctation (repaired or not) should **have at least one cardiovascular MRI or computed tomography** for complete evaluation of the thoracic aorta. MR imaging can also detect associated cardiac abnormalities and can be used for serial follow-up after surgical repair or balloon angioplasty.

Reference: <https://www.uptodate.com/contents/clinical-manifestations-and-diagnosis-of-coarctation-of-the-aorta>

355- Child with nephrotic syndrome on steroid for 3-6wks or 6 months have vaccine? (old correction approved)

- A. Give the vaccine
- B. Stop the steroids
- C. 3month and give appointment

Answer:C

Killed or inactivated vaccines do not represent a danger to immunocompromised persons and generally should be administered as recommended for healthy persons. Steroid therapy usually does not contraindicate administration of live-virus vaccines when such therapy is short term (less than 2 weeks); low to moderate dose; long-term, alternate-day treatment with short-acting preparations; maintenance physiologic doses (replacement therapy); or administered topically (skin or eyes), by aerosol, or by intra-articular, bursal, or tendon injection.

The exact amount of systemic corticosteroids and the duration of their administration needed to suppress the immune system of an otherwise healthy child are not well defined.

The immunosuppressive effects of steroid treatment vary, but many clinicians consider a dose equivalent to either 2 mg/kg of body weight or a total of 20 mg/day of prednisone as sufficiently immunosuppressive to raise concern about the safety of immunization with live-virus vaccines. Corticosteroids used in greater than physiologic doses also may reduce the immune response to vaccines. **Physicians should wait at least 3 months after discontinuation of therapy before administering a live-virus vaccine to patients who have received high-dose, systemic steroids for greater than or equal to 2 weeks.**

<https://www.cdc.gov/mmwr/preview/mmwrhtml/00023141.htm>

356- What is the milestone of 4 year child ?

- A. 40 - 60 word
- B. Count to 4
- C. tell story
- D. Say mama baba

Answer : C

Reference: <http://www.cdc.gov/ncbddd/actearly/milestones/milestones-4yr.html>

357- Which vaccine is contraindicated in HIV pt

- A. OPV
- B. varicella
- C. MMR

Answer C (because it is a live attenuated virus)

358- Boy has a cat developed itching for a month with Red eye and watery with discharge No lymphadenopathy and general exam normal: (KSAUHS correction)

- A. Cat scratch Dermatitis.
- B. allergic conjunctivitis.

Answer: B because it also the symptoms of allergy.

Reference: <https://icatcare.org/advice/cat-health/chlamydomydia-felis-infection-feline-chlamydomydia>

359- Boy with elevated WBCs very high? Low hemoglobin Low MCV Low reticulocytes What is the diagnosis?

- A. Iron deficiency
- B. B Thalassemia trait
- C. Sickle
- D. Anemia of chronic disease

Answer: D

The nearest answer; associated with elevation in acute phase reactants (ESR, CRP, fibrinogen, platelets)

- Peripheral blood :
 - mild: usually normocytic and normochromic
 - moderate: may be microcytic and normochromic
 - severe: may be microcytic and hypochromic
- Absolute reticulocyte count is frequently low, reflecting overall decrease in RBC production

360- 7 year girl developed pubic hair And axillary hair and complain from acne and breast develop NOT enlargement of clitoris what dx?

- a) central cause of puberty (something same this)
- b) gonadotropin releasing tumor

Answer: (couldn't find one left the old correction bellow)

Etiology of PRECOCIOUS PUBERTY

- Usually idiopathic in females (90%), more suggestive of pathology in males (50%)
- Central (GnRH dependent)

hypergonadotropic hypergonadism; hormone levels as in normal puberty premature activation of the HPG axis

differential diagnosis: idiopathic or constitutional (most common in females), CNS disturbances (tumors, hamartomas, post-meningitis, increased ICP, radiotherapy), NF, primary severe hypothyroidism

- peripheral (GnRH independent) hypogonadotropic hypergonadism

differential diagnosis: adrenal disorders (CAH, adrenal neoplasm), testicular/ovarian tumor, gonadotropin/hCG secreting tumor (hepatoblastoma, intracranial teratoma, germinoma), exogenous steroid administration, McCune-Albright syndrome, aromatase excess syndrome, rarely hypothyroidism (Van Wyk-Grumbach syndrome).

361- 5 year old child present with odor of adult and pubic hair what investigation will do?

Answer: investigation:

- **initial screening tests:** bone age, serum hormone levels (estradiol, testosterone, LH, FSH, TSH, free T4, DHEA-S, 17-OH-progesterone)
- **secondary tests:** MRI head, pelvic U/S, β -hCG, GnRH, and/or ACTH stimulation test

Confirmed by nelson p652

362- Breastfeeding mother treated with HCV by interferon more than one year what the risk of breastfeeding on infant? (KSAUHS correction)

- A. Nipple cracked
- B. Mother with anemia
- C. Infant complain of oral candidacies
- D. Not follow up of infant immunization

Answer is A

Explanation:

- CDC – Hepatitis C: HCV has not been shown to be transmitted through breast milk, although HCV-positive mothers should consider abstaining from breastfeeding if their nipples are cracked or bleeding.
- Uptodate: There is no evidence that breastfeeding is a risk for infection among infants born to HCV infected women
- Antiviral treatment of pregnant women is not recommended. Ribavirin \diamond teratogenic in animal models. Interferon \diamond increase spontaneous abortion in animal models.
- Medscape: peginterferon alfa 2a: unknown if distributed in human breast milk. Large molecular weight

363- treatment of streptococcus glomerulonephritis in children with edema and HT?

- A. High dose of antibiotic
- B. Diuretic for edema
- C. Diuretic for htn

Answer B

Medscape: <http://emedicine.medscape.com/article/239278-treatment#d9>

364- fluid required to give for neonate 10 KG, loss 5% of his body fluid? (old correction approved)

- A. 1000
- B. 1500
- C. 2500

Answer: B

Explanation: we have to calculate the fluid deficit and maintenance.

- ✚ Fluid deficit = wt x percentage of loss x 10 ml of fluid.
- ✚ Maintenance = first 10 of child wt = 100 ml/kg second 10 = 50 ml/kg addition kg = 20 ml/kg
- ✚ So in this case: fluid deficit = 10 x 5 x 10 = 500 ml and

✚ The maintenance = $10 \times 100 = 1000$.

✚ So total fluid required is 1500 ml/day

Check nelson page: 124 for more understanding.

365- child with pain when chewing and headache, he complain loss of weight and decrease appetite ? (Temporomandibular joint dysfunction) ? what is the complain ? (Re-corrected)

A. Hearing loss

B. Facial palsy

Answer: the possible diagnosis is: TMJ syndrome (disorders)

Symptoms of temporomandibular joint syndrome consist of the following (non from the above choices)

- Chronic pain in the muscles of mastication described as a dull ache, typically unilateral
- Pain may radiate to the ear and jaw and is worsened with chewing
- Locking of the jaw when attempting to open the mouth
- Ear clicking or popping, usually when displacement of the articular disk is present
- Headache and/or neck ache: In some cases, patients may complain of headache without localized pain in the temporomandibular joint
- A bite that feels uncomfortable or different from usual
- Neck, shoulder, and back pain
- Bruxism, teeth clenching
- Increasing pain over the course of the day

Reference: <http://emedicine.medscape.com/article/809598-clinical>

366- High height low weight dm1 child, what to check next? (re-corrected)

A. GF

B. TSH

Answer: A (This patient has gigantism)

- Gigantism and acromegaly are syndromes of excessive secretion of growth hormone (hypersomatotropism) that are nearly always due to a pituitary adenoma.
- Before closure of the epiphyses, the result is gigantism. Later, the result is acromegaly.
- Diagnosis is: clinical and by:
 - ✚ Measurement of growth hormone levels: Blood should be taken before the patient eats breakfast (basal state).
 - ✚ Serum Insulin-like growth factor 1 (IGF-1) levels: should be measured in patients with suspected acromegaly; IGF-1 levels are typically substantially elevated (3-fold to 10-fold), and because IGF-1 levels do not fluctuate like GH levels do, they are the simplest way to assess GH hypersecretion. IGF-1 levels also can be used to monitor response to therapy.
 - ✚ CT or MRI of the head should be done to look for a tumor. If a tumor is not visible, excessive secretion of pituitary GH may be due to a non-CNS tumor producing excessive amounts of ectopic GHRH.
- Treatment involves removal or destruction of the responsible adenoma.

367- mother bring her first & only infant was fatigued not move or gaze from light direct on his eye what the Dx?

A. infantile botulism

<http://emedicine.medscape.com/article/961833-clinical>

368- 6y old boy fever, sore throat, developed pink maculopapular rash all over and pericarditis , what's the Dx? (re-corrected)

A. still' disease

B. Kawasaki Disease

Answer: B

Explanation:

Diagnostic Criteria for Kawasaki disease:

- fever persisting ≥ 5 d AND ≥ 4 of the following features
 1. bilateral, non-exudative conjunctival injection
 2. oral mucous membrane changes (fissured lips, strawberry tongue, injected pharynx)
 3. changes of the peripheral extremities
 - ◆ acute phase: extremity changes including edema of hands and feet or erythema of palms or soles
 - ◆ subacute phase: periungual desquamation
 4. polymorphous rash
 5. cervical lymphadenopathy > 1.5 cm in diameter (usually unilateral)
 - exclusion of other diseases (e.g. scarlet fever, measles)
 - atypical Kawasaki disease: fever persisting ≥ 5 d and 2-3 of the above criteria ■ further evaluation dictated by CRP, ESR, and supplemental laboratory criteria
- Reference: Toronto notes 2017

369- what is the condition that baby will have bone age more than chronological age? (old correction approved)

- A. hypothyroid
- B. chronic kidney disease
- C. congenital adrenal hyperplasia
- D. Reckitt

Answer: C

Reference: <https://www.eurospe.org/clinical/CPC%20Docs/Bone%20age%20assessment.pdf>

370- milestone baby can hold his head and when he looks at his flying hand he laughs and coos. (re-corrected)

If they ask about the age I would say 4 months the following happen at 4 months of age

- No head lag.
- Laughing.
- looking at hand

Cooing on the other hand is established at 2 months of age

Reference: Nelson essentials of pediatrics, section 2, chapter 7

371- Milestone said baba and walk holding furniture and a lot of other features

- A. 12M
- B. 10M

Answer: B All this happens between 9-10 months of age

Reference: Nelson essentials of pediatrics, section 2, chapter 7 and Illustrated textbook of pediatrics the 4th edition

372- Scrotal mass in a neonate no trans illumination non reducible:

- a- tortion
- b- inguinal hernia

Answer: b

<http://www.merckmanuals.com/professional/gastrointestinal-disorders/acute-abdomen-and-surgical-gastroenterology/hernias-of-the-abdominal-wall>

373- One month boy came for vaccine. His older sister (6 years old) had renal transplant and now is on immunosuppressive medication. Which vaccine is contraindicated? (Doesn't say for the baby or for the girl)- (old correction approved)

- a- MMR
- b- Oral polio
- c- Salk polio
- d- Influenza

Answer: B

Oral polio b/c of the risk of spread OPV for immunocompromised girl

Explanation: VAPP "vaccine associated paralytic poliomyelitis" usually occurs among young infant OPV recipients and among direct contacts of OPV recipients. The overall risk is about 1 case per 900,000 first dose OPV. Adults may be at higher risk than young infants and children. Persons with B cell immunodeficiency carry the highest risk with an estimated VAPP rate of 2 per 1000 vaccines. Which means immunocompromised direct contacts carry the highest risk for OPV complications

Source: uptodate: poliovirus vaccination

374- Most common intra-abdominal tumor in infants?

- a- Wilms tumor
- b- Neuroblastoma

Answer: B

Explanation: neuroblastoma is the most common intra-abdominal malignancy of infancy.

Wilms tumor is the most common childhood abdominal malignancy with a median age of 3.5 years

<http://emedicine.medscape.com/article/439263-overview>

<http://emedicine.medscape.com/article/989398-overview>

375- Pediatric patient with Asthma since age 2 years he is now asymptomatic with rare uses of albuterol inhalers. he came for counseling. he had contact sport participation, what is best question to ask to know his response: (old correction approved)

- A- "Are keeping up with your friends?"
- B- "How frequent do use inhaler?"
- C- "presence night symptoms (cough)"

answer : C

<https://www.uptodate.com/contents/an-overview-of-asthma-management>

376- long term treatment of sickle cell is: (re-corrected)

- A- folic acid
- B- penicilline
- C- hydroxurea

Answer : C

<http://emedicine.medscape.com/article/205926-treatment>

377- 12-hour newborn developed jaundice. Which investigation will you order? (re-corrected)

- A. Hb electrophoresis
- B. Osmotic fragility test
- C. G6PD screening
- D. G6PD

Answer: The answer should be Coomb’s Test and total bilirubin and fraction of both conjugated and non-conjugated to total bilirubin. I will order G6PD if G6PD is suspected (especially in a male) but not as the first test.

Causes of jaundice in <24 h are ALWAYS PATHOLOGIC and they include:

- Hemolytic
- Rh or ABO incompatibility
- Sepsis
- Congenital infection (TORCH)
- Severe bruising/hemorrhage

Investigations:

Unconjugated hyperbilirubinemia	Conjugated hyperbilirubinemia (must be investigated without delay- always pathological)
1) Hemolytic workup: CBC, reticulocyte count, blood group (mother and infant), peripheral blood smear, Coombs test 2) If baby is unwell or has fever: septic workup (CBC and differential, blood and urine cultures ± LP,CXR) 3) other: G6PD screen (especially in males), TSH	Consider liver enzymes (AST, ALT), coagulation studies (PT, PTT), serum albumin, ammonia, TSH, TORCH screen, septic workup, galactosemia screen (erythrocyte galactose-1-phosphate uridylyltransferase levels), metabolic screen, abdominal U/S, HIDA scan, sweat chloride

Reference: Toronto notes 2017

378- 8 years old boy with petechiae all over his body. Lab results: low platelets and high creatinine level. what is the diagnosis? (KSAUHS correction)

- a. ITP
- b. TTP

Answer: Depends on nelson 7 the answer is probably hus. Hus if no fever or altered mental status. Hus = microangiopathic hemolytic anemia + thrombocytopenia + renal failure. Ttp= hus + fever and/ or altered mental status.

Table 164-1	Common Laboratory Findings with Hemolytic Uremic Syndrome
EVIDENCE OF MICROANGIOPATHIC HEMOLYTIC ANEMIA	
Anemia Thrombocytopenia Presence of schistocytes, helmet cells, and burr cells on peripheral blood smear Increased LDH Decreased haptoglobin Increased indirect bilirubin Increased AST Elevated reticulocyte count	
EVIDENCE OF RENAL INJURY	
Elevated creatinine Presence of hematuria, proteinuria, pyuria, casts on urinalysis	
OTHER POTENTIAL FINDINGS	
Leukocytosis Positive stool culture for <i>E. coli</i> O157:H7 Positive stool test for shiga-toxin Elevated amylase/lipase	

Reference: nelson 7 p: 560

379- Newborn just delivered vaginally presented with respiratory distress, on examination: left side silent and heart sounds heard on right side , what's the most likely diagnosis ? (old correction approved)

- A. diaphragmatic hernia
- B. spontaneous pneumothorax
- C. dextrocardia

Answer: A.

Explanation: Infants with congenital diaphragmatic hernia (CDH) most often develop respiratory distress in the first few hours or days of life. Physical examination will reveal a barrel-shaped chest, a scaphoid appearing abdomen because of loss of the abdominal contents into the chest, and absence of breath sounds on the ipsilateral side. In most patients with CDH (because the lesion is on the left side), the heartbeat is displaced to the right because of a shift in the mediastinum. " + the most common type in diaphragmatic hernia is left posterior (left silent chest)

*In Spontaneous pneumothorax, there will probably be a hint that the newborn were on a ventilator, and the most cardiac finding is tachycardia not shifting of heart sound.

*Dextrocardia will not present with silent chest (no breath sounds)

Source: Uptodate : congenital diaphragmatic hernia in the neonate Pneumothorax / physical exam section

380- 5 year old presented with abdominal pain + constipation, labs show low K, low Na , low Cl, most likely diagnosis ? (old correction approved)

- A. bartter syndrome
- B. gitelman syndrome
- C. congenital adrenal hyperplasia
- D. congenital chloride diarrhea

Answer: A

<https://www.uptodate.com/contents/bartter-and-gitelman-syndromes>

381- Sanrio about baby when birth weight was 3.5 kg after one week 3.1 kg (old correction approved)

- A. Give Abotics
- B. Oral replacement therapy
- C. Reassurance
- D. Do routine investigation and send home

Answer: C

Explanation: " Term neonates may lose up to 10 percent of their birth weight in the first few days of life and typically regain their birth weight by 10 to 14 days".

So normally is weight after birth can reach to 3.15 kg.

Source: uptodate: normal growth patterns in infants and prepubertal children_

382- Asthmatic boy on muntelukast present to ER, he has symptoms everydayexacerbated by exercise What to give for maintenance (old correction approved)

- A. oral steroid daily with long acting when needed
- B. inhaled steroid twice with short acting when needed

C. Muntelukast with long acting

Answer: B

<http://www.aafp.org/afp/2001/0401/p1341.pd>

383- y.o amenorrhea ,Short stature ,HTN,broad neck ,Also parent short stature dx: (old correction approved)

A- Familial

B- Turner

Answer: B

Explanation:

Familial short stature usually occur in healthy children with no delay in bone age and normal growth velocity that correlates with their parents.

The mentioned features are typical for turner, which is a result of a chromosomal defect; the presence of a short stature in one of the parent might be coincidental.

If the short stature runs in the family that is always due to short stature of one of the parents with no other complain

384- 4 y.o child , language development. (re-corrected)

a) Can say 50-100

b) 2 phrase / words sentences

c) Use past tense

d) Tell a story

Answer: C

Reference: nelson essentials of pediatrics/ Toronto notes 2017

385- young boy presented with diarrhea some time bloody, Weight loss, arthritis, anemia the diagnosis is : (old correction approved)

A. Chron's

B. UC

C. Celiac

Answer: A

Explanation: Both UC, and CD can present with the above features. Since CD is more common than UC. it would be the probable diagnosis some of the extra-intestinal manifestations are more common in CD (" arthritis is twice as common in CD as compared to UC") , anemia m.c with uc Quoting from uptodate " CD tends to present In late childhood or adolescence and it's the predominant form of IBD after the age of 8"

Source : uptodate: clinical features and diagnosis of inflammatory bowel disease in children and adolescents

386- 8 year child come with 30 BMI what can you do for him? (old correction approved)

A. Surgery for obesity

B. Give him drug for obesity

C. Reassure and Live style.

D. follow after 12 months

Answer: C

Explanation: For patients in the initial stages of obesity treatment (stages 1 and 2 above), we suggest that the provider of primary care perform a brief clinical intervention, using the behavioral strategies, nutritional goals, and exercise goals.

Source uptodate: management of childhood obesity in primary care sitting

Anti-obesity drugs can be useful adjuncts to diet and exercise for obese adults with a BMI greater than 30 kg/m², who have failed to achieve weight loss goals through diet and exercise alone.

Source uptodate : drug therapy of obesity

387- Child presented with cyanosis and murmur (case of the transposition of great vessel)
<http://emedicine.medscape.com/article/900574-clinical#showall>

388- 4 years old SCD w/ recurrent VOC what is best management for future improvement? (old correction approved)

- A. Hydroxyurea
- B. Multiple blood transfusions

Answer: A

<http://www.merckmanuals.com/professional/hematology-and-oncology/anemias-caused-by-hemolysis/sickle-cell-disease>

389- What is characterized about x fragile syndrome? (KSAUHS correction)

- A. Obesity
- B. Macrogonadism
- C. Small

Answer: B

- 1 in 200 in frequency.
- Most common cause inherited mental retardation. Features:
- Characteristic craniofacial finding (large head, prominent forehead, jaw, ear)
- Characteristic neurobehavioral profile including (mental retardation, autism spectrum disorder, pervasive developmental disorder)
- Macro-orchidism
- Mild connective tissue disorder including (joint laxity, patulous eustachian tubes, mitral valve prolapse)

Reference: essential nelson of pediatrics

390- pediatric patient with abdominal distention and severe foul smelling flatus? (re-corrected)

- A- Giardia lamblia
- B- Entameba histolitica

Answer is A

Explanation: The answer is giardia, which inhibits fat absorption causing steatorrhea and bloating.

Features of giardia infection include:

Abdominal bloating and cramping, foul-smelling stools, anorexia

For more: <http://www.merckmanuals.com/professional/pediatrics/symptoms-in-infants-and-children/diarrhea-in-children>

391- Mother used a steroid cream for a scaly dermatological ... And then become better

- A. Psoriasis

Answer: a

392- 2 y child had mass in flank lead to **displace** the collection system Dx?

- A. wilms
- B. neuroblastoma

Answer: A but I'm not sure of the answer (I choose it because it says displace the collecting system and displacement goes with Wilms- read the explanation bellow) I also asked a oncologist he said he should go with B BUT the question is not complete and he needs more info!

Explanation:

Wilms tumor: Radiographic features

Wilms tumours are usually large heterogeneous solid masses which **displace adjacent structures**. Occasionally they may be mostly cystic. Metastases are most commonly to lung (85%), liver and local lymph nodes.

Neuroblastomas are tumours of neuroblastic origin corresponding to the most common extracranial solid childhood malignancies and the third commonest childhood tumours after leukaemia and brain malignancies.

Clinical presentation

Typically with pain or a palpable mass and abdominal distension.

Location

Neuroblastomas arise from the sympathetic nervous system:

Intra-abdominal disease (two-thirds of cases) is more prevalent than the intrathoracic disease.

Specific sites include:

- adrenal glands: most common site of origin, 35%
- retroperitoneum: 30-35%
 - organ of Zuckerkandl
 - coeliac axis
 - paravertebral sympathetic chain
- posterior mediastinum: 20%
- neck: 1-5%
- pelvis: 2-3%

Plain radiograph

Appearances are non-specific, typically demonstrating an intrathoracic or intra-abdominal soft-tissue mass. Pressure on adjacent bones may cause remodelling of ribs, vertebral bodies or pedicle thinning. Up to 30% may have evidence of calcification on the plain film.

<https://radiopaedia.org/articles/neuroblastoma>

<https://radiopaedia.org/articles/wilms-tumour>

393- hemangioma in the left eye in an infant and it needs to be resected so it doesn't affect the vision, when will u do that?

- A. immediately
- B. 2 weeks
- C. 3 months
- D. 6 months

Answer: A

Table 8. Vascular Tumours

	Clinical Presentation	Pathophysiology	Epidemiology	Clinical Course	Management
Hemangioma of infancy	Hot, firm red to blue plaques or tumours	Benign vascular proliferation of endothelial lining	Appears shortly after birth; rarely may be congenital	Appears shortly after birth, increases in size over months, then regresses 50% of lesions resolve spontaneously by 5 yr	10% require treatment due to functional impairment (visual compromise, airway obstruction, high output cardiac failure) or cosmesis Consider treatment if not gone by school age; propranolol; systemic corticosteroids; laser treatment; surgery

Reference: <https://www.vbiny.org/photo-gallery/hemangiomas/eyelid-eyebrow>, Toronto notes 2017

394- child e recurrent UTI investigation ? (old correction approved)

- A. u/s
- B. x-ray
- C. Ct .

Answer: A

Usually start by US then Voiding cystourethrography (VCUG)

Ultrasonography of the bladder and kidneys is recommended for infants with febrile UTIs to exclude structural abnormalities or detect hydronephrosis. Voiding cystourethrogram (VCUG) is indicated if the ultrasound is abnormal (hydronephrosis, scarring, or other findings to suggest obstruction or congenital abnormality).

Ref :- Nelson

395- A child present with s&s of Leukemia with CALLA +ve?Dx?

Answer: ALL

Reference:

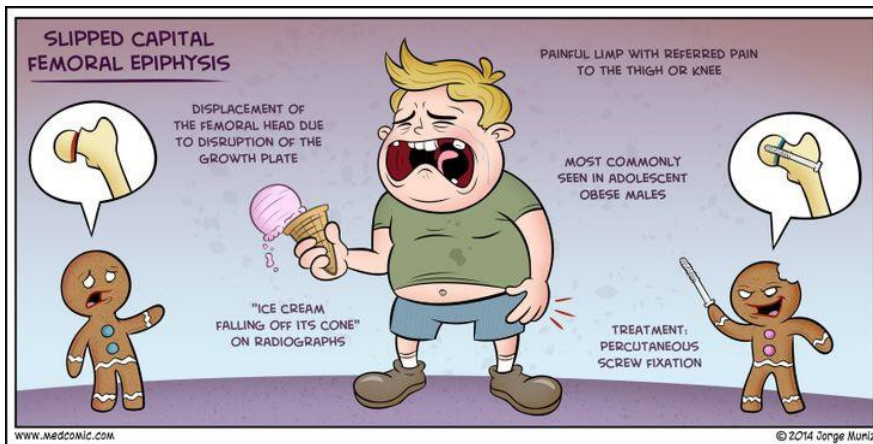
<http://www.medicinenet.com/script/main/art.asp?articlekey=39568>

396- Child with Painful limping, Dx?

Answer: SCFH

397- 12 Y +OBESE+ Cannot bear weight + hip externally rotated>>slipped capital femoral epiphysis

Answer: SCFH



398- child with blue dot in testis and painful mass in inguinal area? (old correction approved)

- A. Incarcerated hernia
- B. testicular appendix torsion

Answer: testicular appendix torsion

Reference: Toronto note

399- HUS vs TTP?

Answer:

	HUS	TTP
Clinical features	1- thrombocytopenia 2- MAHA 3- Renal involvement (30% have CNS involvement and fever)	1- thrombocytopenia 2- MAHA 3. Mild renal involvement 4. Fever 5. CNS involvement (60% may not have the pentad)
Age	Children	Adults
Mechanisms	Diarrhea+: Shiga toxin Diarrhea -: Alternative complement disorders	ADAMTS-13 abnormalities

400- baby has sickle cell anemia and receive blood transfusion , what about vaccination ?

- B. take the vaccine
- C. B. don't give vaccine

Answer: A

Reference: <http://www.mayoclinic.org/diseases-conditions/sickle-cell-anemia/basics/treatment/con-20019348>

401- pediatric case croup , from where take swab ?

- A. nasopharyngeal swab
- B. nasal swab
- C. pharyngeal swab

Answer: nasopharyngeal swab

402- child in the hospital play and come to his parents sav stories . draw head and hands and legs
 خطوط بشكل وايدي ارجل نبيها الذي الرسمه what is the age of this child:

- A. 3yrs
- B. 4yrs
- C. 5yrs

Answer: 5 years

Reference: Toronto notes 2017

403- Case of 12years old boy on skate down stairs he felt and had perineum trauma,with bruises over the scrotum,perineum, lower abdomen. Retrograde cysto-urethrogram show extravasation of the dye. Where is the injury?

- A. Penile urethra
- B. Prostate urethra
- C. Ureter
- D. Bladder

Answer: penile urethra

Relevant Anatomy

The male urethra may be divided into 2 portions. The posterior urethra includes the prostatic urethra, which extends from the bladder neck through the prostate gland. It then joins the membranous urethra, which lies between the prostatic apex and the perineal membrane. The anterior urethra begins at that point and includes 3 segments. The bulbar urethra courses through the proximal corpus spongiosum and ischial cavernosus-bulbospongiosus muscles to reach the penile urethra. The penile

404- years old girl has type 1 DM , her weight 40 kg (below 50th percentile) and his height150 cm (below 95th percentile) , she has no signs of secondary sexual character- istics of puberty, you want to perform annual screening in clinic for :

- A. ophthalmology
- B. growth hormone ?!
- C. Ct to renal
- D. d. celiac

(Answer:d anwered by pediatric consultant) the old answer

Answer is A

Patients with Type I diabetes mellitus (DM) should be tested for CD if there are any digestive symptoms, or signs, or laboratory evidence suggestive of CD. The screening for celiac disease is not usually done annually. In the question asked about (annual screening). Screening for sight threatening retinopathy should start 5 years after the diagnosis of type 1 diabetes and yearly thereafter. For type 2 diabetics screening starts at diagnosis and then yearly.

Reference: ophthalmology lecture notes, <https://gi.org/guideline/diagnosis-and-management-of-celiac-disease/>

405- baby on antibiotic developed watery diarrhea , what is most likely organism : (old answer approved)

- A. c.perferingas
- B. c.difficile
- C. rota virus

answer :B

Refernce: <http://www.uptodate.com/contents/antibiotic-associated-diarrhea-caused-by-clostridi-um-difficile-beyond-the-basics>

406- parent brought their baby to your clinic , you noticed testicular asymmetry and was tender on palpation , the testes were palpable in scrotum bilaterally , next step :

- A. transillumination
- B. surgery
- C. watch it while the baby is crying and coughing

answer B

<http://www.aafp.org/afp/1999/0215/p817.html>

407- baby came to u with sore throat , u obtain culture and send the baby home , the culture grows meningococcus , u call the parents and they say their baby is asymptomatic , what will u do :

- A. 10 days oral ampicillin
- B. one dose IM ceftriaxone

Answer B (read the bold for why the rest is just some background knowledge)

Patients with acute meningococemia may present with meningitis alone, meningitis and meningococemia, meningococemia without clinically apparent meningitis.

The clinical presentation of meningococemia may include any of the following:

- A nonspecific prodrome of cough, headache, and sore throat
- The above followed by a few days of upper respiratory symptoms, increasing temperature, and chills
- Subsequent malaise, weakness, myalgias, headache, nausea, vomiting, and arthralgias
- The characteristic petechial skin rash is usually located on the trunk and legs and may rapidly evolve into purpura
- In fulminant meningococemia, a hemorrhagic eruption, hypotension, and cardiac depression, as well as rapid enlargement of petechiae and purpuric lesions.

Antibiotics recommended for the treatment of meningococemia include the following:
Third-generation cephalosporins such as ceftriaxone (2 g IV q24h) or cefotaxime (2 g IV q4-6h) are the preferred antibiotics

Alternative agents include (1) ampicillin 12 g/d either by continuous infusion or by divided dosing q4h or (2) moxifloxacin 6-8 g/d IV

The course of therapy is 7-10 days

Note: Meningococci are resistant to vancomycin and the aminoglycosides

Chloramphenicol may be considered in patients who are allergic to beta-lactam antibiotics. It appears to be most useful when administered as a single IM injection during epidemics in developed countries.

<http://emedicine.medscape.com/article/221473-overview>

Very important note: u need to know the workup for meningitis and the treatment as well. If meningitis is suspected you need to give empirical treatment for suspected meningitis but for this question I would definitely bring the baby back and do a LP and treat empirically even before I get the LP results because children have less symptoms of meningitis than adults + in this scenario I don't know how old the child is but know that if the scenario had a neonate u should do a full septic workup. The question might be missing some important information so know everything about meningitis. Below I found the same question in KSAUHS questions and it was answered as follows:

5 years old boy presented with sore throat, he was discharged home, culture was done showing group a meningococcus, the physician called the family to inform them he finds that the child is asymptomatic, the best treatment is:

A. Penicillin

B. Single dose ceftriaxone

Answer: a or b

"a range of antibiotics can treat the infection, including penicillin, ampicillin, chloramphenicol and ceftriaxone. Under epidemic conditions in africa in areas with limited health infrastructure and resources, ceftriaxone is the drug of choice."

<Http://www.who.int/mediacentre/factsheets/fs141/en/>

408- baby with 5 min after birth assessing (HR 120 ,breath irregular and grasping , acrocyanotic , cough and grimace , flexing all limbs not moving) apgar score : (old correction approved)

- A. 6
- B. 7
- C. 8
- D. 9

Answer : B

Apgar Sign	2	1	0
Heart Rate (pulse)	Normal (above 100 beats per minute)	Below 100 beats per minute	Absent (no pulse)
Breathing (rate and effort)	Normal rate and effort, good cry	Slow or irregular breathing, weak cry	Absent (no breathing)
Grimace (responsiveness or "reflex irritability")	Pulls away, sneezes, coughs, or cries with stimulation	Facial movement only (grimace) with stimulation	Absent (no response to stimulation)
Activity (muscle tone)	Active, spontaneous movement	Arms and legs flexed with little movement	No movement, "floppy" tone
Appearance (skin coloration)	Normal colour all over (hands and feet are pink)	Normal colour (but hands and feet are bluish)	Bluish-grey or pale all over

409- child admitted with sore throat and bilateral knee pain?

- A. Juvenile rheumatoid arthritis
- B. Rheumatoid arthritis
- C. Other choices I did not remember it

Answer: should be acute rheumatic fever. Can be a case of reactive arthritis as well.

Reference: Toronto notes 2017 , <http://www.merckmanuals.com/professional/musculoskeletal-and-connective-tissue-disorders/joint-disorders/reactive-arthritis>

410- child eating a lot of milk but he does not meat, MCV hypochromic microcytic anemia , How will you manage this child? (old answer approved)

- A. Oral vitamins + iron(I think)*
- B. Trial of iron then then observe
- C. Folic acid
- D. Iron

Answer :D

EXPLANATION: Exclusive milk can cause Iron deficiency anemia , the treatment is by iron of not receiving fortified cereals/meat/meat alternatives .

References :Toronto note

411- Child can walk without support ,crawling ,build 3 cubes point to something he interested in , so what is the age of the child ? (old correction approved)

- A. 9month
- B. 15 month*
- C. 2 years

Answer: B

Reference : Toronto notes 2017

Table 5. Developmental Milestones (continued)

Age*	Gross Motor	Fine Motor	Speech and Language	Adaptive and Social Skills
15 mo	Walks without support, crawls up stairs/steps	Picks up and eats finger foods, scribbles, stacks 2 blocks	4-5 words, points to needs/wants	Looks to see how others react (e.g. after falling)
18 mo	Runs, walks forward pulling toys or carrying objects	Tower of 3 cubes, scribbling, eats with spoon	10 words, follows simple commands	Shows affection towards others, points to show interest in something
24 mo	Climbs up and down steps with 2 feet per step, runs, kicks ball	Tower of 6 cubes, undresses	2-3 word phrases, uses "I, me, you", 50% intelligible, understands 2-step commands	Parallel play, helps to dress
3 yr	Rides tricycle, climbs up 1 foot per step, down 2 feet per step, stands on one foot briefly	Copies a circle, turns pages one at a time, puts on shoes, dress/undress fully except buttons	Combines 3 or more words into sentence, recognizes colours, prepositions, plurals, counts to 10, 75% intelligible	Knows sex and age, shares some of the time, plays make-believe games
4 yr	Hops on 1 foot, climbs down 1 foot per step	Copies a cross, uses scissors, buttons clothes	Speech 100% intelligible, uses past tense, understands 3-part directions	Cooperative play, fully toilet-trained by day, tries to comfort someone who is upset
5 yr	Skips, rides bicycle	Copies a triangle and square, prints name, ties shoelaces	Fluent speech, future tense, alphabet, retells sequence of a story	Cooperates with adult requests most of the time, separates easily from caregiver

*Use corrected GA until 2 yr

- 412- SCA kid come with hip pain and limping
o Avascular necrosis(legg-calve perth's disease)
Answer: AVN should be the answer

- 413- Parent came to your clinic with their obese child with BMI 33 ,So they are afraid of having their child a disease , they wanted you to do lipid profile , after taking history you decided to do a lipid profile but why ? (old answer approved)
A. Because his parents wish or need this test to be done
B. Because the child eating French fries daily
C. Because there is early family history of cardiac disease*
Answer: C
Reference: e-medicine & medscape.com.

- 414- Which of the is mostly associated sign with croup: (re-corrected)
A. dysphonia
B. Cyanosis
Answer :A

Exaplination: signs and symptoms of croup include: A **barking, often spasmodic, cough** and **hoarseness** then occur, commonly at night; **inspiratory stridor** may be present as well. The child may awaken at night with respiratory distress, tachypnea, and retractions. In severe cases, cyanosis with increasingly shallow respirations may develop as the child tires.
Reference: <http://www.merckmanuals.com/professional/pediatrics/respiratory-disorders-in-young-children/croup>

- 415- 2 month old has diarrhea and his mother is worried from dehydration what will you advise the mother:
A. Change milk
B. Oral rehydration solution
Answer:B
Reference: E-medicine .medscape.com Uptodate

- 416- A child presented with diaper rash with satellite lesion he was given localcreams and steroid but didn't work:

Local antifungal
answer :

Explanation : due to candida infection , they use sertaconazole cream (new alternative for diaper dermatitis candidiasis treatment & ciclopirox more safe and effective
Reference: e-medicine & medscape.com & uptodate

- 417- child has itching and all student in his class got the same infection:
A. Sarcopes scabiei

Answer: A

Scabies , it's skin infection caused by mite sarcoptes scabiei contagious condition , transmitted through person to person by direct contact

Reference: uptodate, <http://www.merckmanuals.com/professional/dermatologic-disorders/parasitic-skin-infections/scabies>

418- child c/o unilateral nasal foul smelling discharge for two weeks ,what is your treatment?(re-corrected)

- A. x-ray of the head
- B. antibiotics

Answer: most likely the diagnosis is nasal foreign body (NFB). Note the treatment in this case is REMOVAL OF THE NFB.

Explanation:

- For most isolated NFBs, **no diagnostic testing is indicated**. With the exception of metallic or calcified objects, most NFBs are **radiolucent**. When an alternate diagnosis (i.e., tumor, sinusitis) is being considered, imaging (i.e., CT scan) may be helpful. On the other hand, if concern for an ingested or aspirated foreign body exists, radiography of the chest/abdomen should be performed.
- Most inanimate foreign bodies, if visualized well, can be removed easily through the anterior nares with the use of cupped forceps, hemostats, curved hooks, old metallic eustachian tube catheters, and suction.
- Removal of a rounded object may be an arduous task because of difficulty in grasping foreign bodies of this shape. A curved hook is best suited for this job.
- A nasal endoscope can aid in visualization of the foreign body when present in the posterior nasal cavity.
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3208336/>

419- hydrops fetalis in thalassemia case : (old correction approved)

- A. Normal 2 beta abnormal 4 alpha
- B. abnormal 2 beta normal 4 alpha
- C. Normal 4 beta abnormal 2 alpha
- D. Abnormal 4 beta normal 2 alpha

Answer: A

It's alpha thalassemia major ,absent of 4 alpha

Because there is no alpha globin chain production, affected fetuses have great difficulty in synthesizing a functional hemoglobin molecule. Gamma chains accumulate and form gamma-4 tetramers (hemoglobin Bart's); hemoglobin Bart's binds oxygen, but cannot release it to tissues because its affinity for oxygen is much greater than that of hemoglobin A. Hemoglobin electrophoresis will show greater than 80 percent hemoglobin Barts while the remaining hemoglobin will be of embryonic origin, with a small component of hemoglobin H (beta-4 tetramers)

Uptodate

420- newborn with umbilical hernia.what should tell the mother ? (old correction approved)

- a. Reassure Should treat it before school (after 4 years of age)

Answer : A

Reference: <http://www.mayoclinic.org/diseases-conditions/umbilical-hernia/basics/treatment/con-20025630>

421- baby with vomiting and diarrhea , looks ill , cries with tears , capillary refill 3 sec , vital signs were normal almost : (re-corrected)

- A. moderate dehydration give something 10 ml infusion
- B. moderate dehydration give ...
- C. sever dehydration give IV fluid
- D. sever dehydration give another something (couldn't remember the exact sentences but these were the choices)

Answer: the question is incomplete but the degree of dehydration is moderate and u treat by oral replacement therapy.

● **Mild dehydration (3 to 5 percent volume loss)** – a history of fluid losses may be the sole finding, as clinical signs may be absent or minimal.

● **Moderate dehydration (6 to 10 percent volume loss)** – signs and symptoms are now apparent and can include the following: tachycardia, orthostatic falls in blood pressure, decreased skin turgor, dry mucous membranes, irritability, decreased peripheral perfusion with a delay in capillary refill between two and three seconds, and deep respirations with or without an increase in respiratory rate. There may be a history of reduction in urine output and decreased tearing, and, in infants, an open fontanelle will be sunken on physical examination.

● **Severe dehydration (>10 percent volume loss)** – such children typically have a near-shock presentation as manifested by hypotension, decreased peripheral perfusion with a capillary refill of greater than three seconds, cool and mottled extremities, lethargy, and deep respirations with an increase in rate. Severe hypovolemia requires immediate aggressive isotonic fluid resuscitation to restore the effective circulating volume (ecv) and prevent ischemic tissue injury.

Treatment of dehydration:

The American Academy of Pediatrics and the WHO both recommend oral replacement therapy for mild and moderate dehydration. Children with severe dehydration (eg, evidence of circulatory compromise) should receive fluids IV. Children who are unable or unwilling to drink or who have repetitive vomiting can receive fluid replacement orally through frequently repeated small amounts, through an IV, or through an NGT

<https://www.uptodate.com/contents/clinical-assessment-and-diagnosis-of-hypovolemia-dehydration-in-children>

<http://www.merckmanuals.com/professional/pediatrics/dehydration-and-fluid-therapy-in-children/dehydration-in-children>

422- years old baby presented with severe lower limb pain , growth parameters under the 5th percentile , low Hg :

- A. Osteomyelitis
- B. Vaso Occlusive crisis

Answer: B (low Hg -> possible sickler-> most common manifestation in sicklers is vaso-occlusive crisis)

<http://emedicine.medscape.com/article/205926-overview#a1>

423- baby with blood jelly stool (was case of intussusception) what will u do: (old corection approved)

- A. US
- B. Barium enema

Answer: a

Explanation: Barium enema was once the preferred initial study because it revealed the classic coiled-spring appearance around the intussusceptum. In addition to being diagnostic, barium enema was also usually therapeutic; the pressure of the barium often reduced the telescoped segments. However, barium occasionally enters the peritoneum through a clinically unsuspected perforation and causes significant peritonitis. Currently, ultrasonography is the preferred means of diagnosis; it is easily done, relatively inexpensive, and safe.

<http://www.merckmanuals.com/professional/pediatrics/gastrointestinal-disorders-in-neonates-and-infants/intussusception>

424- 8 years old girl , parent complains that she looks older than her classmates , wt and

height above the 95th percentile , otherwise normal : (KSAUHS correction)

- A. reevaluate after 12 months
- B. obesity medications
- C. life style modification
- D. surgical intervention .

Answer: c

Explanation: this is most likely due to obesity. Familial tall stature also known as constitutional tall stature is the most common cause of tall stature. The second most common cause is nutritional. The height as well as the weight are at higher percentile.

Again the bone age is marginally to moderately advanced so final predicted height is not much. Nutritional tall stature is managed by life-style changes and avoidance of bad dietary practices.

Reference: <http://www.ncbi.nlm.nih.gov/pmc/articles/pmc3850425/>

425- Newborn after 2weeks c/o bilateral conjunctivitis ,chest infiltration , lung crepitation, what is organism ?? (old correction approved)

- A. chlamydia

Answer: A

Explanation: chlamydia trachomatis is the most common cause of sexually transmitted genital infections in the united states. Infants born vaginally to infected mothers with genital disease are at risk for acquiring c. Trachomatis, which usually presents as conjunctivitis and/or pneumonia.

Reference: <http://www.uptodate.com/contents/chlamydia-trachomatis-infections-in-the-newborn>

426- 117. Newborn with congenital adrenal hyperplasia present with; (KSAUHS correction)

- A. Hirsutism
- B. Infantile acne
- C. Abdominal striae
- D. Dehydration

Answer: d

There are three main types and the presentation depends on the type and patient gender.

[Http://emedicine.medscape.com/article/919218-overview](http://emedicine.medscape.com/article/919218-overview) it is easier and more exam directed if you read from first aid.

427- child ate honey then he develop flaccid paralysis :

- A. clostridium botulinum

Answer: clostridium botulinum

<http://emedicine.medscape.com/article/961833-overview>

428- Say few words at the age of which ?

- A. 24
- B. 12m

Answer: B

Reference: Toronto notes 2017

429- what u will seen on physical examination of pt with croup ??

- A. presence of inspiratory sounds
- B. presence of expiratory wheeze

answer : A: Stridor with inspiration

<http://emedicine.medscape.com/article/962972-overview>

430- newborn girl (i did not remember the complain but there is enlargement of clitoris (I think this is congenital adrenal hyperplasia) ask about treatment ?

- A. fluid
- B. Hydrocortisone

answer : B

<http://emedicine.medscape.com/article/919218-treatment>

431- Mother ask you about what to give her child which has gastroenteritis

- a- Oral rehydration fluid

Answer: a

432- 18 months old girl delivered premature her wt was 2.6kg .she is healthy but last 2 days c/o irritability and fatigue .mother shift feeding from breast feed to cow milk feeding at age of 9 month , she has hypochromic microcytic anemia , this patient complain due to ? (KSAUHS correction)

- A. premature
- B. cow milk feeding
- C. bone marrow defect

Answer : B

Explanation: cow milk fed infants suffer from iron deficiency anemia due to low iron content in cow's milk.

Reference: [nelson essentials of pediatrics 7th edition, page 97, table 31-1](#)

433- Child After fall down comes with heamoarthrosis

- A. Clotting factor deficiency

Answer: a

434- 25 kg child maintenance 24h :

The Maintenance is 1600 ml

Half 800 ml given in 1st 8 h ..the rest is given in 2nd 16 h

435- child develop petechiae in leg hx of URTI LAB : normal CBC expect plt was low next management?

- A. Platelet transfusion
- B. Immunoglobulin

Answer: B

[Http://emedicine.medscape.com/article/202158-overview](http://emedicine.medscape.com/article/202158-overview)

436- type of pneumococcal conjugate 13 :

- A. live

- B. conjugate
- C. inactive

Answer: B https://en.wikipedia.org/wiki/Pneumococcal_conjugate_vaccine

437- child complains of abdominal pain since 2 weeks , diarrhea occasionally bloody. malaise. what is the most appropriate test for the diagnosis? (re-corrected)

- A. abdominal CT
- B. barium enema
- C. abdominal US

Answer: c? not sure of the diagnosis is it intussusception then the answer will be C

<http://www.merckmanuals.com/professional/pediatrics/gastrointestinal-disorders-in-neonates-and-infants/intussusception>

438- 3 years old came to the ER with dry cough, he was crying and hoarseness of voice was present, what is your management? (re-corrected)

- A. oxygen mask
- B. nebulized cool mist

Answer: the diagnosis is croup and the management should be Racemic Epinephrine

439- child presented to the emergency room with non productive cough and inspiratory stridor. what is the worst sign we should worry about? (old correction approved)

- A. bluish lip color
- B. expiratory stridor

Answer: A

[*Step up to pediatrics pages No. 268-269*](#)

440- child vaginal bleeding + breast +mass in pelvic?

- A-ovarian teratoma
- B-granulosa theca
- C-yolk sac tumour

Answer: B

Patients usually present with precocious pseudopuberty (70-80%) and have secondary sex characteristics at a very early age. These may include increased linear growth, breast enlargement, clitoral enlargement, pubic hair development, increased vaginal secretions, and vaginal bleeding.

<http://emedicine.medscape.com/article/254489-overview#a6>

441- baby diagnosed with Cystic fibrosis. ..he has + sweat chloride test his brother is normal, to confirm diagnosis of cystic fibrosis?

- A- CTRF gen in parent
- B- CTRF gene in sibling
- C- Chloride test. .parent
- D- Chloride test in sibling

Answer: none of above.

A positive sweat test result should be confirmed by a 2nd sweat test or by identification of 2 CF-causing mutations.

<http://www.merckmanuals.com/professional/pediatrics/cystic-fibrosis-cf/cystic-fibrosis#v1090303>

ANSWERS WITHOUT QUESTIONS/ incomplete questions.

Sav mama/baba at 9-11 m but it not specific meanwhile he walk throw the object

Digeorge syndrome ? answer: thymic (some thing)

child presented with something in the eye with lab result of incense of WBC what is the diagnosis (this correction is an old one from SMLE 13)

leukemia

neuroblastoma

Answer:???

Not clear O But :-

According leukemia we will have high WBC and mav papilledema in case of CNS involvement

. - Regarding neuroblastoma mav we have low WBC (Anemia or other cvtopenias suggest bone marrow involvement.) + eve manifestation will be Opsoclonus or Horner syndrome) +

Abdominal mass . Ref :- First Aid – step 2 CK

child 9 v ..Rx of severe avascular necrosis? Answer: ???!

Medical and surgical.

pedia case neonat has iaundice admitted due to physiological jaundice then discharge , still appear iaundiced what is case ? (not enough information)

duodenal atresia

(Prolonged physiological jaundice associated with hypothyroidism and GIT obstruction)

Answer: ??

Neonatal Jaundice

A •Before 24h = Usually either Sepsis or Blood diseases (Rhesus disease, ABO incompatibility or HS (Hereditary spherocytosis)) → •24h to 2 weeks – most commonly Physiological or breastfeeding jaundice → •Prolonged Jaundice – Breastfeeding jaundice, biliary atresia, sepsis, thyroid problems (hypo), CF

S+S •Jaundiced! Skin and sclera are orange! •Signs of underlying disease
-Biliary Atresia= Pale stools
-Rhesus – Splenomegally. •Signs of Kernicterus (Bilirubin >350µmol/L)
- Lethargic
- ↑ muscle tone
- Coma
- Poor feeding
- Fits
- Death!

P •Jaundice in general = ↑ bilirubin (breakdown of haemoglobin) in blood.
•Physiological Jaundice= Fetal Hb has short life span, and the neonatal liver often has difficulty in metabolising it all. Fetal Jaundice happens in around about 60% of babies, so is very common.
•Breastfeeding Jaundice = Breastfed babies more likely to be jaundiced for longer. Multifactorial.
•Kernicterus = ↑ bilirubin levels cause bilirubin to cross BBB and deposit in basal ganglia and brainstem. This can give long lasting neurological damage, but with good treatment this is avoided.

I •Good history and examination.
•Bloods (Bilirubin, FBC, LFT, Blood groups, Blood film, blood culture – TORCH SCREEN, Coombs test)
•Urine
•If persistent jaundice, consider USS of biliary tree.

T •Each centre has its own treatment chart, which look like this →→→→
•Supportive therapy (hydration status etc), if breastfeeding, keep doing so!
•Phototherapy - 450nm wavelength light converts unconjugated bilirubin into a harmless substance, baby must be completely naked but wear eye protection. Can be done via fibre-optic blanket.
•Transfusion – Either done through UVC or peripheral vein and arterial line.
2x babies blood volume of thoroughly screened blood is transfused.

Graph: Bilirubin vs Time. Shows a rising line for Bilirubin, a horizontal line for Transfusion line, and a downward sloping line for Phototherapy.

442- 12y old baby only says mama and baba his brother with hx of delay speech until 3y. Speech and language delay may be due to : ???

- hearing loss, global developmental delay, anatomical deficit eg cleft palate, environmental deprivation, familial.
- A hearing test and assessment by a speech and language therapist are the initial steps.
- Source :illustrated

443- Osgood schlatter disease?

444- baby presented with abdominal bloating and constipation, inv shows increase ca+.

I forgot the choices answer ? not complete

https://en.wikipedia.org/wiki/Hypercalcaemia#Signs_and_Symptoms

445- What is the most common cause of facial cellulitis in pediatrics?

Answer:

-Facial cellulitis in pediatric practice is now largely due to trauma/loss of skin integrity with secondary infection, dental problems, or severe sinusitis.

-These three underlying causes accounted for 89% of the cases of facial cellulitis seen at our hospital during the past decade. Although the numbers did not reach statistical significance, there was a trend toward an increasing number of facial infections due to severe sinus disease.

-Facial cellulitis accompanying group B streptococcal sepsis in newborns also was not seen during the past 10 years

http://www.medscape.com/viewarticle/439427_4

446- most common sexual differentiation in male : (KSAUHS correction)

A. micropenis

B. hypospadias

Answer: question and choices incomplete

Explanation: diseases of sexual differentiation (dsd) vary in frequency, depending on their etiology. In general, cah is the most common cause of ambiguous genitalia in the newborn. Mixed gonadal dysgenesis (mgd) is the second most common cause of dsds. In 46, xy babies there might be defect in testicular synthesis of androgens or androgen resistance in target tissues. Hypospadias occurs at a rate of 1 case per 300 live male births; in fewer than 1% of patients, hypospadias occurs in combination with undescended testes. Clinicians should suspect the possibility of a dsd in patients with both hypospadias and cryptorchidism.

References: <http://emedicine.medscape.com/article/1015520-overview#a4>

Toronto notes 2015, page u38

5. 11 months old infant , dark foul smell stool mixed with blood and mucus , what will u do investigation : (KSAUHS correction)

A. Something like technetium scan .

B. Ultrasound

Answer: (incomplete question and choices!)

131

Explanation: in infants with stool mixed with blood and mucus, main ddx include: bacterial diarrhea, presents with fever, abdominal pain and bloody diarrhea, bacteria determined by stool culture. Intussusception, presents with paroxysmal abdominal pain, vomiting, sausage shaped abdominal mass, and currant jelly stool, diagnosed by contrast enema. Meckel diverticulum, mostly asymptomatic, but may present with bloody stool, intussusception, volvulus, or diverticulitis, diagnosed by technetium scan.

Reference: illustrated textbook of paediatrics 4th edition, pages 225-227, 229

[Http://emedicine.medscape.com/article/1955984-clinical](http://emedicine.medscape.com/article/1955984-clinical)

6. 15 yo female , no period still , on examination slight breast buds with wide spaced areola , fine pubic hair on labia majora , (not sure if they mention a normal growth parameters in the question and unfortunately I forgot the choices

answer : ?? NOT COMPLETE

7. developmental score that depend solely on parents information :

answer

I think: ages and stages Questionnaire?

8. read about Epstein-Barr virus?

9. Read about Kawasaki disease?

10. Read about mononucleosis?

11. Dehydrated child what is the best statement describe fluid replacement

- a) 50 ml/hr in the first 4 hr and then 50 ml/hr in the rest 24 hr
- b) 100 ml/hr in the first 4 hr and then 50 ml/hr in the rest 24 hr
- c) 100 ml/hr in the first 4 hr and then 100 ml/hr in the rest 24 hr
- d) 50 ml/hr in the first 4 hr and then 100 ml/hr in the rest 24 hr

Q incomplete need the wweight of the patient to give an answer

Personally I might go with B the general rule is to give 2/3 of the fluid in the first 8 hours and the remaining in the next 16 hours.

12. 2 year child didn't complete his vaccination (10 months is the last one) present with fever bilateral swelling pediauricular , unable to swallow , dysphasia , enlarged tonsils and spleen and lymph nodes...(no Infectious Mononucliosis nor mump in the choices):

A- Diphtheria

B- Streptococcus pharyngitis

Answer: Streptococcus pharyngitis (the question need s more details)

449- Type of pneumococcal conjugate 13:

D. live

E. conjugate

F. inactive

Answer: B

Explanation: Pneumococcal conjugate vaccine (PCV13) is Purified polysaccharides of 13 serotypes conjugated to diphtheria protein

Reference: Pediatrics Kaplan for Step 2.

450- Child complains of abdominal pain since 2 weeks, diarrhea occasionally bloody. Malaise. What is the most appropriate test for the diagnosis?

A-abdominal CT

B-Barium enema

C-abdominal US

Answer : ?? The scenario is not complete but this is most likely Ulcerative colitis which diagnosed by Colonoscopy.

451- 3 years old came to the ER with dry cough, he was crying and hoarseness of voice was present, what is your management?

C. oxygen mask

D. nebulized cool mist

Answer: B

Explanation: this is most likely Croup. Cool mist administered by face mask may help prevent drying of the secretions around the larynx.

Reference: Nelson Essentials of Pediatrics 7th edition Page No. 355

452- child presented to the emergency room with nonproductive cough and inspiratory stridor. what is the worst sign we should worry about?

A. bluish lip color

B. expiratory stridor

Answer: A

Explanation: cyanosis indicates low level of oxygen (hypoxia) which is one of the worst signs in the upper airway diseases.

Reference: <https://www.uptodate.com/contents/croup-in-infants-and-children-beyond-the-basics>

453- child vaginal bleeding + breast +mass in pelvic?

A-ovarian teratoma

B-granulosa theca

C-yolk sac tumour

Answer: B

Explanation Patients usually present with precocious pseudopuberty (70-80%) and have secondary sex characteristics at a very early age. These may include increased linear growth, breast enlargement, clitoral enlargement, pubic hair development, increased vaginal secretions, and vaginal bleeding.

Reference: <http://emedicine.medscape.com/article/254489-clinical>

454- Baby diagnosed with Cystic fibrosis. ...he has + sweat chloride test his brother is normal, to confirm diagnosis of cystic fibrosis?

A- CTRF gen in parent

B- CTRF in sibling

C- Chloride test. .parent

D- Chloride test in sibling

Answer: A?

Explanation supposed to be CFTR testing in child

Cystic fibrosis is a recessive disorder, which means that both parents must pass on the defective gene for any of their children to get the disease. If a child inherits only one copy of the faulty gene, he or she will be a carrier. Carriers don't actually have the disease, but they can pass it on to their children.

Reference: <http://learn.genetics.utah.edu/content/disorders/singlegene/cf/>

455- Purulent discharge from newborn's eye, what's the organism?

A. gonorrhoea (by student get 100% in OPH)

Answer: A

Explanation: neonatal conjunctivitis caused by Gonococcal infection Neisseria gonorrhoea. (within 2- 5 days of life) Or could be chlamydia trachomatis eye infection (at 5-14 days of age)

Reference: step up 2 CK lecture notes 2017 pediatrics p98

456- Runny nose child watery conjunctivitis what virus?

A-Adenovirus

B-Corona virus

C-Parainfluenza

D-Rhinovirus

Answer: A

Explanation: the classic presentation is characterized by fever, sore throat, coryza, and red eyes. Upper respiratory tract symptoms may precede ocular findings or may be absent.

Reference: <http://emedicine.medscape.com/article/211738-clinical>

457- Q about Cerebral palsy with typical feature patient had spastic paralysis of all limbs except upper limbs had less paralysis. What type of CP the baby had:

- A- mixed
- B- Diplegic
- C- hemiplegic
- D- Quadriplegic

Answer: B

Explanation and reference: <https://www.michigancerebralpalsyattorneys.com/about->

Body Regions Affected by Cerebral Palsy

Cerebral palsy can be defined by which parts of the body are affected

	Hemiplegia Affected Limbs: 2 One side of the body is affected. The arm is usually more involved than the leg.
	Diplegia Affected Limbs: 4 All four limbs are affected. The legs are more involved than the arms.
	Quadriplegia Affected Limbs: 4 All four limbs are affected.
	Monoplegia Affected Limbs: 1 One limb is affected. The involved limb is usually the arm.
	Triplegia Affected Limbs: 3 Three limbs are affected (usually both arms and one leg).
	Pentaplegia Affected Limbs: 5 All four limbs, the head, and the neck are affected.

cerebral-palsy/

TYPES OF CEREBRAL PALSY

AND THEIR AFFECTED BRAIN REGIONS

Impairments to movement and function depend on which region of the brain is affected by injury.

Motor Types

Prevalence

SPASTIC

Spastic cerebral palsy occurs in 80% of all diagnosed cases of the condition, making it the most common form of cerebral palsy.

Spasticity refers to increased muscular tone. In cases of spastic CP, damaged regions of the brain send signals to the body that result in involuntary movements, stiffness, and mobility impairments.

ATAXIC

Ataxic cerebral palsy occurs in roughly 10% of all diagnosed cases of cerebral palsy.

Ataxic cerebral palsy results from damage to the cerebellum, which is the area of the brain responsible for balance and posture control, movement coordination, motor learning, and cognitive function. People with ataxic CP generally display hypotonia, tremors, motor impairments, imbalance, and visual and auditory processing problems.

ATHETOID

Athetoid/dyskinetic cerebral palsy accounts for roughly 5% of all diagnosed cases of cerebral palsy.

Athetoid and dyskinetic CP are characterized by mixed muscle tone—patients generally have hypertonia and hypotonia.

Side effects of athetoid and dyskinetic CP include postural impairments, fine motor function problems, and poor physical control.

MIXED

About 5% of people diagnosed with cerebral palsy have two or more forms of the condition.

Each type of cerebral palsy is the result of damage to a particular region of the brain, so when an injury or insult damages multiple parts of the brain, the result is often mixed cerebral palsy.

Call us toll-free
(844) CP-ATTY1
(844) 272-8891
for a free legal consultation

Brought to you by
Michigan Cerebral Palsy Attorneys
www.michigancerebralpalsyattorneys.com

458- pediatric pt k/c of Asthma since age 2 years he is now asymptomatic with rare uses of albuterol inhalers, he came for counseling, he had contact sport participation, what is best question to ask to know his response:

A- "Are keeping up with your friends"

B- "How frequent do use inhaler"

C- "Presence night symptoms (cough)"

Answer: B-C?

Explanation :Have you had difficulty sleeping because of your asthma symptoms (including cough)? Have you had your usual asthma symptoms during the day (cough, wheeze, chest tightness or breathlessness)?

Has your asthma interfered with your usual activities (housework, work/school etc)

Reference: Couldn't find reliable source

462-12 months child already completed course of steroid last week come for vaccination of 12 months what vaccine he can get

A-Varicella

B-MMR

C-Measles

Answer: B

Explanation: Saudi vaccination schedule: 12 Months vaccines are: OPV, MMR, PCV, and MCV4

Reference:

<http://www.moh.gov.sa/HealthAwareness/EducationalContent/HealthInstructions/Documents/%D8%AC%D8%AF%D9%88%D9%84%20%D8%A7%D9%84%D8%AA%D8%B7%D8%B9%D9%8A%D9%85%D8%A7%D8%AA.pdf>

-463 Kids on outside for picnic, he inhaled foreign body, and what do you expect to see on Chest X ray

A-Rt lobe atelectasis

B-Rt side hyperinflation

C-Rt side consolidation

Answer: B

Explanation: the affected lung may show hyperaeration (obstructive emphysema) and shifting of the mediastinum away from the affected lung on expiratory CXRs because of the ball-valve effect of the tracheal foreign body

Reference: <http://emedicine.medscape.com/article/405994-overview#a2>

464- Young boy presented with diarrhea sometimes bloody , Weight loss , arthritis ,ane- mia the diagnosis is :

a. Crohns

b. UC

c. Celic

Answer: B

Explanation: bloody diarrhea+ anemia +Wt loss + extra intestinal manifestation (arthritis) =IBD and most likely it is UC not crhons in this scenario

Reference : Illustrated textbook of pediatrics 4th edition page No. 236

465- child young present with his family (pic of baby his age is months head tilted to one side) he was normal on birth with normal not complicated delivery ,when you try stretch sternocleidomastoid he was crying all reflexes and movement normal?

- A- Cervical rib
- B- Infant Torticollis

Answer: B

Explanation: infant torticollis: The head tilts to one side while the chin tilts to the other.

Reference : <http://www.childrenshospital.org/conditions-and-treatments/conditions/torticollis/symptoms-and-causes>



466- child mild persistent asthma visit ER once every month he is on ventolin what to add to his medication?

Answer: Low dose CS according to Asthma TTT scale

Explanation: mild persistent asthma medications: short acting beta agonist + low dose ICS

Reference :Nelson essential p 277

467- Child with dehydration, depressed anterior fontanel, and decreased skin turgor. What is the percentage of dehydration?

- A- 5
- B- 10
- C- 15
- D- 20

Answer: B

Explanation: Mild 5% : normal fontanelle
moderate 6-10% : Sunken slightly severe >10 % : Sunken significantly

Reference:

http://www.uptodate.com/contents/image?imageKey=PEDS%2F76198&topicKey=PEDS%2F6142&source=see_link

468- Deceleration in fetal assessment?

- A-Good prognostic factor
 - B- Bad prognostic factor
- Answer: B

Explanation: Decelerations are temporary drops in the fetal heart rate. There are three basic types of decelerations: early decelerations, late decelerations, and variable decelerations. Early decelerations are generally normal and not concerning. Late and variable decelerations can

sometimes be a sign the baby isn't doing

Reference: <http://www.healthline.com/health/pregnancy/abnormal-fetal-heart-tracings#accelerations2>

469- baby recently 6 months ago diagnosed w/ DM type 1 compliant to medication and diet start to have episodes of hypoglycemia not in particular time what is the cause ?

- A.honeymoon period
- B.Dawn phenomenon
- C.Sigmoid phenomena

Answer: A

Explanation: the beta cell mass has not been completely destroyed. The remaining functional beta cells seem to recover function with insulin treatment. When this occurs, exogenous insulin requirements decrease. This is a period of stable blood glucose control, often with nearly normal glucose concentrations. This phase of the disease, known as the honeymoon period

Reference: Nelson essential p 576

470- baby can sit roll from prone to supine and back play handle object but can't pick things b/ 2 fingers age

- A-4 months
- B-6 months
- C-8 months

Answer: B

Explanation: baby can sit, roll from prone to supine and handle object at 6 months.

Reference: Nelson essential p 16

471- baby after operation has loss of gag reflex in left side, normal uveal movement what nerve injured ?

- A- Glossopharyngeal
- B- Vagus

Answer: A

Explanation Glossopharyngeal nerve lesions produce difficulty swallowing; impairment of taste over the posterior one-third of the tongue and palate; impaired sensation over the posterior one-third of the tongue, palate, and pharynx; an absent gag reflex; and dysfunction of the parotid gland.

Reference: <https://www.ncbi.nlm.nih.gov/books/NBK386/>

472-What is more present in Cow milk than breast milk

- A-proteins
- B-fat
- C-carbs
- D-calories

Answer: A

Component	Human milk	Cow's milk	Formula
<i>Protein</i>	Right amount Easy to digest	Too much Difficult to digest	Quantity reduced Quality as cow's
<i>Fats</i>	EFA's present Lipase to digest	No EFAs No lipase	Some EFA added No lipase
<i>Carbohydrate</i>	Lactose - plenty Oligosaccharides (anti-infective)	Lactose - less Oligos not suitable	Lactose + sucrose Lacks oligos
<i>Vitamins and minerals</i>	Adequate if mother enough	Low Vit A and C and iron	Vits/mins added usually enough
<i>Anti-infective factors</i>	IgA, lactoferrin, lysozyme, cells	None	None
<i>Growth factors</i>	Present	None	None

Reference: step up 2 CK lecture notes pediatrics p:39

473- non pruritic pink eruption of the right foot no scales no history of infection
Answer : **Granuloma annulare**

Explanation: Granuloma annulare is characterized clinically by dermal papules and annular plaques The precise cause is unknown. Histological examination reveals foci of degenerative collagen associated with palisaded granulomatous inflammation.

Reference: <http://emedicine.medscape.com/article/1123031-overview>

474- Newborn presented with vomiting and enlarged clitoris ,lab was included showing hypokalemia and hypernatremia. what is the most likely diagnosis

A- Congenital adrenal hyperplasia

Answer: A if it is hyperkalemia not hypo.

Explanation: In CAH Genitalia are ambiguous in girls, boy do not initially exhibit any abnormality but begin to lose their finding sexual futures as they age .

Inappropriate facial hair , fertilization and menstrual abnormalities are seen .

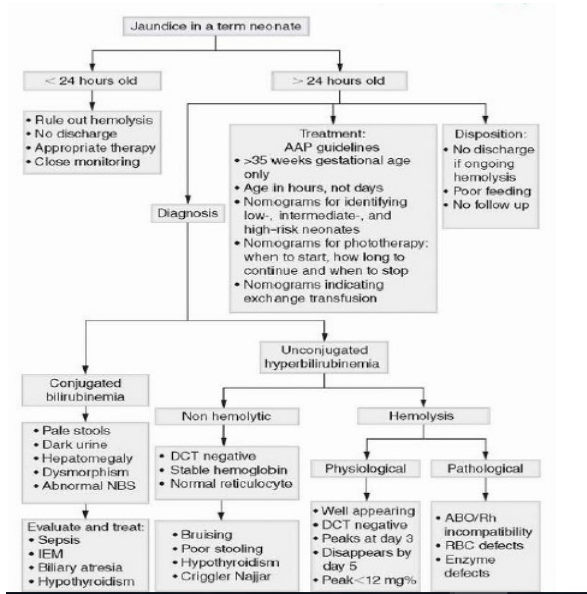
Hyponatremia , hypochloremia , hypoglycemia and hyperkalemia are seen

Reference : **Master the board**

475- Read about viral hemorrhagic disease?

<http://emedicine.medscape.com/article/830594-overview>

476- days neonate ,, with pale stool , high conjugate ,, diagnosed with neonatal jaundice and treated with fluorescence what is the cause



Q- child complaining of bilateral knee pain after that he developed purple rash over lower limb Dx??

Answer: HSP

Explanation: HSP: patients Present with purpuric rash, joint pain, abdominal pain

Reference: step up 2 CK lecture notes 2017 pediatrics p153

477- Dehydration child 8 month tttt

Not clear??

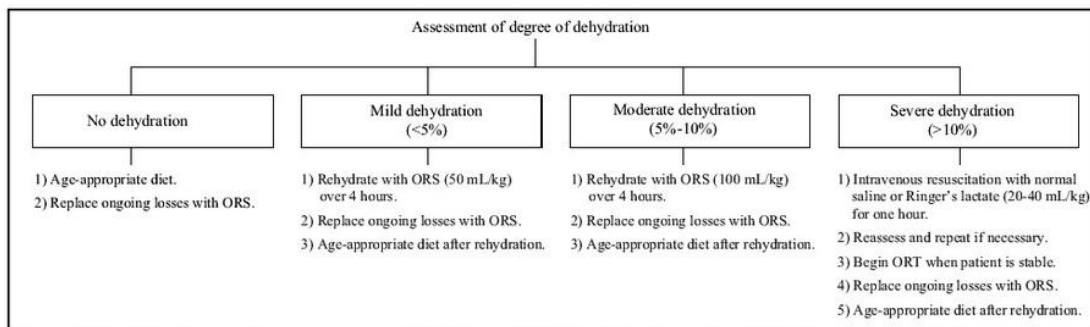


Figure 1) Algorithm for managing acute gastroenteritis in children. ORS Oral rehydration solution; ORT Oral rehydration therapy

478- What is buline ???

Not clear

479- Clear case of DKA in a child what the initial management?

A - electrolytes replacement

B - Fluid replacement

C - Bicharb

D - Insulin infusion

Answer: B

Reference: <http://emedicine.medscape.com/article/801117-treatment#d10>

Diabetic Ketoacidosis (DKA)	
Treatment	<ul style="list-style-type: none"> • ABCs are first priority • Monitor degree of ketoacidosis with AG, not BG or serum ketone level • Rehydration <ul style="list-style-type: none"> – 1 L/h NS in first 2 h – after 1st 2 L, 300-400 mL/h NS. Switch to 0.45% NaCl once euvolemic (continue NS if corrected sodium is falling faster than 3 mosm/kg water/h) – once BG reaches 13.9 mmol/L then switch to D5W to maintain BG in the range of 12-14 mmol/L • Insulin therapy <ul style="list-style-type: none"> – critical to resolve acidosis, not hyperglycemia – do not use with hypokalemia (see below), until serum K⁺ is corrected to >3.3 mmol/L – use only regular insulin (R) – maintain on 0.1 U/kg/h insulin R infusion – check serum glucose hourly • K⁺ replacement <ul style="list-style-type: none"> – with insulin administration, hypokalemia may develop – if serum K⁺ <3.3 mmol/L, hold insulin and give 40 mEq/L K⁺ replacement – when K⁺ 3.5-5.0 mmol/L add KCL 20-40 mEq/L IV fluid to keep K⁺ in the range of 3.5-5 mEq/L • HCO₃⁻ <ul style="list-style-type: none"> – if pH <7.0 or if hypotension, arrhythmia, or coma is present with a pH of <7.1 give HCO₃⁻ in 0.45% NaCl – do not give if pH >7.1 (risk of metabolic alkalosis) – can give in case of life-threatening hyperkalemia • ± mannitol (for cerebral edema)

480- 4 days baby present with bilious vomiting , he had abdominal distention , poorly feed on examination abdominal distention (no other findings in examination in the q)

A - Mid Volvulus

B - Allergic to formula

Answer: A

Reference: Nelson essential p 196

481- child with symptoms of DKA ,, ABG ph 7.24 ,, Pco2 lower than normal,, HCO3 lower than normal, What is it?

A - Compensated metabolic acidosis

B - Compensated metabolic alkalosis

C - Uncompensated metabolic acidosis

D - Uncompensated metabolic alkalosis

Answer: A

Explanation :Partially compensated (to said uncompensated pco2 have to be NORMAL)

Status	pH	P _a CO ₂	HCO ₃ ⁻
Normal	7.35-7.45	4.7-6	22-24
Respiratory acidosis	↓	↑	Normal
Metabolic acidosis	↓	Normal	↓
Compensated respiratory 'acidosis'	Normal	↑	↑
Compensated metabolic 'acidosis'	Normal	↓	↓
Respiratory alkalosis	↑	↓	Normal
Metabolic alkalosis	↑	Normal	↑
Compensated respiratory 'alkalosis'	Normal	↓	↓
Compensated metabolic 'alkalosis'	Normal	↑	↑

482- 15 month baby LP show gram + cocci in chain what Abx?

- A- Vancomycin alone
- B- Ampicillin alone
- C- Ceftriaxone and vancomycin
- D- Ampicillin and gentamicin

Answer: C

Reference: step up 2 CK lecture notes 2017 pediatrics p229

483- 4 month baby , sleep all the time , not cry , has jaundice and umbilical hernia

- A - Hypothyroidism
- B - Congenital adrenal hyperplasia

Answer: A

Explanation: the symptoms suggest hypothyroidism (sleepy+ jaundice + umbilical hernia)

Reference: step up 2 CK lecture notes 2017 pediatrics p162

484- adolescent (12-14) with headache like a band , Other characters, he has stress in school?

- A.tension headache

Answer: A

Explanation: Tension-type headache usually presents as a chronic or episodic nonprogressive headache pattern. Pain is often bilateral, bandlike, diffuse, dull, non-pulsatile, and of mild to moderate intensity.

Reference: The 5-Minute Pediatric Consult SIXTH EDITION p390

485- Newborn is irritable and sweating, chest is clear, vitals was provided \bar{e} HR 300 beat/ min , what is your action:

- A. cardiac dextroversion
- B. vagal massage
- C. digoxin

Answer: B

Explanation: haemodynamically stable, consider the following:

- Vagal manoeuvres: ice bag to face for 15–20s or unilateral carotid massage or Valsalva manoeuvre. Do not compress orbits.
- Adenosine: 50–100micrograms/kg initially, as rapid IV push.
- DC shock: synchronized countershock 1J/kg should be reserved for the haemodynamically unstable. Intubation and appropriate analgesia and sedation are required.
- Other drugs: amiodarone, procainamide, fl ecaïnide.

Reference : Oxford Handbook of Pediatrics

486- 90% of children in a village have cretinism iodine supplement???

Reference: read it from Kaplan lecture notes pediatrics 2017 p162

487- read ttt of hirschsprung disease and see picture for x-ray 2 Q about ttt

X-ray of Abdominal radiograph demonstrating small bowel obstruction and megacolon in infant with Hirschsprung's Disease.

Reference: To read about management: <http://emedicine.medscape.com/article/929733-treatment>

488- Neonate with duodenal obstruction ? What the sign? Bubble!!!

Explanation: Characteristic finding of duodenal obstruction is the double-bubble image of an air-filled stomach proximal to an air-filled first portion of the duodenum.

Reference: <http://emedicine.medscape.com/article/932917-workup#c6>

489- Perth's disease. (4-8 y)

Explanation Legg-Calve-Perthes disease (LCPD) is idiopathic avascular necrosis (osteonecrosis) of the capital epiphysis of the femoral head. The classic presentation is a child with an atraumatic, painless limp

Reference: Nelson essential p674-675

<http://orthoinfo.aaos.org/topic.cfm?topic=a00070>

490- child ingested iron what is treatment :

- A. Gastric lavage acute mangment
- B. active charcoal not bind to iron salt deferoxamine.
- C. late mangment

Answer: B

Explanation: Deferoxamine is the iron-chelating agent of choice. Deferoxamine binds absorbed iron.

Reference: <http://emedicine.medscape.com/article/1011689-treatment#d7>
Nelson essential p143

491 - boy goes Camping when he's back he came with constitutional symptoms lymph nodes enlargement and took penicillin developed rash what does he have?

A- Infectious mononucleosis

Answer: A

Explanation: infectious mononucleosis= Generalized lymphadenopathy+ fever, fatigue, most will have rash if treated with ampicillin or amoxicillin

Reference: step up 2 CK lecture notes 2017 pediatrics p243

492- A child present with symptoms of Leukemia with CALLA +ve?

Dx?

A- Acute Lymphoblastic Leukemia(ALL)

Answer: A

Explanation: CALLA stands for Common Acute Lymphoblastic Leukemia Antigen and it's associated with ALL

Reference: step up 2 CK lecture notes 2017 pediatrics p201

493-Child with positive breath urea test what the most common organism?

A- H. Pylori

Answer: A

Explanation: urea breath test (UBT) is a reliable noninvasive test to determine whether H pylori has been eradicated.

Reference: <http://emedicine.medscape.com/article/929452-workup?pa=kNdMuAtwf5Z5RsKB0oC9T9lb19TXLt9C4CyDrzB2qKihZNTvYX2VecFacEW1OdMqX8MwC0EECwzp432Skuf9qw%3D%3D>

494- Milestone at 6 months

A- Rolls over supine to prone

B- Rolls prone to supine

Answer: Rolling from prone to supine is happening at 4 months so if only we have these answers then B is the correct answer

Explanation: 4 months: rolls from prone to supine position

6 months: sits with support

Reference: step up 2 CK lecture notes 2017 pediatrics p43

495- Child can roll over, sit tripod, attempt to take object Which month?

A. 6

B. 9

C. 2

Answer: A

Explanation: child can sit with support (tripod) at 6 months)

Reference: step up 2 CK lecture notes 2017 pediatrics p43

496- Infantile colic

A) decreased peristalsis

B) Increased gases

Answer: both are wrong?

Explanation: read more here https://en.wikipedia.org/wiki/Baby_colic

497- Boy fight with 2 boys what system activated?

A. Sympathetic

B. Parasympathetic

C

Answer: A

Physiology 101

498- pediatric patient complain of cough he control it by leukotrienes when he visited the primary physician 6 month ago. now he develops cough for 4 days after exercise they give him albuterol the symptoms were relieved what you gonna give him:

A- leukotriene + short act b-2 agonist

B- oral steroid + short act b-2 agonist

C- long act b-2 agonist + short act b-2 agonist

Answer: C

Explanation: Long-Acting β_2 -Agonists is approved for use in children older than 5 years Of age for maintenance asthma therapy and for prevention of exercise-induced asthma.

Reference: Nelson essential p276

499- boy has bowing legs, labs showing normal ca normal phosphor and alkaline phosphatase, low Mg, what is the initial investigation?

A-standing X ray pelvis B-

B-B-standing X ray lower limbs

Answer: B

Explanation However, if your doctor notes that one leg is more severely bowed than the other, he may recommend an x-ray of the lower legs. An x-ray of your child's legs in the standing position can show Blount's disease or rickets

Reference: <http://orthoinfo.aaos.org/topic.cfm?topic=a00230>

500- Least cardiac anomaly associated with infective endocarditis?

A. ASD

Answer: A

Explanation: Patients with isolated ASD are not considered at risk of developing infective endocarditis.

Reference: <https://patient.info/doctor/atrial-septal-defect-pro#ref-11>

501- child drink cow milk his hemoglobin low and MCV low which type of anemia he will has:

A-Iron deficiency anemia

Answer: A

Explanation: Iron deficiency anemia can be caused by consumption of large amounts of cow milk and foods not enriched with iron

Reference: step up 2 CK lecture notes 2017 pediatrics p188

502- milestone > baby healthy run to the doctor play a role model as his father can't complete a sentence can't eat with spoon

Answer: 12 months

Reference: step up 2 CK lecture notes 2017 pediatrics p43

503- Child sit and support his head , laughing and cooing :

A- 4

B- 6

C- 8

D- 16

Answer: B

Reference: step up 2 CK lecture notes 2017 pediatrics p43

504- case of fanconi syndrome

Reference: <http://emedicine.medscape.com/article/981774-overview>

505- Case (young or kid) bilateral knee pain then rash starts on legs, thighs and buttocks = typical

Answer: HSP

Explanation: Henoch-Schönlein purpura (HSP) is characterized by a generalized vasculitis involving the small vessels of the skin and other organs and the central nervous system

. Reference: <http://emedicine.medscape.com/article/984105-overview>

506- Child with sickle cell, what is the lifelong treatment to prevent infections?

A- Penicillin and immunization.

Answer: A

Reference: step up 2 CK lecture notes 2017 pediatrics p194

507- child with pain and swelling in his hands and foot (sickle cell disease),.... forgot the question....

??

508- child with vesicles in his oral mucosa, what is the diagnosis?

A-herpes simplex type 1.

Answer: A

Explanation:HSV1 causes non-genital infection (mouth-lips-eyes)

Reference: step up 2 CK lecture notes 2017 pediatrics p252

509- child who's lethargic and losing his concentration, Hgb is 10.5, what to give?

A- IM iron.

B- oral ferroussulphate

C- fortified cereal.

Answer: B

Explanation the patient is symptomatic, and the initial treatment for IDA is oral Ferrous Sulfate

Reference: <http://www.fpnotebook.com/hemeonc/peds/pdtrcanm.htm>

510- What is the injection that is routinely given to newborn to inhibit haemorrhage:

a) Vitamin K

b) Vitamin C

c) Vitamin D

d) Vitamin E

Answer: A

Explanation Newborn needs intramuscular administration of vitamin K or develops bleeding diathesis

Reference: step up 2 CK lecture notes 2017 pediatrics p198

511- Child with URTI is complaining of bleeding from nose, gum and bruising the treatment is:

a) Prednisolone

b) IVIG

Answer: ITB can be treated with Both Prednisolone and IVIG, it depends on the platelets numbers and the clinical judgment.

Reference: Nelson essential p528

512- Cellulitis occurring about the face in young children (6-24 months) and associated with fever and purple skin discoloration is MOST often caused by

- c) group A beta hemolytic streptococci
- d) Haemophilus influenzae type B c) streptococcus pneumoniae
- e) staphylococcus aureus
- f) pseudomonas

Answer : A

Explanation Erysipelas Usually caused by beta-hemolytic group A Streptococcus bacteria

Reference: <https://en.wikipedia.org/wiki/Erysipelas>

513- 4 years old brought by his parents, height < 5th percentile, they ask if he will remain short. what you will do initially :

- a) Parental height

Answer: A

Reference: Nelson essential p588

514- 8 years old girl presented with fever, numerous bruises over the entire body and pain in both legs. Physical examination reveals pallor and ecchymosis and petechiae on the face, trunk and extremities. Findings on complete blood count includes a haemoglobin of 6.3 g/dl, white cell count of 2800/mm³ and platelet count of 29,000/mm³. Which of the following would be the MOST appropriate treatment?

No choices

Explanation although rare, severe bleeding can occur with ITP. Emergency care usually includes transfusions of platelet concentrates, intravenous corticosteroid (methylprednisolone) and intravenous Immunoglobulin

Reference: <http://www.mayoclinic.org/diseases-conditions/idiopathic-thrombocytopenic-purpura/diagnosis-treatment/treatment/txc-20201329>

515- Child with mild trauma develop hemarthrosis, in past history of similar episode DX ?

- a) Platelets dysfunction
- b) Clotting factor deficiency

Answer: B

Explanation: most likely hemophilia- von Willebrand disease (vWD)

Reference: step up 2 CK lecture notes 2017 pediatrics p196-197-198

516- 3 years old his parents has TB as a pediatrician you did PPD test after 72 hr you find a 10mm induration in the child this suggest

- a) Inconclusive result
- b) Weak positive result
- c) Strong positive result

answer: C

Explanation: this child in high risk group so more than 5mm is positive result

Reference: <http://www.webmd.com/a-to-z-guides/tuberculin-skin-tests?page=3>

517- Child with aspirin intake overdose ...what kind of acid base balance:

- a) Metabolic alkalosis
- b) Metabolic acidosis
- c) Respiratory alkalosis

d) Respiratory acidosis

Answer: B

Explanation: Salicylate Toxicity (Aspirin) is well known cause for metabolic acidosis.

Reference: <http://emedicine.medscape.com/article/1009987-overview>

518- Child with high-grade fever for 5 days and sore throat, on examination there was tonsillitis and white patches on the gingiva. No LN enlargement, ASO is negative. The most likely causative organism is:

a) Coxsackie virus.

b) Herpes simplex virus.

c) EBV.

Answer: B

Explanation: Herpetic gingivostomatitis occurs approximately one week after contact with an infected child or adult (the contact case often is asymptomatic). It generally begins with a prodrome that lasts about four days and may include fever ($>38^{\circ}\text{C}$ [100.4°F]), anorexia, irritability, malaise, sleeplessness, and headache.

Reference: <http://cursoenarm.net/UPTODATE/contents/mobipreview.htm?14/0/14336>

519- child with generalized swelling, ... long scenario of nephritic syndrome ... you are suspecting minimal change nephropathy, what you will find in the biopsy? (options are long "2 lines long for each")

Answer: -ve EM , focal fusion , loss of foot process

Reference: <http://unckidneycenter.org/kidneyhealthlibrary/glomerular-disease/minimal-change-disease>

520- child with cola colored urine, which test should you perform first?

A- urinary microscopy.

B- renal function test.

C- renal biopsy.

Answer: A and could be B also

Explanation: urinalysis and renal function test is initial test then Renal biopsy (with light, immunofluorescence, and electron microscopy) remains the most sensitive and specific pediatrics test for definitive diagnosis of GN for patients with nephrotic and nephritic syndromes and rapidly progressive GN

Reference: <http://emedicine.medscape.com/article/240337-workup>

Nelson essential p555

521- child with delay in walking, on examination there is bowing in his legs, labs show- ing normal Ca^{+2} normal phosphor and elevated alkaline phosphatase, what is the diagnosis?

A- Rickets.

Answer : A

Explanation The skeletal findings are similar for calcipenic and phosphopenic rickets, and may include delayed closure of the fontanelles, parietal and frontal bossing, enlargement of the costochondral junction ("rachitic rosary"), widening of the wrist, and lateral bowing of the femur and tibia (bow legs).

Reference: <http://emedicine.medscape.com/article/985510-overview>

522- CPR in child according to American heart association in presence of 2 rescuer:

a) 15 compression and 2 ventilation

b) 30 compression and 2 ventilation

answer: A

Explanation: Delivers 15 compressions in 9 seconds or less with 2 rescuers

Reference: <https://www2.tulane.edu/som/ahatraining/instructors/upload/PALS-Child-CPR-AED-Skill-Sheet.pdf>

523- child with oral and tonsillar ulcers and vesicles, fever. Dx:

A. Herpangina

answer: A

Explanation: Herpangina is an acute febrile illness associated with small vesicular or ulcerative lesions on the posterior oropharyngeal structures (enanthem).

Reference: <http://emedicine.medscape.com/article/218502-overview>

524- Neonate was on breast feeding after 2 weeks has irritability and decrease feeding diagnosed with meningitis .. What is the organism ?

A- Neisseria

B- listeria

C- streptococcal pneumonia

Answer: B

Explanation: from birth till 2 months: the most common causes of meningitis is: *Listeria monocytogenes*, *GBS* and *E.coli*

Reference: step up 2 CK lecture notes 2017 pediatrics p229

525- Child presented to ER with hx of testicular pain , what is next step?

A- u/s

B- surgery counseling

Answer: ??

it depends on the clinical suspicion and the severity of the pain, we may do U\S and we may take the patient to OR immediately

Explanation:

Reference: your manual to surgery 351

526- Neonate take immunoglobulin from his mother this is

A- Active Artificial immunity

B- Passive artificial

immunity C- Active neutral immunity

D- Passive neutral immunity

ANSWER : D

Explanation: naturally acquired passive immunity occurs during pregnancy, in which certain antibodies are passed from the maternal into the fetal bloodstream

. Reference: https://en.wikipedia.org/wiki/Passive_immunity

527- What measurement you should take to relieve an infant abdominal colic?

A- antispasmodic drugs

B- increase bottle

feeding C- warm baths

D- prevent child abuse

ANSWER: C

Explanation: Soothing techniques We suggest that parents experiment with one or more of the

following techniques for soothing the infant and/or decreasing sensory stimulation like warm baths

Reference: <https://www.mamanatural.com/baby-colic/>

528- 10 days neonate present with lethargy , irritability , fever , signs of meningitis which organism is causative :

A.listeria

monocytogenes B-strept
pneumonia

C-staph aureus

D,N.meningitidi

s ANSWER : A

Explanation: from birth till 2 months: the most common causes of meningitis is: *Listeria monocytogenes*, *GBS* and *E.coli*

Reference: step up 2 CK lecture notes 2017 pediatrics p229

529- What is most common heart lesion in Down syndrome ?

a- Arterioventricular septal

ANSWER : A

Explanation: The most common defects are Atrioventricular Septal Defect (formally called Endocardial Cushion Defect),

Reference : step up 2 CK lecture notes 2017 pediatrics p19

530- Neonate with sign of sepsis which empirical antibiotic :

A-ampicillin

B-

gentamicin

C-

cefotaxime

ANSWER A

Explanation: neonatal sepsis: If no evidence of meningitis: ampicillin and aminoglycoside until 48–72-hour cultures are negative – If meningitis or diagnosis is possible: ampicillin and third-generation cephalosporin (not ceftriaxone)

Reference : step up 2 CK lecture notes 2017 pediatrics p14

531- child in the school K/c of DM loss of consciousness, last insulin dose not known , what should you do:

A-give IV Dextrose

B-SC insulin

C-urgent transfer to hospital

ANSWER : A

Explanation: Infants and children with altered consciousness and/or who are unable to safely swallow rapidly-absorbed carbohydrates should be treated with intravenous (IV) dextrose. If IV access is not readily available, then subcutaneous or intramuscular glucagon should be given.

Reference:

http://cursoenarm.net/UPTODATE/contents/mobipreview.htm?25/45/26320?source=see_link

532- Most common cause of death in sickle cell anemia :

A- Aplastic crises

- B- Sequestration crises
 - C- Acute chest syndrome
 - D- Parvovirus b19
- ANSWER : C

Explanation: in sickle cell anemia acute chest syndrome (along with sepsis, are most common Causes of mortality)

Reference : step up 2 CK lecture notes 2017 pediatrics p194

533- Child presented with burn in the upper right extremity with blister what is the degree of the burn

- A- 2nd degree more than 15
- B- 2nd degree less than 15 %
- C- 3rd degree more than 15 %
- D- 3rd degree less than 15

ANSWER B

Explanation:

Upper right extremity = 9%,
blister= second degree burn

Reference: <http://www.emtresource.com/emergencies/burns/rule-of-nines/>

534- Best antibiotic for breast feeding is ?

- A- Chloramphenicol
- B- Azithromycin
- C- Cimetidine
- D- Ciprofloxacin

ANSWER : B

Explanation: Azithromycin it would not be expected to cause adverse effects in breastfed infants

Reference: <https://www.drugs.com/breastfeeding/azithromycin.html>

535- case : mother come to doctor because worry About her child may be had dehydration what is most tool exam of child ?

- A- history
- B- clinical
- C- C.T
- D- ultrasound

answer: A or B?

Explanation: clinicians have to rely on the patient's history and physical examination findings to assess the severity of dehydration.

Reference: <http://emedicine.medscape.com/article/801012-clinical#b3>

536-pt (I forget age) his weight 95th percentile , height <5th percentile . What is diagnosis?

Answer: Not clear Q, going with short stature? Prader-wili?

537- Child with blister in trunk what dx ?

- A- herpes simplex i
- think B- varicella

C-
impetigo
Answer: C

Explanation: impetigo may feature larger blisters that occur on the trunk of infants and young children.

Reference: <http://www.mayoclinic.org/diseases-conditions/impetigo/symptoms-causes/dxc-20202566>

538- Child with his purge disease what to do ?

Answer: didn't find reliable source for this. Most likely treated with cognitive behavioral therapy.

Explanation :Purging disorder is an eating disorder characterized by recurrent purging (self-induced vomiting, misuse of laxatives, diuretics, or enemas) to control weight or shape in the absence of binge eating episodes that occurs in people with normal or near-normal weight.

539- 10 years old child with diarrhea what is the correct about oral rehydration solution ?

- A. start with 50 in first 4 hour then maintenance 100 per day
- B. start with 50 in first 4 hours then maintenance 50 per day
- C. start with 100 in first 4 hours then maintenance 100 per day

answer : ? no weight or degree of dehydrating ??

540- modified duke's criteria :

A-1 major 2 minor+ PLUS

B- 1major 3 minor

Answer: 2 Major OR 1 Major and 3 Minor OR 5 Minors

Reference: step up 2 CK lecture notes 2017 pediatrics p127

541- thump sign what is the treatment?

Answer: epiglottitis treated by 1- securing airway 2- antibiotic

Explanation: Establish patent airway (intubate)– Antibiotics to cover staphylococci, HiB, and resistant strep (antistaphylococcal plus third-generation cephalosporin)

Reference: step up 2 CK lecture notes 2017 pediatrics p66

542- Child high indirect bilirubin?

Answer : It could be crigler najjar syndrome or gilbert syndrome

Explanation causes of high indirect bilirubin: Crigler-Najjar syndrome types I and II, Gilbert syndrome (decreased uptake and/or conjugation), Neonatal physiologic jaundice, Breast milk, jaundice, Maternal serum jaundice, Hypothyroidism/hyperthyroidism, Ethinyl estradiol

Reference: step up 2 CK lecture notes 2017 pediatrics p12

543- Painless genital ulcer + lymph nodes enlargement

A- primary syphilis

B- secondary syphilis

Answer : A

Explanation: Single, painless, well-demarcated ulcer (chancre) with a clean base and indurated border with Mild or minimally tender inguinal lymphadenopathy

Reference: <http://www.aafp.org/afp/2012/0201/p254.html>

544- X- ray picture, with history of 8 years male with Lt hip, appear externally rotated and there are decrease in range of motion ,decrease in the abduction of the hip.

What is your diagnosis :

a. Developmental dysplasia of the hip

b. Legg-calve perthes disease .

c. Slipped capital femoral epiphysis

Answer:??

545- HCV infant, mother asking about breastfeeding?

A- Treat the baby then breastfeed.

B- Continue breast feeding.

C- Stop breastfeeding.

Answer: B

Explanation: There is no documented evidence that breastfeeding spreads HCV. Therefore, having HCV-infection is not a contraindication to breastfeed.

Reference: <https://www.cdc.gov/breastfeeding/disease/hepatitis.htm>

546- Croup case what will you hear by pulmonary auscultation?

Answer: Auscultation reveals prolonged inspiration and stridor. Crackles also may be present, indicating lower airway involvement. Breath sounds may be diminished with atelectasis.

Reference: <http://www.msmanuals.com/professional/pediatrics/respiratory-disorders-in-young-children/croup>

547- month old with wide anterior fontanel, large protruded tongue, diagnosis?

A- Congenital hypothyroidism

Answer : A

Explanation: Clinical presentation of congenital hypothyroidism known as “cretinism.” Prolonged jaundice, Large tongue, Umbilical hernia, Edema ,Mental retardation; developmental delay ,Anterior and posterior fontanels wide, Mouth open, Hypotonia

Reference: step up 2 CK lecture notes 2017 pediatrics p162

548- Easy Q about cystic fibrosis "sweat test" ?

Answer: Sweat test is a diagnostic test of CF (confirm).

Reference: step up 2 CK lecture notes 2017 pediatrics p75

549- 16 years old boy known case of sickle cell anemia presented to with painful right hip pain for several weeks (this was the scenario and it was for several weeks). what is the most likely diagnosis:

A- Avascular necrosis

B- still's disease

C- Tumor.

Answer: A

Explanation: ischemic damages in Sickle cell disease include: Skin ulcers, Retinopathy, Avascular necrosis of hip and shoulder, Infarction of bone and marrow (increased risk of Salmonella osteomyelitis), Splenic autoinfarction, Pulmonary—acute chest syndrome (along with sepsis, are most common, causes of mortality), Stroke (peak at 6–9 years of age), Priapism, especially in adolescence

Reference: [step up 2 CK lecture notes 2017 pediatrics p194](#)

550- 7 days baby weight 3.02 was 3.5 Mom is concern about her baby weight, although she feed him:

A-reassure the mom it's normal

B-routine test and reassure

Answer: A

Explanation: It is expected that newborns will lose some weight in the first 5-7 days of life. A 5% weight loss is considered normal for a formula-fed newborn. A 7-10% loss is considered normal for breast- fed babies. Most babies should regain this lost weight by days 10-14 of life.

Reference: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3091615/>

551- 13 Y/O child limping & pain, radiological finding destructed femur head, high WBC, diagnosis:

A) Septic arthritis of the hip

B) legg calve perthes

Answer: A

Explanation: pain + limping + high WBC + destructed femur head as complication suggest SA

Reference: <http://emedicine.medscape.com/article/395381-overview#a2>

552- Child with sudden abdominal pain bloody diarrhea, management?

A) Radio decompression

B) Immediate surgery

Answer: A

Explanation: Intussusception treated first with Radiographic reduction under fluoroscopy—most will reduce if done within 48 hours of presentation (goes down to half after that time) and surgical if manual operative reduction is not possible or bowel is not viable, Then resection and end-to-end anastomosis

Reference: [step up 2 CK lecture notes 2017 pediatrics p145](#)

553- Fever, flu, then developed rashes, which virus ?

Answer: Most likely measles

Explanation: Onset of measles ranges from 7-14 days (average, 10-12 days) after exposure to the virus. The first sign of measles is usually a high fever (often $>104^{\circ}\text{F}$ [40°C]) that typically lasts 4-7 days. The prodromal phase is also marked by malaise; anorexia; and the classic triad of conjunctivitis, cough, and coryza then they will develop rash.

Reference: <http://emedicine.medscape.com/article/966220-overview>

554- Child with yellow and cavities in his teeth, what to give?

- A) Antiseptic mouthwash
- B) Fluoride

Answer: B

-All children should have a dental examination by a dentist at least annually and a dental cleaning by a dentist or hygienist every 6 months. Dental health care visits should include instruction about preventive care practiced at home (brushing and flossing). Other prophylactic methods shown to be effective at preventing caries are **concentrated fluoride topical treatments** (dental varnish) and acrylic sealants on the molars.

Nelson Essentials of Pediatrics , 7E 2015 P23: Dental Care.

555- baby with sky blue sclera, multiple healing fractures, there is xray is question What is diagnosis?

Answer: osteogenesis imperfecta

-OI is subdivided into 4 types based on clinical and radiographic criteria. Classical OI was described with the triad of fragile bones, blue sclerae, and early deafness.

Nelson Textbook of Pediatrics - 20th Edition chapter 701.

See also: <http://www.orthobullets.com/pediatrics/4102/osteogenesis-imperfecta>

556- (Case of Intussusception) Child came with colicky abdominal pain, vomiting, bloody stool. US showed doughnut sign. What is the most important step in management of this case?

- A-urgent surgeryre ferral
- B- NGT decompression
- C- IV Fluid Resuscitation
- D- Barium Enema

Answer: C

-Therapy must begin with placement of an IV catheter and a nasogastric tube. Before radiologic intervention is attempted, the child **must have adequate fluid resuscitation** to correct the often severe dehydration caused by vomiting and third space losses.

Nelson Essentials of Pediatrics , 7E 2015 P443: Treatment.

-Correct any volume or electrolyte abnormalities, check CBC for leukocytosis, and consider an NG tube for decompression.

-In the setting of high clinical suspicion, an air insufflation enema should be performed without delay, as it is diagnostic and curative in the vast majority of patients.

-Surgical resection is indicated if the child has peritoneal signs, enema reduction is unsuccessful, or a pathologic lead point is identified.

First Aid for the USMLE Step 2 CK 9th edition P386.

557- Which of the following is associated with Burkitt's Lymphoma?

- A- EBV
- B- HIV
- C- coxsackie
- D- HBV

Answer: A- EBV

-Lymphomas, or malignancies of lymphoid tissues, are the third most common malignancy in childhood, behind leukemias and central nervous system (CNS) tumors. There are two

major types of lymphoma: Hodgkin disease and non-Hodgkin lymphoma (NHL). The etiologies are unknown, but evidence in many cases suggests that the **Epstein-Barr virus (EBV)** plays a causal role in both conditions.

Nelson Essentials of Pediatrics , 7E 2015 P544: Etiology.

558- Child c/o petechial rash all over the body . O/E palpable spleen . Hx of URTI, dx?!

-ITP

-HSP

Answer: A

-HSP is characterized by rash, arthritis, and, less frequently, gastrointestinal or renal vasculitis. The hallmark of HSP is palpable purpura, the rash is **classically found in dependent areas**: below the waist, on the buttocks, and lower extremities.

Nelson Essentials of Pediatrics, 7E 2015 P302: clinical manifestations.

Henoch–Schönlein purpura is the combination of some of the following features: • Characteristic skin rash • Arthralgia • Periarticular oedema • Abdominal pain • Glomerulonephritis. It usually occurs between the ages of 3 and 10 years, is twice as common in boys, peaks during the winter months and is often preceded by an **upper respiratory tract infection**.

Illustrated Textbook of Paediatrics 4th edition. P338.

-ITP: Clinical Manifestations: young children typically exhibit ITP 1 to 4 weeks **after viral illness**, with abrupt onset of petechiae, purpura, and epistaxis. The thrombocytopenia usually is severe. Significant adenopathy or hepatosplenomegaly is **unusual**.

Nelson Essentials of Pediatrics, 7E 2015 P527: clinical manifestations

Most children present between the ages of 2 and 10 years, with onset often 1–2 weeks **after a viral infection**. In the majority of children, there is a short history of days or weeks. Affected children develop petechiae, purpura and/or superficial bruising. It can cause epistaxis and other mucosal bleeding but profuse bleeding is uncommon.

Illustrated Textbook of Paediatrics 4th edition. P400 clinical features.

Summary

The child with petechiae or purpura

Non-thrombocytopenic

Henoch–Schönlein purpura

- Lesions confined to buttocks, extensor surfaces of legs and arms
- Swollen painful knees and ankles
- Abdominal pain
- Haematuria

Sepsis

- Meningococcal or viral
- Clinical features – fever, septicaemia, meningitis
- If suspected, give parenteral penicillin immediately

Trauma

- Accidental or non-accidental

Other causes (rare)

Thrombocytopenia

Immune thrombocytopenia (ITP)

- 2–10 years
- Widespread petechiae and purpura and superficial bruising
- Distinguish from acute leukaemia and aplastic anaemia – clinical features, full blood count and blood film
- Bone marrow examination not required if only the platelet count is low, characteristic clinical features and no steroid treatment
- Is acute, benign and self-limiting in about 80% of children
- Treatment – controversial, usually not required unless there is bleeding

Leukaemia

- Clinical features – malaise, infection, pallor, hepatosplenomegaly, lymphadenopathy
- Blood count – also low Hb, blasts on film, confirmed on bone marrow

Disseminated intravascular coagulation (DIC)

- Critically ill – severe sepsis or shock or extensive tissue damage

Other causes (uncommon)

Positive glass test – rash does not blanch when pressed

559- Neonate came e decrease feeding & activity + fever , o/e baby is hypotensive Dx?!

A- Septic shock

Septic shock: Septic shock is defined as sepsis-induced **hypotension** persisting despite **adequate** fluid resuscitation. [Uptodate](#).

560- Preterm baby c/o SOB X-ray showed gross ground appearance + air bronchogram This is due to ?!

A- Pneumonia

B- Low surfactant " (ARDS)

Answer: B

Almost exclusively occurs in premature infants. (*impaired **surfactant** synthesis and secretion*).

Chest X-ray findings in respiratory distress syndrome "RDS" are:

–**Ground glass appearance**

- Atelectasis

- **Air Bronchograms**

[Kaplan lecture notes pediatric 2014 P7](#)

561- Child e sx . O/E there's strong pulse in the U.L and absence in LL . Dx?!

A- Coarctation of aorta

answer: A

Features of CoA: **blood pressure discrepancy** between upper and lower extremities and **diminished** or delayed femoral pulses relative to brachial.

[Toronto notes 2017 P18 Pediatrics](#).

562- Daily fluid requirement for child 10 kg

A- 1000 ml /day

answer: A

Table 37. Maintenance Fluid Requirements

Body Weight	100:50:20 Rule (24 h maintenance fluids)	4:2:1 Rule (hourly rate of maintenance fluids)
1-10 kg	100 cc/kg/d	4 cc/kg/h
11-20 kg	1000 cc + 50 cc/kg/d for every kg > 10 kg	40 cc + 2 cc/kg/h for every kg > 10 kg
>20 kg	1500 cc + 20 cc/kg/d for every kg > 20 kg	60 cc + 1 cc/kg/h for every kg > 20 kg

[Toronto notes 2017 P76 Pediatrics](#).

563- Child girl aged 9 months she showed pubic hair at 6 months. and adult odor at 8 months. what is the investigation to do?

A- Testosterone

B- 17 hydroxyprogesterone

C- (another derivative of testosterone, has sulphate in it) "*I think it's DHEA-S*"

Answer: C –This is most likely a case of **Isolated Premature adrenarche**.

The serum concentration of dehydroepiandrosterone sulfate (**DHEA-S**) is the best marker for the presence of adrenarche.

[Premature adrenarche- uptodate](#)

564- Case scenario , they mentioned mother height & father ht. And they asked about expected Ht of the child?!

For a girl, midparental height is calculated as follows:

$$\frac{\text{Paternal height (inches)} + \text{Maternal height (inches)}}{2} - 2.5$$

For a boy, midparental height is calculated as follows:

$$\frac{\text{Paternal height (inches)} + \text{Maternal height (inches)}}{2} + 2.5$$

midparental height is calculated in inches as follows:

- ◆ Boys: [(maternal height + 5) + paternal height]/2
- ◆ Girls: [maternal height + (paternal height - 5)]/2

2.5 Inches= 6.5 cm

5 Inches= 13 cm

Both formulas are basically the same.
Use whatever you like.

Nelson Essentials of Pediatrics, 7E 2015 P12: chapter 6.

Nelson Textbook of Pediatrics - 20th Edition chapter 15

565- Baby with oral thrush and ask about Dx (9)?

A-oral candidiasis

Answer: A

Oral candidiasis (thrush): treat baby with antifungal such as nystatin.

Toronto notes 2017 P7 Pediatrics.

554- Baby can sit without support , he can grasp says mama , wave bye bye to the dr.

Which developmental milestone he has defect in?

Answer: Vague.

It's not clear what they meant by "grasp". If the baby is able to grasp large object (Palmar grasp), then he/she's most probably 4-6 months old and if the baby is able to grasp small object between his/her thumb & index fingers (Pincer grasp), then he/she is 10 months old.

Gross motor: Sits without support: 6-8 months.

Fine motor: Palmar grasp: 4-6 months. Mature pincer grip at 10 months.

Language: Says mama and dada: 7-10 months (indiscriminately at 7 months and appropriately at 10 months).

Social: waves bye bye: 10-12 months.

Illustrated Textbook of Paediatrics 4th edition. P35

Please note that there are slight differences in the developmental milestones between different sources.

566- picture of child with macular rash all over the body with Hx of fever and carditis, what's the Dx:

Answer: Kawasaki disease.

Present of persistent fever is a core criterion in the diagnosis of typical Kawasaki disease.

Myocarditis and **pericarditis** are common findings in Kawasaki patients.

Kaplan lecture notes pediatric 2014 P176



Toronto notes 2017

Diagnostic Criteria for Kawasaki Disease

Warm **CREAM**

Fever ≥ 5 d with ≥ 4 of:

Conjunctivitis

Rash

Edema/Erythema (hands and feet)

Adenopathy

Mucosal involvement (fissured lips, strawberry tongue)

567- 5 years old girl with uncomplicated cystitis, how to treat:

A- oral ampicillin

B- iv cephalosporin

C- IM ceftriaxone

iv ...

Answer: Oral ampicillin, according to Pediatrics resident

-Treatment

Lower urinary tract infection (cystitis) with amoxicillin, trimethoprim-sulfamethoxazole, or nitrofurantoin (if no fever)

Kaplan lecture notes pediatric 2014 P145

-We recommend that empiric therapy for uncomplicated acute bacterial cystitis in children between 2 and 13 years of age include coverage for E. coli. We suggest a second- or third-generation cephalosporin as the first-line agent for these patients.

Uptodate: Acute cystitis in children older than two years and adolescents.

568- a mother noticed her daughter pulling her hair while studying or with stress and anxiety (I think the diagnosis is trichotillomania) , what is the Rx:

A- lithium?! X

Answer : clomipramine "TCA" or fluoxetine "SSRI" may

be helpful, particularly when combined with behavioral interventions. N-Acetylcysteine may also be helpful.

Nelson Textbook of Pediatrics - 20th Edition chapter 662.

569- child with long history of enuresis, what is the most important investigation to be done:

A- VCUG

B- Urinalysis

C-

Answer: B

For most children with enuresis, the only laboratory test recommended is a clean catch urinalysis to look for chronic urinary tract infection.

Nelson Essentials of Pediatrics, 7E 2015 P43: clinical manifestations

570- infant with maculopapular rash over his face with purple discoloration, what is the causative organism:

A- GBS

B- strep.pneumonia

C- staph.aureus

D- RSV

Answer: A

DDx of bacterial maculopapular rash and fever:

-group A streptococcus in Erythema marginatum (in rheumatic fever), Scarlet fever and Erysipelas.

smle ,2016

- Secondary syphilis
- Pseudomonas aeruginosa
- Salmonella typhi (typhoid fever, "rose spots")

Nelson Essentials of Pediatrics, 7E 2015 P329 Table 97-1

Erysipelas in newborns is often caused by group B streptococci.

Medscape, Erysipelas etiology. <http://emedicine.medscape.com/article/1052445-overview#a5>

571- child, obese, had left hip pain and limbing with x-ray showing slept femoral hip, no Hx of trauma, Dx:

- A- slipped capital femoral head
- B- fracture
- C- osteomyelitis

Answer:A

The typical patient is a chubby (or lanky) boy around age 13 who complains of groin or knee pain, and who ambulates with a limp.

Kaplan lecture notes surgery 2016 P19

572- young sickler patient had Hx of tiredness and fatigue within 10 hrs, drop in Hb and palpable liver and spleen 6 cm below the costal margin, had 3 previous similar episodes . What you will do:

- A- splenectomy
- B- start hydroxyurea
- C- reticulocyte count
- D- regular blood transfusions

Answer: D, if they are asking about the acute management, A if they are asking about prophylaxis.

-Sequestration crisis: Massive splenomegaly (may involve liver), shock; treat with transfusion.

Nelson Essentials of Pediatrics, 7E 2015 P520 Table 150-8.

- Repeated episodes of splenic sequestration are common, occurring in two-thirds of patients. Most recurrent episodes develop within 6 mo of the previous episode. **Prophylactic splenectomy** performed after an acute episode has resolved is the only effective strategy for preventing future life-threatening episodes.

Nelson Textbook of Pediatrics - 20th Edition chapter 462.

573- Child development under 50 percentile, and delay teeth growth, lab normal except for Ca "low", management?

- A) Calcium

Answer: A

574- Child less than 50 percentile, polyuria, constipation, low Na, K, Cl ,where is the primary defect ?

- A- Na,Cl Channel
- B- K Channel
- C- H+ reabsorption
- D- H+ secretion

Answer: A

Bartter syndrome is caused by a defect in the loop of Henle in which it loses NaCl. This is due to a defect in the Na-K-2Cl cotransporter. This is like having a furosemide-secreting tumor.

Kaplan lecture notes Internal Medicine 2016 P46
smle ,2016

575- A case of Bartter syndrome ; Chloride is passively absorbed along most of the proximal tubule but is actively transported in the TALH and the distal convoluted tubule (DCT). Failure to reabsorb chloride results in a failure to reabsorb sodium and leads to excessive sodium and chloride (salt) delivery to the distal tubules, leading to excessive salt and water loss from the body.

<http://emedicine.medscape.com/article/238670-overview#a2> (low Cl, Na)

576- infant periumbilical hernia , what you will do ?

- A- put plastic in mid abdomen
- B- reassurance
- C- do hernia repair before start school

Answer: B

Most are small and resolve in 1-2 years without any treatment. Surgery if getting larger after 1-2 years, symptoms (strangulation, incarceration), and/or persistent after age 4.

[Kaplan lecture notes Pediatrics 2016 P8](#)

577- calculates the deficit for child case?

The fluid deficit is the percentage of dehydration "Table attached below" multiplied by the patient's weight

For e.g. (for a 10-kg child, 10% of 10 kg =1 L deficit).

[Nelson Essentials of Pediatrics, 7E 2015 P109](#)

	Mild	Moderate	Severe
<2 yr	5%*	10%*	15%*
>2 yr	3%*	6%*	9%*
Pulse	Normal, full	Rapid	Rapid, weak
Blood Pressure	Normal	Low to normal	Decreased in shock (very late finding in pediatrics and very dangerous)
Urine Output	Decreased	Markedly decreased	Anuria
Oral Mucosa	Slightly dry	Dry	Parched
Anterior Fontanelle	Normal	Sunken	Markedly sunken
Eyes	Normal	Sunken	Markedly sunken
Skin Turgor	Normal	Decreased	Tenting
Capillary Refill	Normal (<3 s)	Normal to increased	Increased (>3 s)

578- treatment of juvenile rheumatoid arthritis?

answer:

Most with pauciarticular disease respond to nonsteroidal anti-inflammatory drugs (NSAIDs) alone

- Additional treatment: methotrexate (safest and most efficacious of second line agents); azathioprine or cyclophosphamide and biologicals (DMARDs)
- Corticosteroids (few indications):
 - ° Overwhelming inflammation
 - ° Systemic illness
 - ° Bridge treatment
- Ophthalmology follow up; physical therapy (PT)/occupational therapy.

[Kaplan lecture notes Pediatrics 2016 P179](#)

579- 8 years old girl brought by her mother complaining of short stature, normal physical development height 25th percentile, weight 10th percentile no secondary sexual characteristics. What is the cause of short stature:

- A- Hormonal
- B- chromosomal
- C- psychological
- D- constitutional

This is not short stature, it could be psychological?

-Not clear. Could be constitutional? (no 2ndary sexual characteristic.) however, she's normal, the onset of normal pubertal development start at: age 8-13 yrs.

580- Q about meningitis how to interpretation of types of meningitis and how to treat children with meningitis? Kaplan lecture notes *Pediatrica* 2016 P228,229

Table 22-1. CSF Findings in Various Types of Meningitis

	Bacterial	Partially Treated	Granulomatous (TB)	Aseptic (Viral)
Cells/mL	200–5,000	200–5,000	100–500	100–700
Cytology	Polymorphonuclear neutrophil	Mostly polymorphonuclear neutrophil	Lymphocytes	Mostly lymphocytes
Glucose [†]	Low	Low	Low	Normal
Protein	High	High	High	Normal to slightly high
Gram stain	Positive	Variable	Negative	Negative
Culture	Positive	Variable	Positive	Negative
CIE or LA	Positive	Positive	Negative	Negative
Pressure	High	High	High	Normal

Definition of Abbreviations: CIE, counterimmunoelectrophoresis; LA, latex agglutination

[†]CSF glucose concentration should be considered in relation to blood glucose concentration; normally CSF glucose is 50–70% of blood glucose.

Table 22-2. Empiric Antibiotic Therapy Based on Age for Bacterial Meningitis

Age	Most Likely Organisms	Empiric Antibiotics
0-2 months	GBS, <i>E. coli</i> , <i>L. monocytogenes</i>	Ampicillin + cefotaxime
2-3 months	Above perinatal organisms + some <i>S. pneumoniae</i> + very little <i>H. influenza</i> type B	Ampicillin + cefotaxime/ceftriaxone + vancomycin (assume resistant <i>S. pneumoniae</i>)
3 months – 2 years	<i>S. pneumoniae</i> + <i>N. meningitides</i>	Vancomycin + cefotaxime/ceftriaxone
2-18 years	<i>N. meningitides</i> +	Vancomycin + cefotaxime/ceftriaxone

Data support the use of IV dexamethasone added to the initial treatment of meningitis due to HiB, beginning with the first dose for 4 doses in children age >6 weeks (this will rarely be the case). Decreased incidence of fever, elevated CSF protein, and 8th cranial nerve damage.

581- about cyanotic heart disease.

- A- TOF
- B- ASD
- C- VSD
- D- PDA

Answer: A

Causes of Cyanotic Heart Disease – 5T’s: Truncus arteriosus, Transposition of the great vessels, Tricuspid atresia, Tetralogy of Fallot, Total anomalous pulmonary venous return

Toronto notes 2017 P19 Pediatrics.

582- baby sit briefly, crawl , move object from hand to hand , but no pencil grasp.

- A- 4 month
- B- 6 month
- C- 7 month
- D- 9 month

AT 7 MO	
Prone:	Rolls over; pivots; crawls or creep-crawls (Knobloch)
Supine:	Lifts head; rolls over; squirms
Sitting:	Sits briefly, with support of pelvis; leans forward on hands; back rounded
Standing:	May support most of weight; bounces actively
Adaptive:	Reaches out for and grasps large object; transfers objects from hand to hand; grasp uses radial palm; rakes at raisin
Language:	Forms polysyllabic vowel sounds
Social:	Prefers mother; babbles; enjoys mirror; responds to changes in emotional content of social contact

7 months	<ul style="list-style-type: none"> • Rolls from supine to prone • <u>May crawl</u> • Starts to sit without support
-----------------	---

answer: C

Nelson Textbook of Pediatrics - 20th Edition chapter 10.P67

Kaplan lecture notes Pediatrics 2016 P43

583- baby thirsty with tachycardia, sunken eye.. Volume loss:

- A- A.1%
- B- B.3%
- C- C.5-9%
- D- D.9%

Answer : D?

Depends on the age of the child and the degree of dehydration. Please refer to the table from Nelson essential of pediatrics 2015 7E P109. or to Q565

584- baby said hi when he entered the clinic, imitates his mother, feeds his doll, refers to himself “ME” and say “eye”:

- A- 12 months
- B- 15 months
- C- 18 months
- D- 24 months

18 months Kaplan lecture notes Pediatrics 2016	<ul style="list-style-type: none"> • Runs • Throws objects overhand while standing 	<ul style="list-style-type: none"> • Scribbles spontaneously • Builds tower of 3 blocks 	<ul style="list-style-type: none"> • 15-25 words • <u>Knows 5 body parts</u> 	<ul style="list-style-type: none"> • <u>Imitates parents in tasks</u> • Plays in company of other children
---	--	---	--	--

18 mo	Runs	Stacks four blocks Kicks a ball	Removes garment <u>“Feeds” doll</u>	Says at least six words	
2 yr	Walks up and down stairs Throws overhand	Stacks six blocks Copies line	Washes and dries hands Brushes teeth Puts on clothes	Puts two words together Points to pictures <u>Knows body parts</u>	Understands concept of today

answer : D?

Nelson Essentials of Pediatrics, 7E 2015 P16

smle ,2016

585- 1st Q, child developed generalized edema with fever and dark urine, all labs normal except low calcium and low albumin, what is dx?


- A- Minimal change disease
- B- Mesangial
- C- nephropathy

Answer: A

Minimal Change Disease


- Clinical presentation
 - Most common between 2 and 6 years of age.
 - May follow minor infections
 - Edema—localized initially around eyes and lower extremities; anasarca with serosal fluid collections less common
 - Common—diarrhea, abdominal pain, anorexia
 - Uncommon—hypertension, gross hematuria

Kaplan lecture notes *Pediatrica* 2016 P156



Nephrotic syndrome

PALE
 Proteinuria (>50 mg/kg/d)
 HypoAlbuminemia (<20 g/L)
 HyperLipidemia
 Edema



Nephritic Syndrome

PHAROH
 Proteinuria (<50 mg/kg/d)
 Hematuria
 Azotemia
 RBC casts
 Oliguria
 HTN

586- Child spitting milk, growing fine. What is the dx what will u do next?

most likely everything is just fine. Almost all babies have gastroesophageal reflux (GER), usually just called reflux. "Seventy percent of infants under 3 months will spit up three times a day, and it's even perfectly normal for them to be spitting up as often as 10 or 12 times,"

587- A child that can raise his head slightly when prone and smiles . He turns hishead 180 degrees and has head lag when you pull him to sit. How many old is he?

- A- 4 weeks
- B- 8 weeks
- C- 12 weeks
- D- 16 weeks

AT 2 MO	
Prone:	Raises head slightly farther; head sustained in plane of body on ventral suspension
Supine:	Tonic neck posture predominates; head lags when pulled to sitting position
Visual:	Follows moving object 180 degrees
Social:	Smiles on social contact; listens to voice and coos

Answer : B

Nelson Textbook of Pediatrics - 20th Edition chapter 10. P67

588- One-month boy came for vaccine. His older sister (6 years old) had renal transplant and now is on immunosuppressive medication. Which vaccine is contraindicated?

- A- MMR
- B- Oral polio
- C- Salk polio
- D- Influenza

Answer : B

The oral, live polio vaccine has been replaced by killed-vaccine given by injection, owing to the risk of vaccine associated polio in unvaccinated family members or **immune-deficient** people following contact with gastrointestinal excretions of vaccine recipients.

Note: Oral Polio vaccine = sabin's vaccine. Inactivated polio vaccine = Salke's vaccine.

Illustrated Textbook of Paediatrics 4th edition. P265

589- Pencil grasp develops at?

Answer: 9 months

Early pincer grasp starts at 9 months (Kaplan, Toronto and Nelson)

smle ,2016

590- Diarrhea in a kid what's the mechanism (decreased absorption , membranous coating)

Answer:??not clear

591- Asystole first treatment in a child?

A- Epinephrine

B- Atropine.

Answer: A

Drug therapy:

See the list below:

Epinephrine 0.01 mg/kg IV/IO q3-5min; use 1:10000 concentration (0.1 mL/kg)

Epinephrine 0.1 mg/kg endotracheal tube (ETT) q3-5min, use 1:1000 concentration (0.1 mL/kg)

Medscape PALS - Asystole/PEA <http://emedicine.medscape.com/article/2066758-overview>

592- Calculate Glasco coma scale: child crying and confused eyes respond when calling his name+ withdraw to pain=>

A- 9

B- 10

C- 11

D- 12

Table 42-1 Glasgow Coma Scales <small>Nelson Essentials of Pediatrics</small>			
ACTIVITY	BEST RESPONSE	SCORE	
Eye opening	Spontaneous	4	
	To verbal stimuli	3	
	To pain	2	
	None	1	
Verbal	Oriented	5	
	• Infant: coos, babbles		
	Confused	4	
	• Infant: irritable, cries		
	Inappropriate words	3	
	• Infant: cries to pain		
Nonspecific sounds	• Infant: moans to pain	2	
	None	1	
	Motor	Follows commands	6
		• Infant: spontaneous movement	
	Localizes pain	• Infant: withdraws to touch	5
Withdraws to pain		4	
Flexion to pain	• Infant: abnormal flexion	3	
	Extension to pain	• Infant: abnormal extension	2
None		1	

Answer: incomplete.

593- 4 month child with developmental milestone ?

A- try to crawling

B- roll over from side to side

C- sit without support

D- complete fixation of the head

Answer: B

Rolls from prone to supine at 4 months (Kaplan & Toronto).

smle ,2016

594- Neonate with bilious vomiting , seed stool diarrhea he passed meconium in day2 what is the cause ?

- A- Hirschberg disease
- B- allergy to formula milk

answer :A

Table 126-10 Common Causes of Constipation and Characteristic Features	
CAUSES OF CONSTIPATION	CLINICAL FEATURES
Hirschsprung disease	<p><i>History:</i> Failure to pass stool in first 24 h, abdominal distention, vomiting, symptoms of enterocolitis (fever, foul-smelling diarrhea, megacolon). Not associated with large-caliber stools or encopresis</p> <p><i>Examination:</i> Snug anal sphincter, empty, contracted rectum. May have explosive release of stool as examiner's finger is withdrawn</p> <p><i>Laboratory:</i> Absence of ganglion cells on rectal suction biopsy specimen, absent relaxation of the internal sphincter, "transition zone" from narrow distal bowel to dilated proximal bowel on barium enema</p>

Nelson Essentials of Pediatrics, 7E 2015 P426

595- Child with bronchiolitis what is the treatment ?

- A- ribavirin
- B- acyclovir
- C- other antiviral

answer : A

Treatment:

- **Supportive care**; hospitalize if respiratory distress; may give trial of hypertonic saline nebulization
- No steroids
- Ribavirin **not routinely used**; may prevent need for mechanical ventilation in severe cases
- Prevention—monoclonal antibody to RSV F protein (preferred: palivizumab) in high-risk patients only.

Kaplan lecture notes Pediatrics 2016 P69

596- Q about Coxsackie virus in pediatric (Hand foot disease)?

Hand, Foot, and Mouth Disease	Coxsackie group A	3-5 d	Likely 1-7 d after symptoms but may be up to months	Direct and indirect contact with infected bodily fluids, fecal-oral	Appearance: vesicles and pustules on an erythematous base Distribution: acral, but may extend up the extremity	Enanthem: vesicles in the POSTERIOR oral cavity (pharynx, tongue)	Supportive	Mainly dehydration
-------------------------------	-------------------	-------	---	---	---	---	------------	--------------------

Toronto notes 2017 P55 Pediatrics. Table 23. Common Infectious Pediatric Exanthems

597- viral gastroenteritis prevented by which vaccine :

A-Rota vaccine

Answer : a

Common causes of viral gastroenteritis including, but not limited to:

- Norovirus
- Rotavirus
- Enteric adenovirus

Kaplan lecture notes Pediatrics 2016 P134

Parents are recommended to vaccinate their children against rotavirus. No available vaccine for children against Noro(still in clinical trials) or adeno viruses(vaccine is available for military

smle ,2016

personnel in the USA only).

598- child his height and weight below normal besides growth hormone what you will order:

- A- somatomedin c
- B- aldosterone
- C- insulin
- D- testosterone

answer : A

Measuring serum IGF-1(somatomedin c) and IGF-BP3 is suggested but not consistently helpful in establishing a diagnosis of GH deficiency.

Nelson Essentials of Pediatrics, 7E

599- Preventing child from drinking before bed, encourage to go to toilet before bed, all these measures to help child with?

Enuresis

- Management: thorough history and physical, (should begin with behavioral treatment; not definitive, varying success rates):
 - ° Enlist cooperation of child-chart dryness, reward system
 - ° Child should void before going to sleep
 - ° Alarm to wake once 2–3 hours after falling asleep; may use alarm that goes off when child wets a special sheet (bell and pad alarm)
 - ° No punishment or humiliation
 - ° Psychotherapy for traumatized children or when behavioral therapy has failed
 - ° Pharmacotherapy for failed behavioral therapy in nocturnal enuresis—oral desmopressin (DDAVP)

Kaplan lecture notes Pediatrics 2016 P48

-management of nocturnal primary enuresis:

start with advice about fluid intake, toileting, or an appropriate reward system, then:

Enuresis (bed-wetting) alarms. first-line treatment

Desmopressin. Second-line treatment

Imipramine (TCA). Third-line treatment

<https://www.uptodate.com/contents/nocturnal-enuresis-in-children-management>

600- Child above 90th percentile in height, long scenario and cardiac abnormality with fatigue...etc ?

A. Marfan syndrome

Major findings are skeletal, cardiovascular, and ocular

– Tall stature with long, slim limbs and little fat.

Kaplan lecture notes Pediatrics 2016 P24

601- Child with epilepsy on anticonvulsant What you will change in hisvaccines

- A- Change OPV to IPV
- B- DTP
- C- Remove all vaccines
- D- Remove all live vaccines

answer : B

Progressive neurologic disorder, including infantile spasms, uncontrolled epilepsy, progressive encephalopathy (administration of pertussis-containing vaccines should be deferred until the neurologic status is clarified and stabilized). [uptodate](#)

602- Kid with RF has PSGN with casts, you will find ?

Poststreptococcal glomerulonephritis (PSGN) is usually diagnosed based upon:

- The clinical findings of acute nephritis include hematuria with or without red blood cell casts, variable degrees of proteinuria, edema, and hypertension.

- Documentation of a recent GAS infection includes either a positive throat or skin culture or serologic tests (eg, anti-streptolysin [ASO] or streptozyme test).

Although a low C3 and/or CH 50 (total complement) level are consistent with a diagnosis of PSGN, these complement components may also be decreased in other forms of glomeru- lonephritis, including membranoproliferative glomerulonephritis.

<http://www.uptodate.com/contents/poststreptococcal-glomerulonephritis>

603- Case of lady delivered macrosomic baby, What is the reliable method of diagnosing postpartum hemorrhage ?

- A- Visual assessment of blood loss
- B- maternal pulse
- C- Hemoglobin
- D-creatinine

answer :A? -Ob/gyn question

<http://www.uptodate.com/contents/overview-of-postpartum-hemorrhage#H100822618>

604- child with hydrocephalus progressively increasing in between the 3rd and 4th ventricle - which area is blocked ?

Answer: I chose cerebral aqueduct

Non-communicating hydrocephalus — also called "obstructive" hydrocephalus — oc- curs when the flow of CSF is blocked along one or more of the narrow passages connecting the ventricles. One of the most common causes of hydrocephalus is "aqueductal stenosis." In this case, hydrocephalus results from a narrowing of the aqueduct of Sylvius, a small passage between the third and fourth ventricles in the middle of the brain.

http://www.ninds.nih.gov/disorders/hydrocephalus/detail_hydrocephalus.htm

605- case of lactose intolerance

Answer :

Clinical Presentation: • chronic, watery diarrhea and abdominal pain, bloating associated with dairy intake.

- primary lactose intolerance: crampy abdominal pain with loose stool (older children, usually of East Asian and African descent)
- secondary lactose intolerance: older infant, persistent diarrhea (post viral/bacterial infection, celiac disease, or IBD).

Diagnosis: trial of lactose-free diet • watery stool, acid pH, positive reducing sugars • positive breath hydrogen test if >6 yr.

smle ,2016

Management: • lactose-free diet, soy formula • lactase-containing tablets/capsules/drops (e.g. Lacteeze®, Lactaid®).

Toronto notes 2017 P35 Pediatrics.

**606- infant + symptoms of meningitis,
What is the next?**

- A- LP
- B- IV antibiotics

Answer: A

“Note: If there are symptoms of increased ICP in the question, then the correct answer would be B.”

Treatment with antibiotics is usually started immediately **after** the blood tests and lumbar puncture are performed.

<http://www.uptodate.com/contents/meningitis-in-children-beyond-the-basics>

607- 1 month Baby come with abdominal distention and constipation since birth what you do next :

- A- Xray
- B- biopsy
- C- rectal manometry

Answer:A

1st investigations to order:

- plain abdominal x-ray.
- contrast enema.

BMJ Best practice: Hirschsprung's disease.

Based on the scenario, this is most likely Hirschsprung disease (infant with abdominal distention and constipation since birth).

Investigations: Rectal biopsy (**gold standard**) – look for aganglionosis and neural hypertrophy
AXR Contrast enema to find narrow rectum and transition zone

Anal manometry unreliable in infants – classic finding is absence of rectoanal inhibitory reflex

Toronto notes 2017 P64 general surgery.

608- child presented with cyanosis and murmur (case of transposition of great vessels)

Transposition of the great arteries (TGA)

-Most common cyanotic lesion presenting in the immediate newborn period.

-More common in infant of diabetic mother.

• Pathophysiology

– Aorta arises from the right ventricle, and the pulmonary artery from the left ventricle;

d= dextroposition of the aorta anterior and the right of the pulmonary artery

(normal is posterior and to the right of the pulmonary artery).

– Series circuit changed to **2 parallel circuits; need foramen ovale and PDA** for some mixture of desaturated and oxygenated blood; better mixing in half of patients with a VSD.

•Clinical presentation:

– **With intact septum (simple TGA)**—as PDA starts to close, severe cyanosis and tachypnea ensue.

– **S2 usually single and loud;** murmurs absent, or a soft systolic ejection murmur at midleft sternal border

– If VSD is present, there is a harsh murmur at the lower left sternal border. If large, then holosystolic murmur, significant mixing of blood lessens cyanosis, but presents

smle ,2016

as heart failure

- Diagnosis
 - Chest x-ray:
 - Mild cardiomegaly, narrow mediastinum, and normal-to-increased pulmonary blood flow
 - **“Egg on a string” appearance**—narrow heart base plus absence of main segment of the pulmonary artery
 - ECG—**normal** neonatal right-sided dominance
 - Echocardiogram (gold standard)
- Treatment
 - PGE1 (keeps PDA patent)
 - Balloon atrial septostomy
 - Arterial switch surgery in first 2 weeks

Kaplan lecture notes [Pediatrica 2016 P123](#)

609- child come with case of immunodeficiency with presented with lump in the groin and lap was given what is the diagnosis ?? there's CH50 in Q

Answer:

A- severe combined immune deficiency

B- chronic granulomatous disease

Answer: A?

Needs more details. CH50 is a screening test for **complement deficiency**.

“CH50 is a screening test for total complement activity. Levels of complement may be depressed in genetic deficiency, liver disease, chronic glomerulonephritis, rheumatoid arthritis, hemolytic anemias, graft rejection, systemic lupus erythematosus, acute glomerulonephritis, subacute bacterial endocarditis and cryoglobulinemia.

Elevated complement may be found in acute inflammatory conditions, leukemia, Hodgkin's Disease, sarcoma, and Behcet's Disease.” [SMLE13](#)

610- Child present to ER with fever and sore throat for one week. Now he has paroxysmal cough and cyanosis at end of cough ?

A- Epiglottitis

B- Sinusitis

C- Croup

D- Bronchitis

Answer: C?

Paroxysmal cough is characteristic for **pertussis**.

Pertussis has 3 phases:

1-prodromal catarrhal stage ■ **lasts 1-7 d**; URTI symptoms (coryza, mild cough, sneezing) with NO or LOW-GRADE fever.

2-**paroxysmal** stage ■ lasts 4-6 wk; characterized by **paroxysms of cough** (“100 day cough”), sometimes followed by inspiratory whoop (“whooping cough”)

smle ,2016

- infants <6 mo may present with post-tussive **apnea**, whoop is often absent
- onset of attacks precipitated by yawning, sneezing, eating, physical exertion
- ± post-tussive emesis, may become cyanotic before whoop
- vomiting after whooping episodes

3-convalescent stage;

- lasts 1-2 wk; characterized by occasional paroxysms of cough, but decreased frequency and severity
- non-infectious but cough may last up to 6 mo

Toronto notes 2017 P61 Pediatrics.

611- Child present with crying and lobulated breathing + retraction of intercostal muscle what to do

- A- Prepare for intubation
- B- Clam the baby down

Answer:

612- Child present with fever and sore throat what of the following suggest viral cause?

rhinorrhea and mucus secretion

613- A child fall down the stair and his head hit the floor. On examination, he was alert and oriented, not having any neurological deficits, he had only bleeding from his right ear, on further ear exam, the eardrum was obviously ruptured. What is the most likely the source of the bleeding?

- A- Subdural Hemorrhage.
- B- Skull base fracture.
- C- Subarachnoid hemorrhage.
- D- other choices I can not remember.

Answer: B

probably longitudinal Temporal Bone Fractures. Features of longitudinal Temporal Bone Fractures: Torn TM or hemotympanum
Bleeding from external auditory canal
Step formation in external auditory canal
CSF otorrhea
Battle's sign= mastoid ecchymosis and Raccoon eyes= periorbital ecchymosis

Toronto notes 2017 P21 Otolaryngology.

614- A child suddenly hit a hard object, he sustained a forehead wound, where will this wound be drained?

- A- Pre auricular lymph nodes.
- B- Retroauricular lymph nodes.
- C- Occipital lymph nodes.
- D- Submental lymph nodes.

smle ,2016

Answer: A

Preauricular (Parotid) and submandibular

The face is divided into three lymphatic territories:

Upper territory: comprising **greater part of forehead**, lateral halves of eyelids including: conjunctiva, parotid area and adjoining part of the cheek.

Lymph from upper territory is drained into preauricular (parotid) lymph nodes

Middle territory: comprising **central part of the forehead**, medial halves of eye lids, external nose, upper lip, lateral part of lower lip, medial part of cheek and greater part of lower jaw.

Lymph from middle territory is drained into submandibular lymph nodes

Lower territory: comprising central part of the lower lip and chin

Lymph from lower territory is drained into submental lymph nodes

Textbook of Anatomy Head, Neck, and Brain 2nd edition Volume 3 p61

615- Six day infant irritable poor feeding twitching of muscles bulging fontanelle

- A- blood culture,
- B- LP
- C- IV antibiotic

Answer:A

Treatment with antibiotics is usually started immediately **after** the blood tests and lumbar puncture are performed.

<http://www.uptodate.com/contents/meningitis-in-children-beyond-the-basics>

616- Baby hypotension severe vomiting and watery diarrhea what is the electrolyte abnormality

- A- L NA,
- B- H NA,
- C- H K ,
- D- Hyperglycemia

Answer: A

GI loss: vomiting, diarrhea, gastric suction can manifest as either hypovolemic hyponatremia, hypokalemia or both.

Kaplan lecture notes Pediatrca 2016 P282,284

617- baby born on 35th week of gestation. his mother bring him for vaccination. which of the following is true?!

- A- give the vaccine at time as schedule
- B- delay his vaccination 2 months
- C- give vaccine at time, but half the dose

answer: A

Prematurity—immunize at the **chronological** age.

Kaplan lecture notes Pediatrca 2016 P52

smle ,2016

618- A 6 weeks old baby pale, jaundice on examination there is palpable spleen 2 cm below the costal margin. lab shows total bilirubin = 205 mg/dl, direct bilirubin = 60 mg/dl, positive direct & indirect coombs test. peripheral blood smear (attached photo shows spherocytosis)

A- spherocytosis

B- gilbert disease

C- ABO incompatibility

D- Crigler Najjar syndrome

Answer :

Bilirubin is ridiculously high in this scenario!

-Coombs test is **negative** in spherocytosis and **positive** in autoimmune hemolytic anemia (AIHA) and ABO incompatibility.

-Spherocytosis in peripheral smear may be present in hereditary spherocytosis, AIHA and ABO incompatibility.

- Splenomegaly may be present in hereditary spherocytosis, AIHA BUT not in ABO incompatibility.

- ABO incompatibility is a disease of newborn, AIHA is rare in pediatric and hereditary spherocytosis is variable, depends on the severity of the symptoms.

Hereditary Spherocytosis Clinical Presentation:

<http://emedicine.medscape.com/article/206107-clinical>

Hemolytic Disease of Newborn Treatment & Management:

<http://emedicine.medscape.com/article/974349-treatment>

Hemolytic Disease of Newborn Workup: <http://emedicine.medscape.com/article/974349-workup>

Autoimmune Hemolysis: <http://www.medbullets.com/step2-3-heme/20235/autoimmune-hemolysis>

Illustrated Textbook of Paediatrics 4th edition. P169

619- sign of duodenal atresia in x-ray ?

A- bird beak appearance R.

B- double bubble appearance

Answer: B

X-ray shows classic double bubble with no distal bowel gas.

Kaplan lecture notes Pediatrics 2016 P139

620- child came complaining of pallor & fatigue. he has short stature & multiple cafe au lait spots over his skin. lab shows (WBC= normal, RBC= low, Hb= low, retc=)

- A- iron deficiency anemia
- B- SCA
- C- fanconi

Answer:C

Physical abnormalities in Fanconi Anemia:

- Hyperpigmentation and café-au-lait spots
- Absent or hypoplastic thumbs
- Short stature
- Many other organ defects
- Labs:
 - Decreased RBCs, WBCs, and platelets
 - Increased HbF
 - Bone-marrow hypoplasia

[Kaplan lecture notes Pediatrca 2016 P190](#)

621- parent bring their child after mid night (3 a.m.) child complain of barking cough, dyspnea, fever & inspiratory stridor. sp o2 = 2% in room air. which of the following symptoms are of concern ?!

- A- fairing of ala nasi U.
- B- expiratory stridor V.
- C- blue color of lips

Answer:C

The severity of upper airways obstruction is best assessed clinically by the degree of chest retraction (none, only on crying, at rest) and degree of stridor (none, only on crying, at rest or biphasic) (Fig. 16.3).

Severe obstruction leads to increasing respiratory rate, heart rate and agitation.

Central cyanosis or drowsiness indicates severe hypoxaemia and the need for urgent intervention

- the most reliable objective measure of hypoxaemia is by measuring the oxygen saturation by pulse oximetry.

[Illustrated Textbook of Paediatrics 4th edition. P280](#)

622- which of the following congenital heart disease is secondary to failure of spiral rotation of the heart septum ?!

- A- transposition of great artery
- B- ASD
- C- VSD
- D- PDA

Answer: A

-Dextro-Transposition of the great arteries (complete) is caused by abnormal neural crest cell migration such that there is **nonspiral development of the aorticopulmonary septum.**

smle ,2016

BRS BOARD REVIEW SERIES: Embryology, 5th edition. P39

-Misalignment of the septum can cause the congenital heart conditions tetralogy of Fallot, persistent truncus arteriosus, dextro-Transposition of the great arteries, tricuspid atresia, and anomalous pulmonary venous connection. [Wikipedia- Aorticopulmonary septum](#)

623- A 18 month old child present to OPD having diarrhoea & flatulence. looking pale , below 25th percentile for weight. baby was completely normal at age 12 month when he weaned from breastfeeding.

A- celiac disease

B- cystic fibrosis

C- hirschsprung disease

Answer: A

- in children: presents at any age, usually 6-24 mo with the introduction of gluten in the diet. Failure to thrive with poor appetite, irritability, apathy, rickets, wasted muscles, fat buttocks, rarely distended abdomen.
- GI symptoms: anorexia, N/V, edema, anemia, abdominal pain.
- non-GI manifestations: iron-deficiency anemia, dermatitis herpetiformis, dental enamel hypoplasia, osteopenia/osteoporosis, short stature, delayed puberty, behavioural changes.

[Toronto notes 2017 P35 pediatrics.](#)

624- long scenario for cerebral palsy). on examination there is crossing of lower limb when child suspend by the axilla. which type of CP does the pt have

A- Hemiplegia

B- Diplegia

C- Quadriplegia

D- Athetoid

Answer:B

*Examination of the child with **spastic diplegia** reveals spasticity in the legs with brisk reflexes, ankle clonus, and a bilateral Babinski sign. When the child is **suspended by the axillae, a scissoring posture** of the lower extremities is maintained.

[Nelson Textbook of Pediatrics - 20th Edition chapter 589. P2897](#)

*4 types of cerebral palsy:

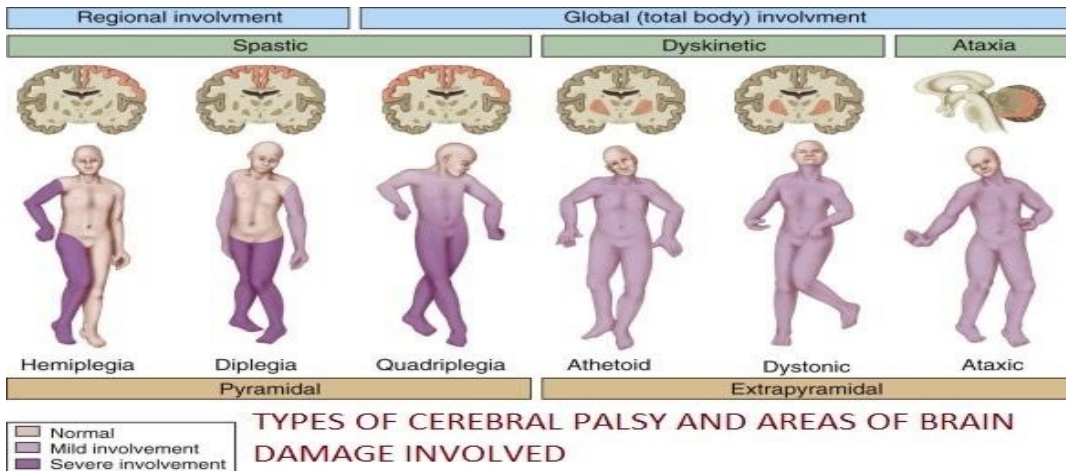
-Spastic (most common type) either monoplegia (one single limb being affected), hemiplegia (one side being affected), diplegia (the lower extremities being affected) or quadriplegia (both arms and Legs).

- Athetoid/ Dyskinetic: Athetosis (involuntary writhing movements) ± chorea (involuntary jerky movements) Can involve face, tongue (results in dysarthria).

- Ataxic: Poor coordination, poor balance (wide based gait) Can have intention tremor.

- Mixed: More than one of the above motor patterns.

[Toronto notes 2017 P83 pediatrics.](#)



625- Diet causes Kwashiorkor?

- A- Low protein
- B- High Carbs

Answer: A

Severe protein and essential amino acid deprivation in association with adequate caloric intake can lead to kwashiorkor.

Nelson Textbook of Pediatrics - 20th Edition chapter 671. P3239

626- Mother brought her child, 9 months, fisting hand and crossed legs, she mentioned that after his birth he didn't cry:

- A- cerebral palsy
- B- Down syndrome

Answer: A

Examination of the child with spastic diplegia reveals spasticity in the legs with brisk reflexes, ankle clonus, and a bilateral Babinski sign. When the child is **suspended by the axillae**, a **scissoring posture** of the lower extremities is maintained.

Nelson Textbook of Pediatrics - 20th Edition chapter 589. P2897

627- scenario of marfan :

- A- X linked
- B- AD
- C- AR

Answer : B

Marfan Syndrome

- Genetics
- Autosomal dominant with wide variability
- Mutation in fibrillin gene (FBN1)—15q21.1

Kaplan lecture notes Pediatrics 2016 P190

628- 5 years old boy presented with sore throat, he was discharged home, culture was done showing Group A meningococcus , the physician called the family to inform them he finds that the child is asymptomatic, the best treatment is:

- A- penicillin
- B- single dose ceftriaxone

Answer: B

-Neither penicillin nor ampicillin treatment eradicates nasopharyngeal carriage and should not be routinely used for prophylaxis.

Ceftriaxone and ciprofloxacin are the most effective agents for prophylaxis, the latter being the drug of choice in some countries. Rifampin is most widely used but fails to eradicate colonization in 15% of cases

[Nelson Textbook of Pediatrics - 20th Edition chapter 191. P1363](#)

-Note: ceftriaxone is safe during pregnancy and more effective than rifampin for treatment of carriers of group A meningococcus.

[Acute Communicable Disease Control Manual \(B-73\) REVISION—February 2017](#)

[MENINGOCOCCAL INFECTIONS](#)

629- When does the jaundice occurs in gilbert syndrome?

Pregnancy Inter current illness*(i think it is the right) Others

.No stress in options

?

Pediatric:

Miscellaneous

- TORCH infection: toxoplasmosis, Rubella, CMV, herpes
- impetigo neonatorum: s. Aureus
- Congenital pneumonia: group B streptococcus GBS
- Scarlet fever: Group A streptococci GAS
- Fever without focus: E.coli, S. Aureus, N. Meningitidis, GBS... Before 2003: S.pneumonia and H. Influenza... Empirical Antibiotic:
 1. < 1 m: ampicillin, amoxicillin and gentamicin.. Or 3rd G cephalosporins
 2. > 1m: augmentin or ampicillin
- GBS: penicillin or ampicillin
- Septic shock antibiotic: cloxacillin, nafcillin, 1st G cephalo, clindamycin
- typhoid fever: ampicillin, trimethoprim-sulfamethoxazole, or chloramphenicol in case of resistance quinolone, macrolide, and third-generation cephalosporin an
- gonococcal ophthalmic disease: single dose of ceftriaxone IV or IM "for both baby with symptoms and baby with untreated mom even if asymptomatic". Prophylaxis for everyone: drop ointment of erythromycin or tetracycline
- Facial cellulitis: in neonate —> GAS, in older children: strep. pneumonia

¥ Cardio

- Rheumatic fever: Group A streptococci GAS --> oral penicillin B, aspirin, prophylactic benzathine. SLE, ped Q638
- Myocarditis: virally most common, can come with diphtheria
- Bacterial endocarditis in diseased heart: Strep. Viridian and Staph. Aureus

\$ Renal

- Most common cause of peritonitis and sepsis in nephrotic syndrome: pneumococcus and E.-coli
- UTI: E.coli, kilebsiella, proteus, staph, peundomonas.. However in neonate: group B strept. TTT: empirical ampicillin and aminoglycoside or 3rd G cephalosporins alone. In milder cases --> oral amoxicillin
- UTI Prophylactic Rx:
 1. infant; cephalosporins or amoxicillin..
 2. Older children; Co-trimoxazole or nitrofurantoin
- Note: All children under age of 5 and all male children should have a renal us to identify anatomical abnormalities including hydronephrosis , dilatation of the distal ureter , or bladder hypertrophy and to rule out pyelonephritis .

Note : vcug indication >>

- * Female <5 y with uti
- * Female > 5y presenting with second uti
- * All males
- * Febrile uti

- Patient with epididemo-orchitis:
 - * males 14-35 years of age, the most common causes are neisseria gonorrhoeae and chlamydia trachomatis —> Rx: ceftriaxone + doxycycline or azithromycine.
 - * under age 14 or over age 35, the infection is usually caused by one of the common urinary tract pathogens —> levofloxacin
- barter syndrome: problem in Na, Cl channel

% GIT

smle ,2016

- Acute diarrhea:
 1. viral with rota V most commonly, astro, entero and adenoV..
 2. Bacteria like: Campylo, salmonella, shigella, yersinia enterocolitis, C. Difficile and E.coli
 3. Parasite: E. Histolytica, Giardia, cryptosporidium
- biliary atresia: intrauterine Echo virus
- Oral rehydration: Start with 50 in first 4 hour then maintenance 100 per day
- C. Difficile after clindamycin → rx

-

Respiratory

- acute epiglottitis: H. Influenza B → Ceftriaxone and (clindamycin or vancomycin)
- Viral croup (laryngotracheobronchitis): parainfluenza virus
- Bacterial trachitis: S. Aureus
- Pneumonia
 1. Birth to 3 weeks: GBS and E.coli --> Rx: ampicillin and gentamicin
 2. 3 weeks to 3 months: S.pneumonia, S. Aureus, RSV, PIV-3, bordetella pertussis --> azithromycin, followed by: erythromycin or clarithromycin
 3. 3 months to 5 years: Viral is the commonest; RSV, PIV, Influenza and adenovirus, Bacteria; S.pneumonia and HiB, mycoplasma pneumonia, Mycobacterium TB --> amoxicillin and 2nd G cephalosporin
 4. 5 years to 15 years: like adult, atypical organisms are the most common; mycoplasma pneumonia, Mycobacterium TB, clamidia, S. Pneumonia --> Rx: azithromycin, followed by: erythromycin or clarithromycin
- Bronchiolitis: RSV(commonest), PIV, rhinovirus → ribavirin
- cystic fibrosis: S. Aureus and nontypeable haemophilus influenzae are common pathogens during early childhood, but pseudomonas aeruginosa

-

Immunodeficiency

- Immunodeficiency
 1. T-cell: opportunistic infection; with fungal, viruses, protozoa and mycobacteria. Note: T-cell is CD3 --> divided into CD4 helper and CD8 cytotoxic
 2. B- cell: encapsulated organism; Pneumococci and H. Influenza- B, exceptional virus Polio and Protozoa Giardia. Note: B- cell is CD 19
 3. Complement: encapsulated organism; 2 meningococcal, or 2 gonococcal
 4. Neutrophil: Recurrent Abscesses; Staph, pseudomonas, E.coli and aspergillois. CD11 and CD18
- chronic granulomatous disease (frequent asked question): catalase-positive organisms: s. Aureus (most), nocardia sp. ,s.marcescens, b. Cepacia, aspergillus or c.albicans.



Fever with exanthem

- infectious mononucleosis --> EBV, can cause nasopharyngeal carcinoma and burket lymphoma
- exanthema subitum: HSV-6
- erythema infectiosum: Human parvo virus B19:
- Chicken box: HZV (zoster):
- Scalled skin syndrome: S. Aureus
- Toxic shock syndrome: S. Aureus
- Hand, foot mouth disease: enterovirus --> Echo and coxacki “ they present with herpangina”
- HSV-1: patient present with gingivitis, mouth and oral vesicles that might ulcerate

CNS

- Meningitis: viral is the commonest cause; enterovirus, HSV. Bacteria; strept. Pneumonia, N. Meningitis, GBS, HiB, mycobacterium TB. Note: Fungal (cryptococcus neoformans), parasite, pseudomonas and salmonella in immunocompromised patients.
- Note: in neonate, the commonest: GBS, E.coli and listeria
- Meningitis Rx:
 1. Neonate: Ampicillin + cefotaxim, Or aminoglycoside + acyclovir
 2. Older than 1 month: vancomycin and 3rd G cephalosporin
 3. If patient has HIV: add amphotericin B and flucytosine
- Prophylaxis for close contact: Rifampin 600 mg (for children > 1 mo, 10 mg/kg; for children < 1 mo, 5 mg/kg) po q 12 h for 4 doses Ceftriaxone 250 mg (for children < 15 yr, 125 mg) im for 1 dose
- In adults, a fluoroquinolone (ciprofloxacin or levofloxacin 500 mg or ofloxacin 400 mg) po for 1 dose
-

electrolyte:

- * Congenital chloride diarrhea: serum electrolyte levels may be within the reference range, especially in neonates and treated patients. However, typical findings include low concentrations of serum chloride, sodium, and potassium.
- * Renal tubular acidosis: serum sodium expect to be within normal ranges

Inheritance:

- willson: AR, chromosome 14
- Cystic fibrosis: AR, long q arm of chromosome 7
- Celiac: HLA-DQ2, DQ
- Familial adenomatous polyposis: AD! APC gene mutation on chromosome 5q21
- Hereditary non polyposis colorectal cancer (Lynch syndrome):AD!, MSH2, MSH6 and MLH1 genes --> microsatellite instability
- Alagil syndrome: AD, chromosome 20
- Congenital chloride diarrhea: AR
- Congenital liver fibrosis: ass. With AR polycystic kidney disease
- Primary immunodeficiency: most of them are x-linked
 1. Bruton agammaglobulinemia(B-cell): X- linked, Btk Gene
 2. Common variable immunodeficiency(B-cell): AR and AD
 3. IgA immunodeficiency(B-cell): x-linked, and AR
 4. DiGeorge anomaly(T-cell): 22q11.2
 5. Wiskott aldrich syndrome (T-cell): X-linked
 6. Severe combined immunodeficiency (T- cell): X- linked, AR
 7. Chronic granulomatous disease (Neutrophil): X- linked, AR
- ricket:
 1. Type 1 vit D dependent (low alpha-1 hydrolase): AR
 2. Type 2 vit D dependent (resistance): AR, associated with alopecia totalis
 3. Familial hypophosphatemia: X-linked dominant
- Myopathies
 1. Dushein muscular dystrophy: X-linked recessive, 1.21
 2. Becker disease: X-linked recessive
 3. Dystrophin myotonica: AD
- Trader willi syndrome: 15q11-13 chromosome
- Fanconi anemia: AR
- neurofibromatosis : The nf1 long (q) arm of chromosome 17, band q11.2 (17q11.2). ras -gt-smle ,2016

pase-activating protein that suppresses tumor growth, primarily by inhibiting ras activity. nf2 (bilateral acoustic neurofibromatosis or central neurofibromatosis) —> long (q) arm of chromosome 22, band q12.2 (22q12.2). The nf2 gene codes for the protein neurofibromin 2, also called merlin or schwannomin.

- Marfan syndrome: autosomal dominant —> fbn1 gene on chromosome 15, which codes for the connective tissue protein fibrillin.

- Alpha and beta thalasemia: AR, The alpha and beta thalassaemias are the most common inherited single-gene

Emergency



1- Patient after road traffic accident developed chest pain. On examination: no lung sound and hyperresonance on one side. What is the 1st thing to do?

- a. Needle decompression

Answer: A

Tension pneumothorax is suspected.

So Immediate attention to the ABCs (airway, breathing, circulation) while assessing vital signs and oxygen saturation is paramount, particularly in patients with thoracic trauma. Definitive Management includes Needle thoracostomy at 2nd intercostal space at Mid clavicular line followed by chest tube at 5th intercostal space at antero- or axillary line.

Reference: Toronto notes.

2- Patient ingested 20 gram of acetaminophen 8 hours ago, what is your next step?

- a. Charcoal
b. N acetylcysteine
c. Gastric lavage

Answer: B

- gastric lavage/emesis (if <2 h after ingestion)
- oral activated charcoal (if the patient has a stable mental and clinical status and presents to the emergency department within 1 hour of ingestion)
- N-acetylcysteine (NAC, Mucomyst®) can be given PO or IV (most effective within 8-10 h of ingestion, but should be given no matter when time of ingestion) > promotes hepatic glutathione regeneration.

Toronto Notes

<http://emedicine.medscape.com/article/820200-treatment>

3- Patient ate from a restaurant. 2 days after that started to complain of diarrhea, vomiting and urticaria.

- a. Food poisoning
b. Food allergy

Answer: ?

Food poisoning: <http://emedicine.medscape.com/article/175569-overview>

Food Allergy: <http://emedicine.medscape.com/article/135959-overview>

4- What is the antidote for organophosphate poisoning?

smle ,2016

a. Atropine

Answer: A

Organophosphate poisoning signs and symptoms in the mnemonic DUMBBELS: Diarrhea, Urination, Miosis, Bradycardia, Bronchorrhea, Emesis (NV), Lacrimation, Salivation/Sweating.

Reference: Master the Boards, 5-Minute Emergency Medicine Consult

5. A patient comes to the emergency with sudden dyspnea. X ray picture was attached showing dark area without vascular marking. What is the diagnosis?

- a. Pneumonia
- b. Pulmonary edema
- c. Pneumothorax
- d. Pulmonary embolism

Answer: C

Master the Boards

6-A guy was standing at a bus stop then fell. No previous history and no cardiac anomalies. What is the diagnosis?

- a. Cardiac syncope
- b. Fainting??!
- c. Seizure
- d. Vasovagal

Answer: D

Kumar 1116

7- A guy presents in emergency with decreased oxygen carrying capacity of blood cells. Suicidal attempt is suspected. what is the culprit?

- a. Carbon monoxide
- b. Cyanide

Answer: A

Resources of CO: ventilated system, paint strippers

Kumar 920

8-Patient came to the ER with status asthmaticus. What will you use to intubate him?

- a. Propofol
- b. Ketamine
- c. Midazolam

Answer: B

Reference: <http://www.ashp.org/doclibrary/policy/emergencycare/post-intubation-management-handout.pdf>

9-Trauma due to MVA. The patient has spinal injury with hypotension and bradycardia. What is the type of shock?

- a. Neurogenic
- b. Hypovolemic
- c. Cardiogenic

Answer: A

Hypovolemic	Hypotension, tachycardia Weak thready pulse Cool, pale, moist skin U/O decreased	Decreased CO Increased SVR
Cardiogenic	Hypotension, tachycardia Weak thready pulse Cool, pale, moist skin U/O < 30 ml/hr Crackles, tachypnea	Decreased CO Increased SVR
Neurogenic	Hypotension, BRADYCARDIA WARM DRY SKIN	Decreased CO Venous & arterial vasodilation, loss sympathetic tone
Anaphylactic	Hypotension, tachycardia Cough, dyspnea Pruritus, urticaria Restlessness, decreased LOC	Decreased CO Decreased SVR
Septic	Hypotension, Tachycardia Full bounding pulse, tachypnea Pink, warm, flushed skin Decreased U/O, fever	Decreased CO, Decreased SVR

10- Soldier tries to have an excuse from the military, presented to the ER with symptoms of tremors, hypoglycemia. What is he using?

- a. Factitious injection of insulin.
- b. Metformin

Answer: A

Metformin will not cause hypoglycemia

Kumar booklet 689

11- Acute attack of cluster headache, what is the abortive treatment?

- c. Oxygen 100%
- d. Subcutaneous Sumatriptan

Answer: A

Both Oxygen 100% and Subcutaneous Sumatriptan are effective.

Abortive Therapy for Cluster Headache: ergotamine, triptans (sumatriptan, eletriptan, almotriptan, zolmitriptan), 100% O₂, prednisone, lithium. Prophylaxis:

Verapamil Abortive Therapy for Migraine Headache: ergotamine, triptans (sumatriptan, eletriptan, almotriptan, zolmitriptan). Prophylaxis (Given when there is 3 or more episodes per month): Propranolol (Best), CCB, TCA, SSRI, Topiramate, Botulinum toxins injections.

Reference: Master the Boards, UpToDate.

12- Semiconscious poly trauma patient, has difficulty breathing on bagventilator (Ambu bag), prepared for intubation. What is the next step?

- a. Go directly and intubate
- b. Cricoid pressure
- c. O₂ supplements
- d. Jaw thrust

Answer: C

Rapid-Sequence Intubation*

1. Pre-oxygenate with 100% oxygen
2. Apply cricoid pressure
3. Induction: etomidate (0.3 mg/kg), propofol (0.5–2 mg/kg) or ketamine (2 mg/kg) IV push
4. Neuromuscular blockade: succinylcholine 1.5 mg/kg IV push
5. Wait 30–45 sec
6. Intubate when optimal conditions achieved

Reference: 5-Minute Emergency Medicine Consult

smle ,2016

13- A patient ate a wild mushroom. Which of the following will be inhibited?

- a. RNA polymerase I
- b. RNA polymerase II
- a. RNA polymerase III
- b. DNA Gyrase

Answer: B

Reference: Handbook of Mushroom Poisoning: Diagnosis and Treatment + Wikipedia

14- Post-traumatic amnesia, vitally stable but he's complaining of pain in all of his 4 extremities. Which type of shock might be developed?

- a. Neuro
- b. Cardiac
- c. Hypovolemic
- d. Reversible

Answer: A

Reference: Toronto Notes

15- Person escaped from fire in his flat from 3rd floor and jumped through the window. What will be the most lifesaving in this case?

- a. Maintain Airway.
- b. Call for help.

Answer: B

BLS guideline

16- 4 members in the family developed nausea and diarrhea 8 hours after eating at a restaurant. Then after 48 hours they improved. Stool test showed oxidase positive gram +ve bacilli. What is organism?

- a. Shigella
- b. Salmonella

Answer: ?

Shigella (gram -ve)

Salmonella (gram -ve)

Bacillus cereus is a Gram-positive aerobic or facultatively anaerobic, motile, spore-forming, rod-shaped bacterium that is widely distributed environmentally. B. cereus is associated mainly with food poisoning.

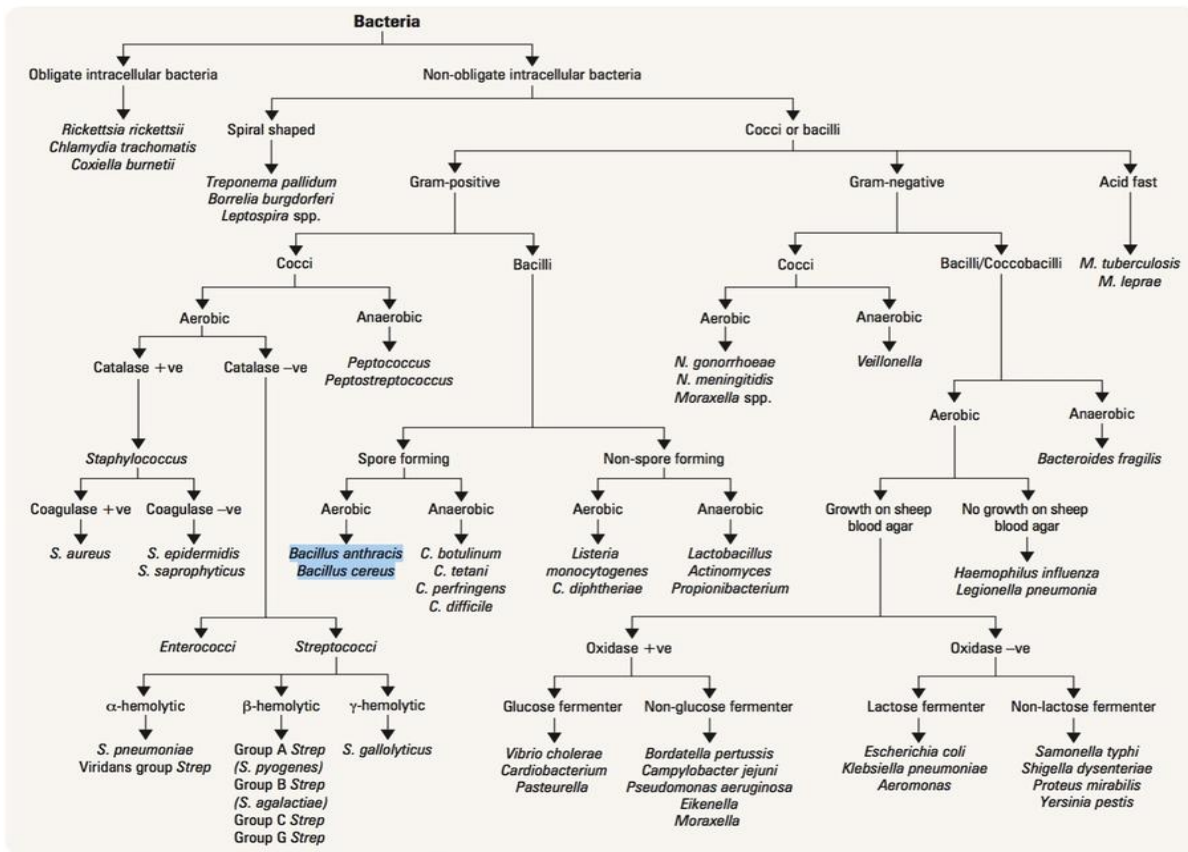


Figure 2. Laboratory identification of bacterial species

- 17- Aspirin toxicity resulting in which of the following?
- A-Respiratory alkalosis followed by metabolic acidosis

Answer: A

Phase 1: Respiratory stimulation- hyperventilation and respiratory alkalosis with al- kaluria
 Phase 2: Paradoxical aciduria (pH <6) and respiratory alkalosis
 Phase 3: Metabolic acidosis & hypokalaemia (± ongoing respiratory alkalosis)

Reference:

http://www.rch.org.au/clinicalguide/guideline_index/Salicylates_Posioning/
<http://emedicine.medscape.com/article/1009987-overview>

- 18- Which of the following babies needs immediate action?
 smle ,2016

- a. Cough and wheezing.
- b. Shallow spinal skin.
- c. Absent lower pulse.
- d. Yellowish discoloration.

Answer : C Absent lower pulse.

19- 36-year-old male having retrosternal chest pain that radiates to jaw and left arm for 20 minutes (vitals included). What is the first thing to give him?

- a. Aspirin.
- b. Morphine.
- c. Oxygen.
- d. IV nitroglycerin.

Answer: A

Early medical management

Accident and emergency

Rapid triage for chest pain (*Note: time is muscle*):

- Aspirin 150–300 mg chewed and clopidogrel 300 mg oral gel
- Sublingual glyceryl trinitrate 0.3–1 mg. Repeat
- Oxygen – nasal cannula 2–4 L/min (Fig. 16.21) if hypoxia is present
- Brief history/risk factors. Examination
- Intravenous access + blood for markers (plus FBC, biochemistry, lipids, glucose)
- 12-lead ECG
- Intravenous opiate, e.g. diamorphine (or morphine) 2.5–5 mg + antiemetic, e.g. metoclopramide 10 mg
- Beta-blocker (if no contraindication) for ongoing chest pain, hypertension, tachycardia
- If primary PCI available (see p. 738), give GP IIb/IIIa inhibitor. Alternatively, give thrombolysis (see below).

20- Male patient presented to the, ER tachypnea, hypotension and cardiac arrhythmia. What is your most correct next step is ?

- a. FAST to check abdominal hemorrhage
- b. Needle decompression
- c. Pericardiocentesis

Answer: A

Hypovolemic shock

21- You are working as an emergency doctor and you got a call that there was an accident at the nuclear plant and 2 men were exposed to nuclear radiation. They don't have any complaints right now. What will you advise them?

- a. Cover them up with dry thick blankets
- b. Give them aspirin and ask them to keep their legs moving
- c. Isolate them and advise them to stay calm
- d. Give them antibiotics

Answer: C

In hospital casualty will be finally decontaminated and kept in a clean special ward. The decontamination room must be at the entry of the hospital and should be sealed off from other premises and should have a separate ventilation system.

smle ,2016

References: http://www.apiindia.org/pdf/pg_med_2008/Chapter-17.pdf

- 22-** Young patient come to ER with palpitation, euphoria, visual hallucinations,
a. [Amphetamine poisoning](#)

Answer: A

CLINICAL FEATURES — Clinicians should consider the diagnosis of methamphetamine intoxication in any diaphoretic patient with hypertension, tachycardia, severe agitation, and psychosis. Acutely intoxicated patients may become extremely agitated and pose a danger to themselves, other patients, and medical staff

Reference: uptodate

<http://emedicine.medscape.com/article/812518-overview>

- 22-** Unconscious pt after ingestion of overdose sleep pills, breathing was reflex response breathing, you give him 2 breathing by mask , then you check pulse it was rapid and weak , what is next step:

- A. wait code blue team
- B. put pt in recovery position
- C. intubate and ventilation
- D. do CPR 5 cycle 30:2

Answer: C

Airway protection – Airway protection by endotracheal intubation should be performed early in the poisoned patient with depressed mental status, unless the cause is easily reversible (eg, opioid intoxication or hypoglycemia), because of the high risk for aspiration and its associated complications, particularly when gastric decontamination procedures need to be undertaken [40]. Tracheal intubation with mechanical ventilation is also indicated in the presence of severe acid-base disturbances or acute respiratory failure. Particularly when intubating a severely acidotic patient, it is important to prevent the development of a respiratory acidosis through inadequate minute ventilation. Occasionally, the management of high-grade physiologic stimulation may require sedation and/or paralysis with mechanical ventilation to limit the extent of complications such as hyperthermia, acidosis, and rhabdomyolysis. One rare exception to this important principle of aggressive airway management is salicylate poisoning, in which mechanical ventilation should be avoided unless absolutely necessary.

Reference: uptodate

23 - child girl obese try to suicide and eat alot of drug because of her friend and came to the ER?

- A. referral immediate to the psychiatry
- B. treatment for acute depression
- C. something
- D. another something

Answer: A not sure ,the first thing to do is to deal with toxicity

- ensure patient safety: close observation, remove potentially dangerous objects from person and room
- assess thoughts (ideation), means, action (preparatory, practice attempts), previous attempts
- admit if there is evidence of intent and organized plan, access to lethal means, psychiatric disorder, intoxication (suicidal ideation may resolve with few days of abstinence)
- patient may require certification if unwilling to stay voluntarily
- do not start long-term medications in the ED
- psychiatry or Crisis Intervention Team consult

Reference: Toronto Notes

24- anterior abdominal stab wound omuntam come through the wound ?

- A. Fast
- B. CT
- C. Exploratory laparotomy

Answer: C

Reference: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4379793/>

25- patient came from RTA and the staff preparing him for intubation he devolved low ventilation on bivalve what to do ?repeated

- B. Proceed to intubation
- C. jaw thrust
- D. More head tilt
- E. Cricoid pressure??

Answer: A, not sure

Indications for intubation: 1) inadequate oxygenation 2) inadequate ventilation 3) Anticipate development of inadequate oxygenation/ventilation 4) protect the airway.

References: <http://www.up.ac.za/media/shared/Legacy/sitefiles/file/45/1335/17594/grandroundtopics/2014/difficultairwaymxinicumay2014jmatshe.ppt>

26- Pt work outdoor in temp 42 c. Tired and Complain of cramp abdominal pain .. Lower limb pain and fever. Otherwise normal, what to do?

- A. electrolytes and oral replacement fluid
- B. warming
- C. cooling
- D. Heat Stroke .

Answer: A

Reference: [uptodate](#)

27- Patient is bleeding the baro receptor activated result in increased tachycardia- and decrease of?

- A. HR
- B. Ventricular rate
- C. Coronary artery flow

Answer: A

Circulatory Reflex Initiated by the Baroreceptors. After the baroreceptor signals have entered the tracts solitaires of the medulla, secondary signals inhibit the vasoconstrictor center of the medulla and excite the vagal parasympathetic center. The net effects are (1) vasodilation of the veins and arterioles throughout the peripheral circulatory system and (2) decreased heart rate and strength of heart contraction.

Therefore, excitation of the baroreceptors by high pressure in the arteries reflex causes the arterial pressure to decrease because of both a decrease in peripheral resistance and a decrease in cardiac output. Conversely, low pressure has opposite effects, reflex causing the pressure to rise back toward normal.

Reference: [Guyton and Hall Textbook of Medical Physiology 12th Ed](#)

28- Atropine side effect?

- A. Dry mouth

Answer: A

Frequent effects include xerostomia (dry mouth), dry skin, blurred vision, cycloplegia, mydriasis, photophobia, anhidrosis, urinary hesitancy and retention, tachycardia, palpitation, xerophthalmia, and constipation, which may appear at therapeutic or subtherapeutic doses. Xerostomia is the dose-limiting effect

Reference: <https://www.drugs.com/sfx/atropine-side-effects.html>

29- Patient came to you with history of bee sting with light headed and shortness of breath what is the Rx ?

- A. Oral histamine reassurance
- B. Fluids and elevate the leg
- C. Sc epinephrine , IV histamine

Answer : C, ideal answer is IM epinephrine

Acute Severe Systemic Reaction/ Anaphylaxis

ABCs, Epinephrine SC/IV, Antihistamines IV, Corticosteroids

Reference: [5-Minute Emergency Medicine Consult](#)

smle ,2016

30- Which type of insulin is used in DKA?

A. Regular (short acting)

Answer: A

Only short-acting insulin is used for correction of hyperglycemia in DKA

Reference :kumar 1020

31- man got a bee sting then his wife trying look for the epinephrine what it gonna inhibit?

A. leukotriene release from macrophages

B. cross reactivity with the cardiac..

C. inhibit immunocomplex formation

Answer :A

- **Adrenaline is the drug of choice.**
- **α 1-agonist, reverses -peripheral vasodilation by inflammatory mediator release, ↓ oedema.**
- **β activity dilates bronchial airways, ↑ myocardial contractility, ↓ histamine and LT release and ↓ severity of IgE-mediated allergic reactions.**

Reference: <http://www.slideshare.net/nidafkhan1/adrenaline-noradrenaline>

32- Pt conscious with multiple injuries. How do you maintain airway?

A. Mask

B. Oro pharyngeal airway

C. Nasopharyngeal

D. Endotracheal Intubation

Answer : A mask

33- Depressed pt with HTN Brought by family to ER for drug overdose palpitation diaphoresis and ECG shows arrhythmia. What is the possible drug?

A. SSRI

B. Digoxin

Answer. B or if there is TCA in the choices

Patients have survived overdoses of each of the SSRIs that were many times their usually effective antidepressant doses without serious toxicity: no arrhythmias, no disturbance of blood pressure, no seizures, no coma, no respiratory depression. All of these adverse effects do occur with overdose of TCAs as little as 5 times their therapeutic doses.

Digoxin toxicity may cause almost any dysrhythmia. Sinus bradycardia and AV conduction blocks are the most common ECG changes in the pediatric population, while ventricular ectopy is more common in adults. Nonparoxysmal atrial tachycardia with heart block and bidirectional ventricular tachycardia are

particularly characteristic of severe digitalis toxicity

Reference: <http://www.emedexpert.com/compare/ssris-vs-tca.shtml>,
Medscape

34- Old pt with high cholesterol level measured before 4 months and he is on a diet. Came to ER complaining of chest pain. What will concern you?

- A. Current symptoms
- B. Cholesterol level before 4 m

Answer :A

35- Pt in ER MVA. First thing you do?

- a. ABC

36- gunshot with wound bowel perforation. What antibiotics you should give

answer: -

IV antibiotics: Antibiotics with coverage against gram-negative and anaerobic organisms: Ampicillin/sulbactam, Cefotetan, Cefoxitin, Piperacillin/tazobactam, Ticarcillin/clavulanate.

Reference: 5-Minute Emergency Medicine Consult

37- Case of RTA and they found difficulty in intubation what should they do :

- A. just proceed to intubation whatever.
- B. increase chit tilt .
- C. press on cricoid

Answer:C

Reference:

https://www.aci.health.nsw.gov.au/__data/assets/pdf_file/0011/195167/AirwayTrauma_Summary.pdf

38- Patient has acute MI. which of the following enzymes will be elevated?

- A. Creatine kinase.
- B. alanine aminotransferase.
- C. Alkaline phosphatase.

Answer :A

39- Patient had bee sting on the hand yesterday, he is presenting to you with redness and itching on the bite site. What is the treatment?

- A. Oral steroid.
- B. Antihistamine.
- C. Oral Antibiotic.

Answer: B

If the patient complaint of large local swelling then treatment is steroid
But if complaint from itching give oral antihistamine

Reference : uptodate

40- Patient had bee sting and presented to you immediately with shortness of breath and lightheadedness. What is the treatment?

- A. SC epinephrine.
- B. IM epinephrine

Reference : uptodate

41- Patient with ischemic stroke presented after 6 hours. What is the treatment?

- a. Tissue plasminogen activator
- b. Aspirin
- c. Clopidogrel

answer : B aspirin

Presentation within 3-4.5 h and no contraindication to thrombolysis
→first line treatment 1 tissue plasminogen activator

Presentation after 4.5 h or contraindication to thrombolysis
→first line aspirin

Reference: BMJ

42- Unconscious patient after RTA .. Ventilation with bag mask was difficult .. What to do ?

- A. Exaggerate jaw thrust
- B. Increase head tilt
- C. Coricoid pressure
- D. Intubation

Answer:D

References: <http://www.up.ac.za/media/shared/Legacy/sitefiles/file/45/1335/17594/grandroundtopics/2014/difficultairwaymxinicumay2014jmatshe.ppt>

43- Young healthy guy comes to ER after light headedness nausea and heavy breathing 20 mins before admission. What most appropriate thing to do?

- A. Alcohol concentration
- B. CT brain

Answer: B

Alcohol intoxication as a cause of altered mental status is a diagnosis of exclusion and should be considered only after ruling out more serious conditions such as head trauma, hypoxia, hypoglycemia, hypothermia, hepatic encephalopathy, and other metabolic and physiologic derangements. For head trauma in particular, existing clinical decision rules such as the Canadian CT Head Rule and NEXUS criteria may not have adequate sensitivity in intoxicated patients with minor head injury.

Uptodate: <http://www.uptodate.com/contents/ethanol-intoxication-in-adults#H4>

44- Elderly asthmatic patient comes to regular checkup. His wife has osteoporosis. He's recurrent kidney stones. he's taking calcium and vitamin supplements. Labs show high ca, normal phosphate, PTH high. Most diagnosis is:

- a. Sarcoidosis.
- b. Paget's disease.
- c. Vit D intoxication.
- d. Hyperparathyroidism.

Answer:D

45- Child with traumatic injury to elbow. X-ray will show?

- A. Posterior fat pad
- B. Anterior fat pad

Answer: A

Supracondylar fracture over 60% of all paediatric elbow injuries

Posterior fat pad sign indicates effusion/injury: In children, it implies supracondylar fracture. Anterior fat pad can found in normal x-rays

Reference:5-Minute Emergency Medicine Consult, <http://radiopaedia.org/articles/paediatric-elbow-radiograph-an-approach>

46- Long scenario .. Pt brought to ER with multiple injuries in head . Chest, abdomen , proximal upper limb is amputated ,blood profuse, hypotensive , on o₂ face mask 6L , what todo?

- A. Tournique
- B. Clamp vessels
- C. OR
- D. mantain airway

Answer : D

Three goals exist in the emergency department treatment of the patient with hypovolemic shock as follows: (1) maximize oxygen delivery - completed by ensuring adequacy of ventilation, increasing oxygen saturation of the blood, and restoring blood flow, (2) control further blood loss, and (3) fluid resuscitation

Refernce: Medscape.

47- aspirin toxicity with ABG : show low CO₂ and low HCO₃ ? with acidic PH ? . cause ?

- A. resp. alkalosis followed by metabolic acidosis
- B. metabolic acidosis followed by resp.alkalosis
- C. metabolic acidosis

Answer: A

Respiratory alkalosis progressing to metabolic acidosis is the key for aspirin overdose diagnosis. Aspirin interferes with oxidative phosphorylation increasing lactate levels. Reference:

Master the board page: 604

48- child ingested iron
what is treatment:

Answer: -

Deferoxamine is the iron-chelating agent of choice. Deferoxamine binds absorbed iron, and the iron- deferoxamine complex is excreted in the urine.

Reference: Medscape

49- in emergency department pt come with close head truma and loss of consciousness what is the first thing todo:

smle ,2016

- A. intubation and hyperventilation
- B. assess airway
- C. pupillary response
- D. Glasgow coma scale

Answer: B

Assess Airway. Establishing and maintaining airway patency takes precedence over all other treatment.

Reference: First Aid Step 2 page 466

50- An alcoholic comes to you with symptoms of alcohol withdrawal. Last drink he consumed was 2 days back. What drug will you give?

- a. Naloxone
- b. Diazepam
- c. Nicotine
- d. Disulfiram

Answer : B

Diazepam. Basic protocol for alcohol withdrawal treatment is diazepam 20mg PO every 2hrs til regression of severe withdrawal symptoms + Thiamine 100 mg IM then 100 mg PO OD for 3 days in addition to hydration. Reference: Toronto notes.

51- Female came to ER .. agitated.. pupil is dilated.. she is toxic with what?

- A. Organophosphate
- B. ????????
- C. ????????

agitation and dilated pupils (mydriasis) are characteristic for anticholinergics toxicity e.g. atropine, TCA, carbamazepine.

Reference: Toronto notes, Emergency medicine.

52- Young female stayed out in sun at 42 degree .. she came to ER later tired.. muscle cramp.. vitally stable except T: 38 how to manage?

- A. Normal saline
- B. Cold back

Answer:A

According to uptodate If no sign of heat stroke (41c or confusion)no need for cooling, replacement of fluid and electrolyte is enough
Heat Stroke - Rapid reduction of the core body temperature is the cornerstone of treatment because the duration of hyperthermia is the primary determinant of

outcome. Once heatstroke is suspected, cooling must begin immediately and must be continued during the patient's resuscitation.

Reference: <http://emedicine.medscape.com/article/166320-treatment>

smle ,2016

53- elderly patient had motor vehicle accident, there is problem with ventilation. what is next step:

- A. exaggerated jaw thrust
- B. more head tilt
- C. intubation

Answer:C

C. Failure of ventilation is an indication for endotracheal intubation.

Reference: Medscape.

54- Dog bite infections?

- A. Gram negative bacillus
- B. Viral
- C. parasit

Answer:A

The most common pathogens in dog bites are *Pasteurella* spp. (both *Pasteurella multocida* and *Pasteurella canis*), *Staphylococcus* and *Streptococcus* spp., and the fastidious Gram-negative rod *Capnocytophaga canimorsus* (previously known as the CDC and Prevention Group Dysgonic Fermenter-2). Treatment: is amoxicillin/clavulanate plus tetanus vaccination booster if more 5 years since last injection.

Reference: Master the board.

Reference: http://www.medscape.com/viewarticle/739023_4

55- patient presented to ER with history of drug overdose and coma for the last 8 hours on examination absent gag reflex best management is:

- A. IV naloxone
- B. Gastric lavage
- C. Endotracheal intubation
- D. charcol

Answer: C

Airway protection – Airway protection by endotracheal intubation should be performed early in the poisoned patient with depressed mental status, unless the cause is easily reversible (eg, opioid intoxication or hypoglycemia), because of the high risk for aspiration and its associated complications, particularly when gastric decontamination procedures need to be undertaken

<http://www.uptodate.com/contents/general-approach-to-drug-poisoning-in-adults>

56- pt had trauma, presented with tachycardia , decrease breathing and hypotension , what is the first thing you will do ?

Tension pneumothorax is suspected.

So Immediate attention to the ABCs (airway, breathing, circulation) while assessing

smle ,2016

vital signs and oxygen saturation is paramount, particularly in patients with thoracic trauma. Definitive Management includes Needle thoracostomy at 2nd intercostal space at Mid clavicular line followed by chest tube at 5th intercostal space at anterior axillary line.

Reference: Toronto notes.

57- case head trauma on parietal lobe subdural hematoma which artery is injured?

- a- superficial temporal
- b- mid cerebral
- c- Rt.cerebral

answer: C

Middle cerebral artery supplies parietal lobe. however, subdural hematomas are most commonly caused by tearing of the bridging veins that drain from the surface of the brain to the dural sinuses. Arterial rupture can also result in Subdural Hematoma and most of them were caused by injuries to small cortical arteries.

Reference: <http://www.uptodate.com/contents/subdural-hematoma-in-adults-etiology-clinical-features-and-diagnosis#H2>

58- Patient is eating at a restaurant with his friend; he choked with a piece of meat, his friend who was an emergency assistant performed Heimlich maneuver but without benefit. He then decided to perform a tracheostomy, during tracheostomy which of the following structures will be cut?

- A. Cricoid cartilage
- B. Thyroid cartilage
- C. Cricothyroid membrane

Answer: C

59- patient MVA and come with fracture of femur , tibia and fibula what is your action :

- A. refer to orthopedic

Answer: A

Parenteral analgesia should be administered when appropriate. open fractures must be diagnosed and treated appropriately (by orthopedician) Tetanus vaccination should be updated, and appropriate antibiotics should be given in a timely manner.

<http://emedicine.medscape.com/article/826304-treatment#d10>

60- young man close the door on his nail color become blue under nail what will u do

- A. evacuate hematoma

smle ,2016

- B. remove the nail
- C. reassurance

Answer: C

A painless and small subungual hematoma usually requires no treatment and its according to the nail edges status. evacuation is indicated in the presence of a painful subungual hematoma with the nail edges intact.

Reference: <http://www.webmd.com/skin-problems-and-treatments/bleeding-un-der-nail?page=2> , <http://emedicine.medscape.com/article/82926-overview#a2>

61- pt involved in MVA the impact especially in forehead examination forehead laceration & fx , discharge from nose clear positive glucose test (I think mean CSF leak) Which cranial n affected :

- A. optic
- B. olfactory
- C. ophthalmic
- D. oculomotor

Answer: D not sure

Cerebrospinal fluid rhinorrhea in the acute phase after trauma has been reported in as many as 39% of the patients with skull base fractures.[104] Patients present with a variety of symptoms depending on the acuteness of the event. In the acute phase following the traumatic event, patients may present with epistaxis, nasal discharge, periorbital ecchymosis, chemosis, oculomotor impairment, anosmia, motor deficit, open-head injury with CSF leakage, loss of vision, cranial nerve deficits (most frequently, first third and fifth–seventh cranial nerve injuries), meningitis, and pneumocephalus

Reference: http://www.medscape.com/viewarticle/765460_3

62- What is the treatment of Aspirin toxicity?

- A. Alkalanization of urine
- B. Activated charcoal
- C. Gastric lavage

Answer: A.

Alkalinization of urine.

Reference: First Aid step 2 page 482

63- Which of the following substance ingestion is a contraindication to gastric lavage?

- A. Aspirin
- B. Benzodiazepine
- C. Hydrocarbons

Answer: C

Caustics ingestion (drain cleaners) is a contraindication to Gastric lavage.

Reference: Master the board page: 602

CO Poisoning	See <i>Inhalation Injury</i> , ER46 Supportive care 100% O ₂
Cyanide	Hydroxocobalamin
Digoxin	Decontaminate (activated charcoal) Digoxin-specific Ab fragments 10-20 vials IV if acute; 3-6 if chronic 1 vial (40 mg) neutralizes 0.5 mg of toxin
Ethanol	Thiamine 100 mg IM/IV Manage airway and circulatory support
Ethylene Glycol/ Methanol	Fomepizole (4-methylpyrazole) 15 mg/kg IV load over 30 min, then 10 mg/kg q12h OR Ethanol (10%) 10 mL/kg over 30 min, then 1.5 mL/h
Heparin	Protamine sulfate 25-50 mg IV
Insulin IM/SC/ Oral Hypoglycemic	Glucose IV/PQ/NG tube Glucagon: 1-2 mg IM (if no access to glucose)
MDMA	Decontaminate (activated charcoal), supportive care
Opioids	See <i>Universal Antidotes</i> , ER48
TCA's	Decontaminate (activated charcoal) Aggressive supportive care NaHCO ₃ bolus for wide QRS/seizures

64- Pt with shock & Cherry red skin;

- A. Bacteremia
- B. Septicemia
- C. Carbon monoxide toxicity

Answer:C

65- Old man came to ER with SOB cough, fever, what is the next step of management.

- A. Put him in a negative pressure room
- B. Chest x-ray
- C. Antibiotics

answer: B

X- Ray ,cough and fever with respiratory infection order CXR to notes any interstitial changes .

66- Pt dose not complain of anything, has sudden knee swelling? What is the best thing to do?

answer: X-ray

If history of trauma, laboratory testing is unnecessary, X-ray

ESR, CRP, WCC: normal results may be useful in excluding inflammatory joint disease or septic arthritis.

Reference: <http://patient.info/doctor/knees-that-swell>

67- Child on picnic with family, presented to the ER with high suspicion of foreign body inhalation. The most common location in the chest will be

- a- Right Main Bronchus
- b- Left Main Bronchus
- c- Carina of Trachea
- d- Inlet of Larynx

Answer: A

Right Main Bronchus 52% of cases

Reference: uptodate

68- Child swallowed battery, now it is lodged in esophagus ?

- A. Endoscopic removal
- B. Wait ..

Answer:A

Endoscopic removal

smle ,2016

Reference: <http://www.poison.org/battery/guideline>

69- Man have 41 c temp with muscle spasm mangment?

- a. core cooling
- b. syprying warm
- c. warm iv

Answer: A

70- Healthy baby was in picnic with his family Suddenly he get SOB come to ER the chest oscultation

:RT wheezing in rt hemithorax, What you will find in the CXR (foreign body),?!

- A. Right lower lobe consolidation
- B. Hyperinflation with middle lobe shift
- C. Atelectasis

Answer;B

Children will more often display signs of airtrapping while adults will more often show atelectasis 80% of aspirated foreign bodies will be non-opaque on conventional radiography

Reference: <http://learningradiology.com/archives2012/COW%20513-Aspirated%20FB/fbcorrect.html>

Answers only .

mild burn ??? cold water

TABLE 2: GENERAL CARE OF MINOR WOUNDS AND BURNS¹⁻⁶**Nonprescription First Aid Products for Minor Wounds and Burns**

General care for minor wounds	General care for minor burns with no blisters
<ul style="list-style-type: none"> • Clean area thoroughly with soap and warm water. 	<ul style="list-style-type: none"> • Gently apply compress of cool tap water for 5 to 10 minutes or hold affected area under cool running water to decrease swelling. Never apply ice to a burn. • Clean the burn area with water and mild soap
<ul style="list-style-type: none"> • Apply a thin layer of topical antibiotic ointment to the wound area to reduce or prevent infection. 	<ul style="list-style-type: none"> • If skin is not broken, apply a thin layer of skin protectant or topical anesthetic. If skin is broken, apply topical antibiotics to prevent infection. • Never break a blister.
<ul style="list-style-type: none"> • Cover the affected area with a sterile bandage to create a moist healing environment to promote healing and minimize incidence of scarring. 	<ul style="list-style-type: none"> • Apply nonadherent dressing or skin protectant to area of the burn. Do not wrap burns in occlusive dressings.
<ul style="list-style-type: none"> • Change dressing as needed. 	<ul style="list-style-type: none"> • Change dressing as needed.

Treatment of bee sting.

Answer: -

ABC management

Systemic reactions:

Epinephrine for respiratory symptoms/hypotension

Antihistamines—H1 (diphenhydramine) and H2 (cimetidine, ranitidine, or famotidine) blockers

Steroids (prednisone, methylprednisolone, or dexamethasone)

Inhaled β -agonist for wheezing/shortness of breath

For persistent hypotension: 0.9% NS IV fluid resuscitation or Vasopressor

Removal of remnants of stinger at site of envenomation by scraping, not squeezing

Local reactions: Cool compress – Elevation - Topical antihistamine/topical steroidal cream as needed

Reference: 5-Minute Emergency Medicine Consult, Toronto Notes and Med- scape.

23- Contraindication for gastric lavage?

Answer: -

- Initial resuscitation incomplete
- Risk assessment indicates good outcome with supportive care and antidote therapy alone
- Unprotected airway where there is a decreased level of consciousness or risk assessment indicates potential for these complications during the procedure
- Small children
- Corrosive ingestion
- Hydrocarbon ingestion

Reference: <http://lifeinthefastlane.com/ccg/gastric-lavage/>

What is the degree of shock in this patient? Answer:
?

Table 5. Assessment of Hemorrhagic Shock

	Class I	Class II	Class III	Class IV
Percentage blood loss	0-15%	15-30%	30-40%	>40%
Percentage TBW loss	0-3%	3-6%	6-9%	>9%
Heart rate	<100	>100	>120	>140
Blood pressure	Normal	Normal	Decreased	Decreased
Treatment	Rapid infusion of 1-2 L of crystalloid (e.g. Ringer's lactate), maintenance fluids	Rapid infusion of 2 L of crystalloid and re-evaluate	Rapid infusion of 2 L of crystalloid, replace losses with crystalloid (1:3) or pRBCs, colloid (1:1)	Rapid infusion of 2 L of crystalloid, replace losses with crystalloid (1:3) or pRBCs, colloid (1:1)
Note			Goal is to maintain urine output at >0.5 mL/kg/h	Goal is to maintain urine output at >0.5 mL/kg/h

Reference: Toronto Notes

- after intubation still low in spo2 wt u will do Answer:

Causes of hypoxia occurring soon after intubation: Think DOPES:

Displacement of the endotracheal tube (ETT)

Obstruction of the ETT

Patient — especially pneumothorax; also: pulmonary embolism, pulmonary edema, collapse, bronchospasm

Equipment — ventilator problems

'Stacked breaths' — a reminder about bronchospasm and ventilator settings.

First step in managing an intubated and ventilated patient who is hypoxic: Disconnect the ventilator and administer high-flow 100% oxygen using a bag-valve-mask.

Reference: <http://lifeinthefastlane.com/pulmonary-puzzle-012/>

bee sting treatment? answer: -

For local reactions:

Provide supplemental oxygen

Diphenhydramine limits the size of the local reaction. Clean the

wound and remove the stinger if

present. Apply ice or cool packs.

Elevate the extremity to limit edema.

if generalized reactions developed; Treatment should include an initial intravenous (IV) bolus of 10-20 mL/kg isotonic crystalloids in addition to diphenhydramine and epinephrine.

Reference: <http://emedicine.medscape.com/article/768764-treatment#d9>

Eyes	Verbal	Motor
4 – Spontaneous	5 – Oriented	6 – Obeys commands
3 – To Verbal	4 – Confused	5 – Localizes
2 – To Pain	3 – Inappropriate	4 – Withdraws
1 – No response	2 – Incomprehensible	3 – Flexion
	1 – No response	2 – Extension
		1 – No response

80. CPR in child according to American heart association in presence of 2 rescuer:

- a. 15 compression and 2 ventilation
- b. 30 compression and 2 ventilation

Answer : A

Reference: <http://emedicine.medscape.com/article/2058889-overview>

81. case about someone stabbed in the 4th right intercostal space, what the structure behind it?

right horizontal fissure

Ans: A

- 1) Horizontal Fissure: 4th Intercostal Space OR inferior border of 4th Rib
- 2) Oblique Fissure: 6th Intercostal Space OR inferior border of the 6th Rib

Reference: <https://quizlet.com/7143345/lungs-pleura-mediastinum-flash-cards/>

82. basal skull fracture cavernous sinus affected >> not sure, which muscle is intact?

trapezius
Sternocleidomastoid

Answer: ?

-

More often, oculomotor palsy occurs together with that of other ocular motor nerves contained in the cavernous sinus in case of skull base fracture.

Reference: <http://medind.nic.in/icf/t07/i2/icft07i2p89.pdf>

83. man make RTA he was conscious, oriented, alert, but his extremity *+, محقق? type of shock

answer: hemorrhagic shock

ffff. Child ate a number of iron tablets presented with severe symptoms including constipation and bloody stool nausea and vomiting and drowsiness how

smle, 2016

would you treat him:

- Deferoxamine
- dialysis

Ans : A

explanation:-

Severe poisonings will require IV chelation therapy - a series of IVs containing deferoxamine mesylate (Desferal), a chemical that binds to iron in a cell and is then excreted in urine.

- . Deferoxamine can be administered by IV or injection, but the IV route is preferred for easier dose adjustment. A change in urine color (to a red-orange) and low blood pressure are common side effects with deferoxamine treatment.
- . Usually children require no more than 24 hours of therapy.

Orogastric lavage, or pumping of the stomach, can be considered, but it is generally only helpful if performed within 1 hour of swallowing the pills. Insertion of the tube can cause complications, and many pills may not fit through the ports of a lavage tube if they are not disintegrated.

If ingestion of other medications is suspected, the physician may give the child activated charcoal to drink. Activated charcoal does not bind to iron but may be useful in adsorbing other medications.

Reference:

http://www.emedicinehealth.com/iron_poisoning/page3_em.htm

85. What medication you can give to prevent heroin withdrawal symptom?

Methadone

Answer: <http://emedicine.medscape.com/article/287790-treatment>

86. Pt with Digoxin toxicity, what will order ?

lidocaine

Fb immunoglobulin

Answer: B

Digoxin Immune Therapy. Digoxin immune Fab (Digibind) is an immunoglobulin fragment that binds with digoxin. It is currently considered first-line treatment for significant dysrhythmias (eg, severe bradyarrhythmia, second- or third-degree heart block, ventricular tachycardia or fibrillation) from digitalis toxicity.

Reference:

<http://emedicine.medscape.com/article/154336-treatment>

87. ptn came to ER with multiple fracture no loss of conscious with Low bp , tachycardia , normal RR, O2 saturation = 95% ?

IV fluid

Save airway

Answer: B

All resuscitations should be performed using Advanced Trauma Life Support (ATLS) guidelines. For the individual physician, assessment of the polytraumatized patient is performed using a stepwise longitudinal approach, in which the airway is handled first and no procedures are initiated until the airway is secured. Then, breathing and circulation are addressed

Reference: Medscape

88. aspirin toxic: Answer: - alkalinization of urine.

89. Pt eat multiple drug what do (not give time)

A. Gastric leavage

B. Activite charcoal

Answer: B *in Acute situation*

Reference and for more information: http://www.uptodate.com/contents/gastrointestinal-decontamination-of-the-poisoned-patient?source=search_result&search=Gastrointestinal+decontamination+of+the+poisoned+patient&selectedTitle=1~150

90-A patient presented to ER with ingestion of multiple iron tablets. What is your next step?

- A. Induce emesis
- B. Ipecac syrup
- C. Gastric lavage
- D. Wait and monitor

Answer: D

if asymptomatic wait 6 h then discharge

http://www.emedicinehealth.com/iron_poisoning/page3_em.htm

91- female with right upper abdomen pain and fever no jaundice.. what is the management :

- A. Emergent surgery.
- B. Iv fluid and antibiotics.
- C. Discharge

Answer: B

91-Key diagnostic factors

Acute cholecystitis is acute gallbladder inflammation, and one of the major complications of cholelithiasis or gallstones. It develops in up to 10% of patients with symptomatic gallstones. [1] In most cases (90%), it is caused by complete cystic duct obstruction usually due to an impacted gallstone in the gallbladder neck or cystic duct, which leads to inflammation within the gallbladder wall.

RUQ pain (common)

- Usually intense, lasting more than 30 minutes.
- May begin in the epigastrium or left upper quadrant and move to the right subcostal region. Most often occurs after eating a fatty meal.

fever (common)

- Persistent pain and fever suggest either more complicated disease such as abscess formation, perforation, or acalculous cholecystitis.

jaundice (uncommon)

 Mild jaundice present in about 10% of patients with the

smle ,2016

condition. [1] Due to inflammation and oedema around the biliary tract and direct pressure on the biliary tract from a distended gallbladder, calculi within the common bile duct, or obstruction by a stone impacted in the gallbladder neck (Mirizzi's syndrome).

supportive care

- Mild (grade I) disease is defined as acute cholecystitis in a healthy patient with no organ dysfunction and mild inflammatory changes in the gallbladder; responds to initial medical treatment. [29]
- When a diagnosis of acute cholecystitis is suspected, medical treatment, including NPO, intravenous fluids, antibiotics, and analgesia,

output, should be initiated.

together with close monitoring of blood pressure, pulse, and urinary

<http://bestpractice.bmj.com/best-practice/monograph/78/treatment/detail-s.html>

92-MTX toxicity what to give:

A- folic acid

B- folinic acid (something like that) C- steroid

Answer: leucovorin

92- Therapeutic use and toxicity of high-dose methotrexate

The guiding principles for prevention of HDMTX toxicity are as follows (see 'Practical tips for managing HDMTX' above):

- Pretreatment assessment of renal function is needed prior to each dose; if feasible, third-space fluid collections (pleural effusions, ascites) should be drained prior to treatment, as they provide a drug reservoir that prolongs MTX excretion. (See 'Pretreatment assessment' above.)

Concomitant use of proton pump inhibitors may delay elimination, and their use should be avoided, if possible, during HDMTX treatment. (See 'Use of proton pump inhibitors' above.)

- Maintaining adequate hydration and urine output are essential for rapid clearance of HDMTX. Aggressive hydration (2.5 to 3.5 liters of IV fluid/m² per day) should start four to 12 hours before the MTX infusion is begun and continue until plasma MTX levels are ≤ 0.1 microM. (See 'Hydration and

smle ,2016

urinary alkalinization' above.)

Urinary alkalinization, usually with sodium bicarbonate added to each liter of IV fluid hydration, should be used to maintain the urine pH ≥ 7.0 until plasma MTX levels are below 0.1 microM.

● Leucovorin rescue is promptly initiated within 24 to 36 hours of the start of the MTX infusion, with continued leucovorin until MTX plasma levels are < 0.1 microM. (See 'Leucovorin administration' above.)

● Serum creatinine, electrolytes, and plasma MTX concentrations are monitored daily, with modification of the leucovorin dose if plasma MTX levels are ≥ 5 to 10 microM at 24 hours, ≥ 1.0 microM at 48 hours, and/or ≥ 0.1 microM at 72 hours. (See 'Laboratory monitoring during treatment' above.)

<http://www.uptodate.com/contents/therapeutic-use-and-toxicity-of-high-dose-methotrexate?source=machineLearning&search=Therapeutic+use+and+toxicity+of+high-dose+methotrexate&selectedTitle=1~79§ionRank=4&anchor=H40#H40>

93- RTA with hypovolemic shock signs , Hg low , what to give initially

A- rengar lactate

B- packed RBC

C- whole blood transfusion

Answer: A

93-Initial management of trauma in adults



Most trauma patients with hypotension or signs of shock (eg, pale, cool, moist skin) are bleeding, and patients with severe hemorrhage have significantly higher mortality (table 3) [59].


Initial fluid resuscitation for these patients may consist of a bolus of intravenous crystalloid (eg, 20 mL/kg isotonic saline).

However, patients with obvious severe or ongoing blood loss

smle ,2016

should be transfused immediately with type O blood (women of childbearing age should be transfused with O negative blood). While mildly unstable patients may be treated with isotonic crystalloid in lieu of blood, unnecessary infusion of crystalloid should be avoided.

<http://www.uptodate.com/contents/initial-management-of-trauma-in-adults?source=machineLearning&search=road+traffic&selectedTitle=1~150§ion-Rank=1&anchor=H1929661#H1929754>

 The particular type of IV solution selected beyond this depends on the patient's needs. For instance, based on the osmotic movement of water as described previously, a person with a low volume of blood may benefit from a hypertonic or isotonic crystalloid solution that will increase blood volume, whereas a hypotonic crystalloid would be more appropriate for a person suffering from

In the prehospital setting, LR and NSS are commonly used for fluid replacement because of their immediate ability to expand the volume of circulating blood. However, over the course of about 1 hour, approximately two-thirds of these IV fluids eventually leave the blood vessels and move into the cells. Some authorities recommend that for every 1 liter of blood lost, 3 liters of an isotonic crystalloid be administered for replacement. This is only a guide, and the volume of IV fluid administered should be based on medical direction or local protocol, as well as the patient's clinical response to fluid administration.

<http://catalogue.pearsoned.co.uk/samplechapter/0131186116.pdf>

94- patient presented to the ER, unable to talk, his face is blue, what is the next step in the management?
A- open mouth check for any foreign body.

94-Part 5: Adult Basic Life Support

2010 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care

Foreign bodies may cause either mild or severe airway obstruction. The rescuer should intervene if the choking victim shows signs of severe airway obstruction. These include signs of poor air exchange and increased breathing difficulty, such as a silent cough, cyanosis, or inability to speak or breathe. The victim may clutch the neck, demonstrating the universal choking sign. Quickly ask, "Are you choking?" If the victim indicates "yes" by nodding his head without speaking, this will verify that the victim has severe airway obstruction. http://circ.ahajournals.org/content/122/18_suppl_3/S685
Relief of Foreign-Body Airway Obstruction

When FBAO produces signs of severe airway obstruction, rescuers must act quickly to relieve the obstruction. If mild obstruction is present and the victim is coughing forcefully, **do not interfere with the patient's spontaneous coughing and breathing efforts.** **Attempt to relieve the obstruction only if signs of severe obstruction develop: the cough becomes silent, respiratory difficulty increases and is accompanied by stridor, or the victim becomes unresponsive.** Activate the EMS system quickly if the patient is having difficulty breathing. If more than one rescuer is present, one rescuer should phone 911 while the other rescuer attends to the choking victim.

The clinical data about effectiveness of maneuvers to relieve FBAO are largely retrospective and anecdotal. For responsive adults and children >1 year of age with severe FBAO, case reports show the feasibility and effectiveness of back blows or "slaps,"^{276–278} abdominal thrusts,^{275–277,279,280} and chest thrusts.^{276,281} In 1 case series of 513 choking episodes for which EMS was summoned,²⁷⁵ **approximately 50% of the episodes of airway obstruction were relieved prior to arrival of EMS. EMS intervention with abdominal thrusts successfully relieved the obstruction in more than 85% of the remaining cases. The few patients with persistent obstruction usually responded to suction or the use of Magill forceps. Less than 4% died.**²⁷⁵

http://circ.ahajournals.org/content/122/18_suppl_3/S685

If obstruction is total:



Open the airway and under direct vision (preferably using a laryngoscope) check in the mouth for a foreign body - if present remove it with magills forceps.



Place child prone with the head down.



Apply 5 blows with the open hand to the interscapular area.



Turn child face up.



Apply 5 chest thrusts using the same technique as for chest compression

smle ,2016

during CPR.



Check in the mouth to see if foreign body has appeared, and remove if possible.



If the obstruction is not relieved, continue with alternating back blows and chest thrusts.



Positive pressure "ventilation" can be tried in an attempt to force the foreign body into the left or right main bronchus.



Asurgical airway may be tried if the obstruction is in or above the larynx and it is impossible to remove it through the mouth.

If obstruction is partial:



DO NOT perform the above manoeuvres.



Place child upright in the position they feel most comfortable.



Arrange for urgent removal of foreign body in the operating theatre.

http://www.rch.org.au/clinicalguide/guideline_index/Foreign_Bodies_Inhaled/



Answer: Adult - Activate the EMS system quickly if the patient is having difficulty breathing -intervention with abdominal thrusts .. pediatric - Open the airway and under direct vision (preferably using a laryngoscope) check in the mouth for a foreign body - if present remove it with magills forceps.

Answer: A

95- male patient came to ER with stab wound and hypotension what is your next step?

- A. fresh frozen plasma
- B. IV ringer lactate
- C. Packed RBC

Answer: B

95-Initial management of trauma in adults



Most trauma patients with hypotension or signs of shock (eg, pale, cool, moist skin) are bleeding, and patients with severe hemorrhage have significantly higher mortality (table 3) [59]. Initial fluid resuscitation for these patients may consist of a bolus of intravenous crystalloid (eg, 20 mL/kg isotonic saline). However, patients with obvious severe or ongoing blood loss should be transfused immediately with type O blood (women of childbearing age should be transfused with O negative blood).

smle ,2016

While mildly unstable patients may be treated with isotonic crystalloid in lieu of blood, unnecessary infusion of crystalloid should be avoided.

<http://www.uptodate.com/contents/initial-management-of-trauma-in-adults?source=machineLearning&search=road+traffic&selectedTitle=1~150§ion-Rank=1&anchor=H1929661#H1929754>



The particular type of IV solution selected beyond this depends on the patient's needs. For instance, based on the osmotic movement of water as described previously, a person with a low volume of blood may benefit from a hypertonic or isotonic crystalloid solution that will increase blood volume, whereas a hypotonic crystalloid would be more appropriate for a person suffering from

In the prehospital setting, LR and NSS are commonly used for fluid replacement because of their immediate ability to expand the volume of circulating blood. However, over the course of about 1 hour, approximately two-thirds of these IV fluids eventually leave the blood vessels and move into the cells. Some authorities recommend that for every 1 liter of blood lost, 3 liters of an isotonic crystalloid be administered for replacement. This is only a guide, and the volume of IV fluid administered should be based on medical direction or local protocol, as well as the patient's clinical response to fluid administration.

<http://catalogue.pearsoned.co.uk/samplechapter/0131186116.pdf>

96- pt with ECG showing bradycardia, what should you give?

A- atropine.

B- cardioversion.

Answer: A

Bradycardia With a Pulse Algorithm

Assess appropriateness for clinical condition.
Heart rate typically < 50/min if bradyarrhythmia.

Identify and treat underlying cause

- Maintain patent airway; assist breathing as necessary*
- Oxygen (if hypoxemic)
- Cardiac monitor to identify rhythm; monitor blood pressure and oximetry
- IV access
- 12-Lead ECG if available; don't delay therapy

Persistent bradyarrhythmia causing:

- Hypotension?
- Acutely altered mental status?
- Signs of shock?
- Ischemic chest discomfort?
- Acute heart failure?

Monitor and observe

Atropine IV Dose:

- First dose: 0.5 mg bolus
- Repeat every 3–5 minutes
- Maximum: 3 mg

If atropine ineffective:

- Transcutaneous pacing**
- OR
- Dopamine IV infusion:
2–10 mcg/kg per minute
- OR
- Epinephrine IV infusion:
2–10 mcg per minute

Consider:

- Expert consultation
- Transvenous pacing

*Dorjes V, Wenzel V, Knacke R, Gerlach K. Comparison of different airway management strategies to ventilate apneic, nonpreoxygenated patients. Crit Care Med. 2003;31:800-804
**Link MS, Atkins DL, Passman RS, Halperin HL, Samson RA, White RD, Cudnik ML, Berry MD, Kudenchuk PJ, Kerber KE. Part 6: electrical therapies: automated external defibrillation, defibrillation, cardioversion, and pacing. 2010 American Heart Association Guidelines for Cardiovascular Resuscitation and Emergency Cardiovascular Care. Circulation. 2010; 122(suppl 1):S706-S719. http://circ.ahajournals.org/content/122/7/1_suppl_1/S706

Version control: This document is current with respect to 2015 American Heart Association Guidelines for CPR and ECC. These guidelines are current until they are replaced on October 2020. If you are reading this page after October 2020, please contact ACLS Training Center at support@acsls.net for an updated document. Version 2016.02.a

© ACLS Training Center | 877-560-2940 | support@acsls.net

Complete your ACLS recertification online with the highest quality course at <http://www.acsls.net> and use promo code PDF2016 during checkout for 15% off.

<https://www.acsls.net/acsls-bradycardia-algorithm.htm>

97-long case about adult come to er complaining of diarrhea , have weekness in body and fatigue , suddenly he fall down , BP when he come was 120 / 80 Now it is 90 / 60 , What is the cause ?

- A- Extracellular voluim loss
- B- Intracellular fluid loss
- C- Intracellul ar glcose loss

Answer: A

smle ,2016

97-Hyponatremia and Hypernatremia

Benja
min J.
Freda
[Saul](#)
[Nurko](#)

Published: August 2010

<http://www.clevelandclinicmeded.com/medicalpubs/diseasemanagement/nephrology/hyponatremia-and-hypernatremia/>

Box 2 Causes of Hyponatremia Based on Extracellular Fluid Volume Status
Hypovolemia
Gastrointestinal solute loss (diarrhea, emesis)
Third-spacing (ileus, pancreatitis)
Diuretic use
Addison's disease
Salt-wasting nephritis

Table 1: Differential Diagnosis of Massive Hemothorax, Tension

Pneumothorax and Cardiac Tamponade

Assessment	Massive Hemothorax	Tension Pneumothorax	Cardiac Tamponade
Pulse	Rapid	Rapid	Rapid
Blood Pressure	Low	Low	Low
Pulsus paradoxus	No	Yes	Possibly
Heart sounds	Audible	Audible	Muffled
Neck veins	Flat	Distended	Distended
Percussion	Dull	Hyperresonant	Normal
Trachea	Midline/deviated	Deviated	Midline
Chest symmetry	Normal/asymmetrical	Asymmetrical	Normal
Breath sounds	Absent/rhonchi/rales	Absent	Present

97- RTA pt came to ER after 30 mins o/e chest there's sound bilateral

+ distended neck. Dx?

- A. Hemorax
- B. Pneumothorax
- C. Cardiac tamponade

Answer: C

97-Cardiac tamponade

The aetiology of tamponade varies widely, as pericardial effusions may have many different causes. In symptomatic patients, the etiologies are most commonly iatrogenic (after cardiac surgery or intervention), trauma, malignancy, and idiopathic effusion. [7] [8] [9] Other common etiologies of large pericardial effusion include viral infection, radiation-induced pericarditis, collagen vascular disease, myxoedema, and uraemia. [10]

Key diagnostic factors show all

malignancy (common)

presence of other risk factors (common)

dyspnoea (common)

elevated jugular venous pressure (common)

Increased central venous pressure in effort to maintain ventricular volumes.

distant heart sounds (common)

pulsus paradoxus

(common) hypotension

(common) tachycardia

(common)

recent invasive cardiac intervention procedure (uncommon)

<http://bestpractice.bmj.com/best-practice/monograph/459/diagnosis/history-and-examination.html>

Cardiac tamponade — Assume that elevated jugular venous pressure (JVP) in a trauma patient is caused by pericardial tamponade. However, hypovolemic patients with tamponade may not have elevated JVP. Perform the FAST exam early in the circulation evaluation of the unstable patient and begin by looking at the heart. (See "Cardiac tamponade".)

[http://www.uptodate.com/contents/initial-management-of-trauma-in-adults?](http://www.uptodate.com/contents/initial-management-of-trauma-in-adults?smle,2016)

smle ,2016

[source=machineLearning&search=road+traffic&selectedTitle=1~150§ion-Rank=1&anchor=H1929661#H11715751](https://www.machinelearningandsearch.com/road+traffic&selectedTitle=1~150§ion-Rank=1&anchor=H1929661#H11715751)

Reference: <http://www.emsworld.com/article/10324543/penetrating-chest-trauma>

98- Why we use CT scan in trauma pt ?

- a. Can detect retroperitoneum hemorrhage
- b. You can see the hemorrhage with contrast

Answer: A

99-Assessment of abdominal trauma

A CT scan of the abdomen is highly sensitive for the diagnosis of solid organ injury, vascular injury, and pelvic fractures, and is the radiographic study of choice to rule out intra-abdominal injury.

It is less effective in the diagnosis of diaphragmatic or bowel injuries. Other disadvantages of abdominal CT scanning are that it exposes the patient to radiation and intravenous contrast dye, is expensive, is relatively time-consuming (although it is becoming relatively fast), and requires transfer of the patient to a scanner. [22]

The presence of free intraperitoneal fluid on an abdominal CT scan, without evidence of a solid organ injury, raises concern of a hollow organ injury. View

[image](#) In this group of patients, diagnostic peritoneal lavage (DPL) may be useful. [16]

<http://bestpractice.bmj.com/best-practice/monograph/1187/diagnosis/step-by-step.html>

99- boy play basket ball he came with abdominal pain without any injury in match physical exam was tenderness in parambilicus what you next :

- a. Chest xray
- b .abdominal CT
- c. 24 recheck
- d. kidney US

smle ,2016

Answer: C

100-Gastrointestinal disorders in athletes

EXERCISE-RELATED TRANSIENT ABDOMINAL PAIN — Exercise-related transient abdominal pain (ETAP) is commonly referred to as a "stitch." It occurs frequently during long distance running (particularly during training and racing) but also with swimming, cycling, horseback riding, and team sports [22]. The reported incidence varies widely: 6 to 68 percent [3-5,12,13,22,23].

Clinical manifestations — Exercise-related transient abdominal pain is often described as a side ache, side cramp, sharp or stabbing pain, cramping, aching, or pulling in the abdomen [22]. In a representative report, ETAP was most commonly localized to the right (46 percent) and left (23 percent) middle quadrants followed by the periumbilical region (16 percent) and the right upper quadrant (13 percent) [14]. It was most often characterized as aching (25 percent), sharp (22 percent), or cramping (22 percent).

Pathogenesis — The pathogenesis of abdominal cramping is not well understood. Several hypotheses have been proposed including diaphragmatic ischemia [24], jolting stress on subdiaphragmatic ligaments supporting the abdominal viscera [25], and frictional irritation of the parietal peritoneum [22]. Several female triathletes have described worsening symptoms with menses, suggesting that hormonal factors may also be involved [5].

Prevention and treatment — Prevention of ETAP includes the gradual increase in exercise conditioning and the avoidance of fatty or high caloric meals within three hours of exercise [13,25,26]. ETAP typically resolves with the cessation of exercise or a reduction in exercise intensity. Other physical maneuvers have demonstrated some efficacy in small studies, including breathing through pursed lips after deep inhalation or bending forward while tightening abdominal muscles [27].

<http://www.uptodate.com/contents/gastrointestinal-disorders-in-athletes?source=machineLearning&search=exercise-related+transient+abdominal+pain+%28ETAP%29.&selectedTitle=1~150§ionRank=1&anchor=H3#H3>

101- Pt came to ER , airway pt gasping ,, u gave 2 breath by mask , pulse is rapid & weak What to do?!

- A. Waiting code team
- B. Put pt in recovery position
- C. Do CPR
- D. intubation

smle ,2016

Answer: C?

Pulse is present, D?

101-HIGHLIGHTS of the 2015 American Heart Association Guidelines Up- date for CPR and ECC

Dispatcher Identification of Agonal Gasps Cardiac arrest victims sometimes present with seizure-like activity or agonal gasps that can confuse potential rescuers. Dispatchers should be specifically trained to identify these presentations of cardiac arrest to enable prompt recognition and immediate dispatcher-guided CPR. 2015 (Updated): To help bystanders recognize cardiac arrest, dispatchers should inquire about a victim's absence of responsiveness and quality of breathing (normal versus not normal). If the victim is unresponsive with absent or abnormal breathing, the rescuer and the dispatcher should assume that the victim is in cardiac arrest. Dispatchers should be educated to identify unresponsiveness with abnormal and agonal gasps across a range of clinical presentations and descriptions

<https://eccguidelines.heart.org/wp-content/uploads/2015/10/2015-AHA-Guide-lines-Highlights-English.pdf>

102- Diabetic - DKA what to give?

- A. 1 L of normal saline
- B. Dextrose 50% followed by insulin

Answer: A

102-Diabetic ketoacidosis

severe volume depletion
serum potassium <3.3
mmol/L (<3.3 mEq/L)

1st
IV fluids

management

- rehydration
 - ♦ bolus of NS, then high rate NS infusion (beware of overhydration and cerebral edema, especially in pediatric patients)
 - ♦ beware of a pseudohyponatremia due to hyperglycemia (add 3 Na⁺ per 18 glucose over 100 mg/dL)
- potassium
 - ♦ essential to avoid hypokalemia: replace KCl (20 mEq/L if adequate renal function and initial K⁺ <5.5 mEq/L)
 - ♦ use cardiac monitoring if potassium levels normal or low
- insulin
 - ♦ critical, as this is the only way to turn off gluconeogenesis/ketosis
 - ♦ do not give insulin if K⁺ <3.3 mEq/L
 - ♦ initial bolus of 5-10 U short-acting/regular insulin (or 0.2 U/kg) IV in adults (controversial – may just start with infusion)
 - ♦ followed by continuous infusion at 5-10 U (or 0.1 U/kg) per h
 - ♦ add D5W to IV fluids when blood glucose <270 mg/dL to prevent hypoglycemia
- bicarbonate is not given unless patient is at risk of death or shock (typically pH <7.0)

- Severe volume depletion is indicated by the presence of orthostatic hypotension or supine hypotension, dry mucous membranes, and poor skin turgor. Extreme cases may be haemodynamically unstable.
- **The goal of initial fluid therapy is to restore tissue perfusion. The initial choice of fluid is isotonic saline infused at a rate of 1 to 1.5 L (or 15 to 20 mL/kg body weight) for the first hour. In patients with severe volume depletion or cardiogenic shock, isotonic fluid therapy and haemodynamic monitoring should continue in the ICU until the patient becomes stable.**
- Electrolytes should be checked at least hourly (to monitor potassium levels) and urea, venous pH, creatinine, and glucose should be checked every 2 to 4 hours until the resolution of DKA.
- When plasma glucose reaches 11.1 mmol/L (200 mg/dL), fluid therapy should be changed to 5% dextrose with 0.45% NaCl at 150 to 250 mL/ hour in order to avoid hypoglycaemia. [\[1\]](#)

smle ,2016

<http://bestpractice.bmj.com/best-practice/monograph/162/treatment/details.html>

103- Dm pt e ABG values show ph 7.2 - pt is hyperventilated.
Why thishap- pen?

answer: -

Hyperventilation causes the body to exhale and "get rid of" CO₂ from the blood

103-Metabolic Acidosis Clinical Presentation

Symptoms of metabolic acidosis are not specific. The respiratory center in the brainstem is stimulated, and hyperventilation develops in an effort to compensate for the acidosis. As a result, patients may report varying degrees of dyspnea. Patients may also report chest pain, palpitations, headache, confusion, generalized weakness, and bone pain. Patients, especially children, also may present with nausea, vomiting, and decreased appetite.

<http://emedicine.medscape.com/article/242975-clinical>

104- Comatosed patient with respiratory depression and pinpointed pupil, drug abuse suspected what is the cause ?

- A. Cocaine
- B. Opiates

Answer: B

104-Opioid use disorder: Epidemiology, pharmacology, clinical manifesta- tions, course, screening, assessment, and diagnosis

Physical examination — A physical examination should be conducted to elucidate common complications of opioid use and/or assist in diagnosing OUD. Chronic intravenous use can be confirmed by the presence of "track marks," which are callouses that follow the course of a subcutaneous vein. These are caused by repeated injections into adjacent sites over an accessible vein. Tracks are often found in easily accessible body areas, such as the backs of the hands, antecubital fossae, on the legs, or in the neck. Signs of recent injection may be found in unusual places in patients attempting to hide their sites of injection. A thorough examination for tracks or recent injection sites should include looking between the fingers and toes, under the fingernails and toenails, in the axillae, breast veins, and the dorsal vein of the penis.

The nasal septum should be examined for perforation from repeated intranasal insufflation (especially when cocaine is mixed with heroin and snorted). A heart smle ,2016

murmur may indicate subacute bacterial endocarditis. Posterior cervical lymphadenopathy may suggest early viral infection, especially with HIV. Hepatic enlargement may indicate acute hepatitis; a small, hard liver is consistent with chronic viral hepatitis due to hepatitis B or C virus, which is common among injection drug users who share needles.

Signs of opioid intoxication may include pinpoint pupils, drowsiness, slurred speech, and impaired cognition. Signs of acute opioid withdrawal syndrome include watering eyes, runny nose, yawning, muscle twitching, hyperactive bowel sounds, and piloerection. (See "Acute opioid intoxication in adults" and "Medically supervised opioid withdrawal during treatment for addiction".)

<http://www.uptodate.com/contents/opioid-use-disorder-epidemiology-pharmacology-clinical-manifestations-course-screening-assessment-and-diagnosis?source=machineLearning&search=Opioids+abuse&selectedTitle=2~150§ionRank=2&anchor=H134294768#H134294768>

105- Which of the following is contraindicated to do gastric lavage?

A. Drain cleaning solution

105-Gastrointestinal decontamination of the poisoned patient

Gastric lavage — Gastric lavage (GL) refers to the passage of a large bore orogastric tube followed by repetitive instillation and aspiration of small aliquots of fluid in an attempt to aspirate pill fragments or other toxins from within the stomach. Referred to as “stomach pumping” by the lay public, this formerly widespread modality has been largely abandoned due to unclear benefit (particularly when compared with other readily available and less invasive techniques) and the risk of serious complications.

Indications — The American Association of Poison Centers (AAPC) and the European Association of Poisons Centres and Clinical Toxicologists (EAPCCT) have issued a joint statement that gastric lavage should not be employed routinely, if ever, in the management of poisoned patients [42]. However, there are rare cases (eg, recent and potentially lethal ingestion) where the procedure may be considered after carefully weighing the well-documented risks against the unclear benefits.

Contraindications — GL is contraindicated in the following cases:

- Unprotected airway
- Caustic ingestion (due to risk of exacerbating any esophageal or gastric injury)
- Hydrocarbon ingestion (due to high aspiration risk)
- Patients at risk of GI hemorrhage or perforation (recent surgery, underlying anatomic abnormality or pathology, coagulopathy)

smle ,2016

<http://www.uptodate.com/contents/gastrointestinal-decontamination-of-the-poi-soned-patient?source=machineLearning&search=gastric+lavage&selectedTitle=1~66§ionRank=1&anchor=H18993923#H18993923>

“Hydrocarbon fluids are strong choices for a wide variety of industrial *cleaning* applications, and can be used in place of chlorinated solvents, mineral spirits and kerosene-based *cleaners*”

Answer: A

*

106- Patient with multiple trauma and head of femur fracture witch of the following is elevated?

- A. AP (alkaline phosphatase)
- B. Creatinie kinase
- C. ??

answer : A ?

106-Trauma: Critical Care

edited by William C. Wilson, Christopher M. Grande,

https://books.google.com.sa/books?id=3H3AIEtvc8YC&pg=PA636&lpg=PA636&dq=LDH+trauma&source=bl&ots=p5Q4yJ-jYd&sig=fY_KUef2pIE7fzGkll-U23ZGQSE&hl=en&sa=X&ved=0ahUKEwiMzN-m-s_OAhUDcBoKHc-sqA2MQ6AEITDAJ#v=onepage&q&f=false

Lactate Dehydrogenase

Elevations of lactate dehydrogenase (LDH) are seen in many different tissue injuries, including skeletal and cardiac muscle, hemolysis, stroke, and renal infarct. LDH is especially high in ischemic hepatitis. A sustained elevation of LDH with AP is indicative of malignant infiltration of the liver (7).

Initial management of trauma in adults

Elevation of both the serum lactate concentration and base deficit correlates with increased mortality in trauma patients [94-96]. However, the base deficit is essentially a surrogate for lactate and an elevated base deficit in the absence of an elevated lactate is not predictive of increased mortality [97]. Furthermore, while elevated levels should heighten suspicion for severe injury, a normal lactate and base deficit do not ensure the absence of significant injury, especially in geriatric trauma patients. In addition, laboratory values lag behind clinical improvement after aggressive resuscitation. Thus, the patient may no longer be in shock despite an elevated lactate suggesting otherwise.

http://www.uptodate.com/contents/initial-management-of-trauma-in-adults?source=search_result&search=trauma&selectedTitle=1~150#H11715830

An elevated bone alkaline phosphatase is indicative of high bone turnover, which may be caused by several disorders including healing fractures, osteomalacia, hyperparathyroidism, hyperthyroidism, Paget disease of bone, osteogenic sarcoma, and bone metastases. We generally refer such patients to an endocrinologist for evaluation. Initial testing may include measurement of serum calcium, parathyroid hormone, 25-hydroxy vitamin D, and imaging with bone scintigraphy.

http://www.uptodate.com/contents/bone-physiology-and-biochemical-markers-of-bone-turnover?source=see_link§ionName=MARKERS+OF+BONE+TURNOVER&anchor=H5#H5

107- post RTA in ICU present with significant blood loss Hypotension Now in Multi Organ failure what is the most Organ causing other organ failure ?

- A. heart
- B. lung
- C. kidney
- D. liver

Answer: A

smle ,2016

107-Surgical Treatment: Evidence-Based and Problem-Oriented.

Holzheimer RG, Mannick JA, editors.
Munich: Zuckschwerdt; 2001.

Heart and cardiovascular system

The acute cardiovascular derangements of MODS consist of five features:

1. a generalized reduction in peripheral vascular tone, mediated largely through the local vasodilatory activity of nitric oxide
2. a generalized increase in capillary permeability producing diffuse capillary leak and edema, and contributing to further dysfunction in other organ systems
3. alterations in regional blood flow to specific organ beds
4. microvascular plugging and stasis, resulting from occlusion of the microvasculature by abnormally rigid erythrocytes and leukocytes, and resulting in arteriovenous shunting that contributes to a high mixed venous saturation
5. myocardial depression, affecting the right side of the heart in particular

It is readily apparent that these abnormalities predispose to impaired oxygen delivery, and therefore contribute to the injury of other organ systems. Since their net physiologic consequence is hypotension that is refractory to increased preload, we have used a measure called the pressure-adjusted heart rate (PAR) to quantify cardiovascular dysfunction in the MOD score. Calculated as the product of the heart rate and the ratio of central venous to mean arterial pressure ($HR \times CVP/MAP$), it is, like the PO_2/FIO_2 ratio, a reflection of physiology, corrected for therapy; increasing values reflect worsening cardiovascular dysfunction.

<http://www.ncbi.nlm.nih.gov/books/NBK6880/>

108- Case of opioid toxicity which to do first:
smle ,2016

- A. Iv naloxone.m
- B. Intubation

Answer: B

108-Acute opioid intoxication in adults

Once opioid poisoning is suspected, initial management should focus on support of the patient's airway and breathing. Attention should be paid to the depth and rate of ventilation. While pulse-oximetry is useful in monitoring oxygenation, it may not be useful in gauging ventilation when supplemental oxygen is being given. While not yet widely used for this purpose, capnography may be an excellent tool to monitor the ventilatory effort of opioid-poisoned patients. Several studies in patients undergoing procedural sedation show that ventilatory difficulty manifests as elevations in end-tidal CO₂ earlier than declines in oxygenation by pulse oximetry. (See "Carbon dioxide monitoring (capnography)".) Spontaneous ventilation present ? IV naloxone

http://www.uptodate.com/contents/acute-opioid-intoxication-in-adults?source=search_result&search=opioids&selectedTitle=4~150#H13

Typical case of organophosphorus poisoning dx:

Answer: Organophosphosphate poisoning

Case history

A 50-year-old farmer with a history of alcohol abuse and depression is brought to the emergency department having deliberately ingested approximately 200 mL of a pesticide 4 hours previously. He is semi-conscious, has pinpoint pupils, and has large amounts of secretions pouring from his mouth. His heart rate is 120 bpm, BP 90/60 mmHg, and oxygen saturation 65%. His chest has widespread crackles and rhonchi. Fine fasciculations are apparent in his peri-orbital, chest, and leg muscles. He has been incontinent of urine and faeces.

Other presentations

smle ,2016

Presentation is highly variable due to differences in dose, agent toxicity, and type of exposure. Presentations after minor exposures (e.g., dermal) are common, but serious toxicity in this setting is very rare, with usual symptoms often being indistinguishable from influenza (e.g., fatigue, runny nose, headache, dizziness, anorexia, sweating, diarrhoea, and muscle weakness). Nausea, vomiting, and visual disturbances may also be seen. A distinctive odour from the solvent may be present. Severe poisoning (usually due to deliberate ingestion or chemical warfare) may present with seizures or respiratory failure. Delayed-onset CNS and peripheral (predominantly motor) neuropathy are uncommon, but may be severe and can lead to permanent disability.

Acute toxicity

- SLUDGE/BBB – Salivation, Lacrimation, Urination, Defecation, Gastric Emesis, Bronchorrhea, Bronchospasm, Bradycardia
- DUMBELS – Defecation, Urination, Miosis, Bronchorrhea/Bronchospasm/Bradycardia, Emesis, Lacrimation, Salivation [19]



<http://bestpractice.bmj.com/best-practice/monograph/852.html>

http://www.uptodate.com/contents/organophosphate-and-carbamate-poisoning?source=search_result&search=Organophosphate+poisoning&selectedTitle=1~21

<http://bestpractice.bmj.com/best-practice/monograph/852/diagnosis/step-by-step.html>

108- Typical case of monoxide poisoning dx:

answer: Carbon monoxide poisoning

An 80-year-old man with a 24-hour history of progressive headache, vomiting, and dizziness is brought to the emergency department by his wife, who has also

smle ,2016

been having similar symptoms. Before presentation to the emergency department she found him to be confused. On examination, the man is awake, appears confused, and has difficulty walking due to generalised weakness.

Other presentations

Other less common clinical presentations of CO poisoning include rhabdomyolysis, acute renal failure from muscle damage, skin bullae, and non-cardiogenic pulmonary oedema. Children can present with non-specific symptoms mimicking viral illness such as nausea and vomiting, but fever and other symptoms of infection are usually absent. Delayed effects can be seen up to 6 weeks after exposure and include confusion, ataxia, hallucinations, and motor and gait disturbances. Long-term exposure to low levels of CO can cause anorexia, personality disorders, acceleration of atherosclerosis, and polycythaemia and cardiomegaly due to chronic hypoxia. [3] Even mild symptoms in a pregnant woman can have devastating effects on the unborn child, such as fetal demise or congenital malformations. Fetal haemoglobin has a much greater affinity for CO than adult haemoglobin.

Symptoms and signs — The clinical findings of carbon monoxide (CO) poisoning are highly variable and largely nonspecific [28,29] (table 1). Moderately or mildly CO-intoxicated patients often present with constitutional symptoms, including headache (the most common presenting symptom), malaise, nausea, and dizziness, and may be misdiagnosed with acute viral syndromes [27]. In addition to current symptoms, the clinician should specifically inquire (of the patient and/or witnesses) about loss of consciousness.

In the absence of concurrent trauma or burns, physical findings in CO poisoning are usually confined to alterations in mental status, so a careful neurologic examination is crucial. Patients may manifest symptoms ranging from mild confusion to coma.

The diagnosis of CO poisoning is based upon a compatible history and physical examination in conjunction with an elevated carboxyhemoglobin level measured by cooximetry of an arterial blood gas sample. In hemodynamically stable patients, venous samples are accurate and commonly used [41,42]. Nonsmokers may have up to 3 percent carboxyhemoglobin at baseline; smokers may have levels of 10 to 15 percent. Levels above these respective values are consistent with CO poisoning. <http://bestpractice.bmj.com/best-practice/monograph/432/diagnosis/case-history.html>
http://www.uptodate.com/contents/carbon-monoxide-poisoning?source=search_result&search=monoxide

smle ,2016

[+poisoning&selectedTitle=1~70#H6](#)

<http://bestpractice.bmj.com/best-practice/monograph/432/diagnosis/step-by-step.html>

109-Present to ER with severe headache and LP showed blood :

- A. ruptured berry aneurysm,
- B. epidural hematoma

Ans: Answer: A

Subarachnoid haemorrhage (SAH) is bleeding into the subarachnoid space and is an emergency. The most common cause of non-traumatic SAH is intracranial aneurysm.

presence of risk factors (common)
headache (common)

Most important clue to diagnosis when described as sudden, severe or 'worst ever'. Around 10% to 43% of patients experience a sentinel headache in the 3 months prior to SAH. [2]

photophobia (common)
loss of consciousness (common) third cranial nerve palsy (uncommon)

Other diagnostic factors

age >50 years (common) female sex (common) black people (common)
nausea/vomiting (common)
altered mental status (common) meningismus (uncommon)
unilateral or bilateral sixth cranial nerve palsies (uncommon) intraocular
haemorrhage (uncommon)
focal neurological deficits (uncommon)

Test	Result
------	--------

LP
bloody CSF (xanthochromia)

Should be performed if CT is unrevealing. Xanthochromia is an indicator of the presence of blood in the subarachnoid space. Xanthochromia is absent in the first 12 hours after SAH, which is the time necessary for red blood cells to start lysing.

<http://bestpractice.bmj.com/best-practice/monograph/415/diagnosis/test-s.html>

110-Same Q as 109 (signs very important)

111-Pt. Overdosed a medication and presented Comatose, dilated pupil, hyperreflexia, what is the meds:

- A. Erdophnium
- B. SSRI
- C. TCA

Answer: B

112- Selective Serotonin Reuptake Inhibitor Toxicity Clinical Presentation Signs of excess serotonin can range from subtle tremor to frank coma.^[22] Mental status changes, autonomic instability, and neuromuscular agitation are the primary findings used to delineate Sternbach's criteria. However, more specific signs and physical findings have become recognized as reliable predictors of serotonin toxicity;

Neuromuscular findings

Neuromuscular findings, such as clonus, hyperreflexia, muscular rigidity, and ataxia, may be present, as well as myoclonic jerks, teeth chattering, and resting smile, 2016

tremor. The clonus is spontaneous, inducible, or ocular. Hyperreflexia is often more pronounced in the lower extremities. Muscular rigidity may mask clonus. Among these findings, clonus is the most useful in diagnosing SS.

Mental status findings

Mental status findings may be subtle, including such symptoms as **pressured speech, restlessness, and confusion**. More severe cases may manifest with agitation, hypomania, coma, or seizures.

Autonomic findings

Autonomic instability includes **diaphoresis; hyperthermia**, which is exacerbated by prolonged muscular rigidity or seizure activity; **tachycardia; mydriasis; and blood pressure lability including hypertension and hypotension**. Electrocardiographic changes such as QTc prolongation have been reported specifically in citalopram ingestions.

Peripheral findings

Peripheral findings may include **increased gastrointestinal motility** (eg, diarrhea or hyperactive bowel sounds), **coagulopathy** (disseminated intravascular coagulation in severe cases), and increased vascular tone.

Serotonin toxicity versus other toxicities

Physical examination findings are helpful in distinguishing serotonin toxicity from other toxic ingestions (although ingestion of multiple agents in suicide attempts can make physical findings less reliable). Neuroleptic malignant syndrome, associated with dopamine antagonists, has a slower onset of symptoms than SS and is associated with bradykinesia and "lead-pipe" muscular rigidity, rather than hyperkinesias and tremors.

Anticholinergic toxicity involves dry, erythematous skin; enlarged pupils (mydriasis); decreased bowel sounds; and normal reflexes, in contrast to serotonin toxicity, which includes diaphoresis, increased bowel sounds, diarrhea, and hyperreflexia.

<http://emedicine.medscape.com/article/821737-clinical#b3>

113- Drug addicted .. Unconscious Came with no gag reflex, What would you do?

- A. Intubation
- B. Gastric lavage
- C. give naloxone

Answer: A

113- Acute opioid intoxication in adults

Once opioid poisoning is suspected, initial management should focus on support of the patient's airway and breathing. Attention should be paid to the depth and

smle ,2016

rate of ventilation. While pulse-oximetry is useful in monitoring oxygenation, it may not be useful in gauging ventilation when supplemental oxygen is being given. While not yet widely used for this purpose, capnography may be an excellent tool to monitor the ventilatory effort of opioid-poisoned patients. Several studies in patients undergoing procedural sedation show that ventilatory difficulty manifests as elevations in end-tidal CO₂ earlier than declines in oxygenation by pulse oximetry. (See "Carbon dioxide monitoring (capnography)".)

http://www.uptodate.com/contents/acute-opioid-intoxication-in-adults?source=search_result&search=opioids&selectedTitle=4~150#H13

Airway protection by endotracheal intubation should be performed early in the poisoned patient with depressed mental status, unless the cause is easily reversible (eg, opioid intoxication or hypoglycemia), because of the high risk for aspiration and its associated complications, particularly when gastric decontamination procedures need to be undertaken

<http://www.uptodate.com/contents/general-approach-to-drug-poisoning-in-adults>

114- RTA pt came to ER after 30 mins o/e chest there's sound bilateral + distended neck, Dx?!

A- Hemothorax

B- Pneumothorax

C- Cardiac tamponade

Answer: C

The aetiology of tamponade varies widely, as pericardial effusions may have many different causes. In symptomatic patients, the etiologies are most commonly iatrogenic (after cardiac surgery or intervention), trauma, malignancy and idiopathic effusion. [7] [8] [9] Other common etiologies of large pericardial effusion include viral infection, radiation-induced pericarditis, collagen vascular disease, myxoedema, and uraemia. [10]

Key diagnostic factors show all

malignancy (common)

presence of other risk factors (common)

dyspnoea (common)

elevated jugular venous pressure (common)

Increased central venous pressure in effort to maintain ventricular volumes.

distant heart sounds (common)

pulsus paradoxus

smle ,2016

(common) hypotension

(common) tachycardia

(common)

recent invasive cardiac intervention procedure (uncommon)

<http://bestpractice.bmj.com/best-practice/monograph/459/diagnosis/history-and-examination.html>

Cardiac tamponade — Assume that elevated jugular venous pressure (JVP) in a trauma patient is caused by pericardial tamponade. However, hypovolemic patients with tamponade may not have elevated JVP. Perform the FAST exam early in the circulation evaluation of the unstable patient and begin by looking at the heart. (See "Cardiac tamponade".)

<http://www.uptodate.com/contents/initial-management-of-trauma-in-adults?source=machineLearning&search=road+traffic&selectedTitle=1~150§ion-Rank=1&anchor=H1929661#H11715751>

*

115- MI patient presented to ER after resuscitation he developed coma and then died, what postmortem change you will find:

A- interventricular hemorrhage

B- brown coloured area supplied by middle meningeal artery

Answer: - A??

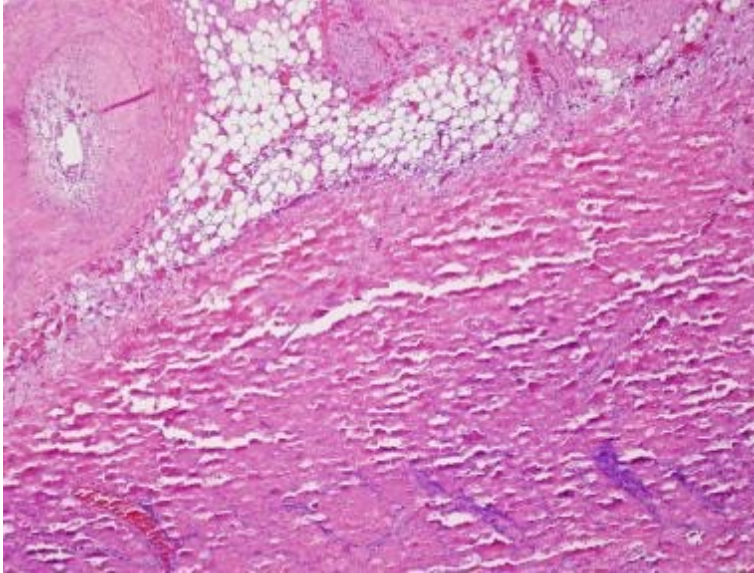
115- Pathology of Sudden Natural Death

Histologic changes and other considerations in myocardial infarction and sudden include the following^[14] :

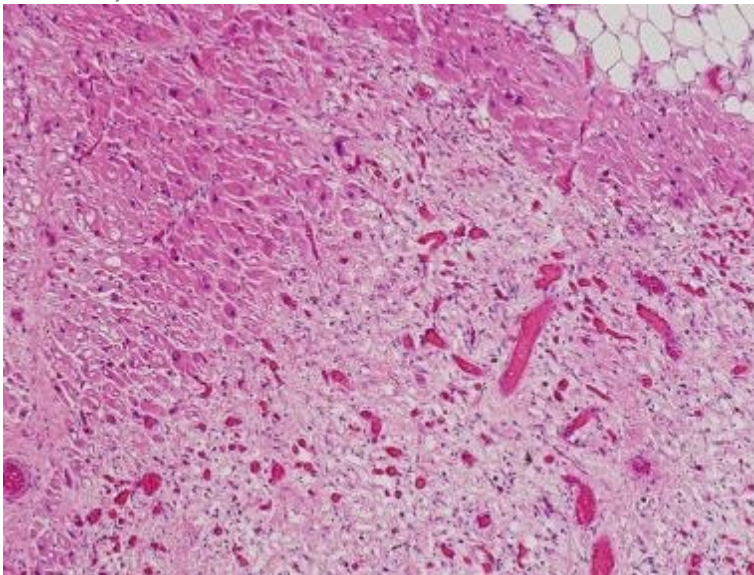
■ Sudden death from occlusive coronary artery disease (CAD) is unlikely to produce significant changes in the myocardium; coagulative necrosis is the

first histologic change specific for infarction, but it is not detected by light microscopy until at least 4 hours after the ischemic event

- **Contraction bands and wavy fibers can be seen between 1 and 4 hours**, but they are not specific for irreversible myocardial injury and are seen in a variety of other conditions (see the following images)

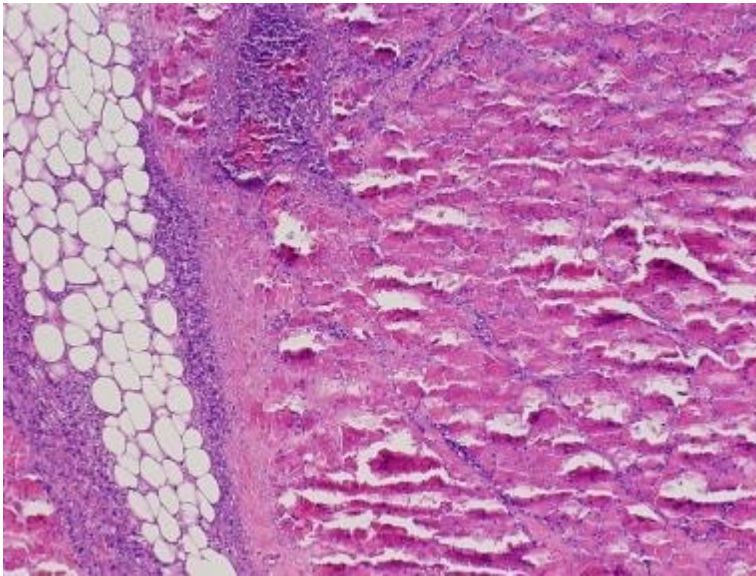


Acute myocardial infarction.



Acute myocardial infarction with early granulation tissue and neovascularization.

- **Progressive necrosis, edema, and hemorrhage are the primary findings up to 12 hours**; between 12 and 24 hours, neutrophilic inflammation becomes detectable, myocytes become hyper-eosinophilic, the nuclei become pyknotic, and distinct contraction band necrosis become apparent
- **From 1 to 3 days, acute inflammation and coagulative necrosis are predominant** (see the image below); myocyte nuclei and striations are absent



Acute myocardial

infarction with extensive coagulative necrosis.

- Disintegration of the dead cells and replacement of the neutrophilic inflammation by macrophages, particularly at the edge of the infarct occurs from 3 to 7 days, and becomes well-developed within 10 days
- Granulation tissue with collagen deposition occurs at approximately 2 weeks, and by 2 months a scar is formed, with progressive loss of cellularity from there onward

116- <http://emedicine.medscape.com/article/1680282-overview#a10>

Q114: RTA pt came to ER after 30 minutes o/e chest there's sound bilateral + distended neck, Dx?!

- D- Hemothorax
- E- Pneumothorax
- F- Cardiac tamponade

Answer: C

Explanation: In Hemothorax and pneumothorax there isn't Bilateral breath sounds The aetiology of tamponade varies widely, as pericardial effusions may have many different causes. In symptomatic patients, the etiologies are most commonly iatrogenic (after cardiac surgery or intervention), trauma, malignancy, and idiopathic effusion. [7] [8] [9] Other common etiologies of large pericardial effusion include viral infection, radiation-induced pericarditis, collagen vascular disease, myxoedema, and uraemia. [10] malignancy (common) presence of other risk factors (common) dyspnoea (common) elevated jugular venous pressure (common).

Cardiac tamponade — Assume that elevated jugular venous pressure (JVP) in a trauma patient is caused by pericardial tamponade. However, hypovolemic patients with tamponade may not have elevated JVP. Perform the FAST exam early in the circulation evaluation of the unstable patient and begin by looking at the heart. (See "Cardiac tamponade".)

Source: <http://www.uptodate.com/contents/initial-management-of-trauma-in->

smle ,2016

adults?

[source=machineLearning&search=road+traffic&selectedTitle=1~150§ion-Rank=1&anchor=H1929661#H11715751](https://www.machinelearningandsearch.com/road+traffic&selectedTitle=1~150§ion-Rank=1&anchor=H1929661#H11715751)

<http://bestpractice.bmj.com/best-practice/monograph/459/diagnosis/history-and-examination.html>

Q115: MI patient presented to ER after resuscitation he developed coma and then died, what postmortem change you will find:

A- interventricular hemorrhage

B- brown colored area supplied by middle meningeal artery

Answer: ?

Q116: Road accident presented with paralysis of 4 limb and extremity pink and hot what is the type of shock?

A. Irreversible

B. Neurogenic

C. Hypotensive

Answer: B

Explanation: Neurogenic shock refers to hypotension, usually with bradycardia, attributed to interruption of autonomic pathways in the spinal cord causing decreased vascular resistance. may also suffer from hemodynamic shock related to blood loss and other complications. An adequate blood pressure is believed to be critical in maintaining adequate perfusion to the injured spinal cord and thereby limiting secondary ischemic injury.

Albeit with little empiric supporting data, guidelines currently recommend maintaining mean arterial pressures of at least 85 to 90 mmHg, using intravenous fluids, transfusion, and pharmacologic vasopressors as needed [52-55]. Maintenance of blood pressure intraoperatively is also important. (See "Initial evaluation and management of shock in adult trauma".)

Patients with multiple injuries often receive large amounts of intravenous fluids for various reasons. Excess fluids cause further cord swelling and increased damage. Therefore, fluid administration, urinary output, and electrolyte levels must be carefully monitored. Bradycardia may require external pacing or administration of atropine. This complication usually occurs in severe, high cervical (C1 through C5) lesions in the first two weeks after TSCI [56,57]. Autonomic dysreflexia is usually a later complication of TSCI, but may appear in the hospital setting, requiring acute management [58]. This phenomenon is characterized by episodic paroxysmal hypertension with headache, bradycardia, flushing, and sweating. (See "Chronic complications of spinal cord injury and disease", section on 'Autonomic dysreflexia'.)

Source: https://www.uptodate.com/contents/acute-traumatic-spinal-cord-injury?source=see_link§ionName=Cardiovascular+complications&anchor=H25317479#H25317479

Q117: 5 cycles of CPR - intubation - put pt. in recovery position? The Question is not clear

smle ,2016

Hypovolemic	Hypotension, tachycardia Weak thready pulse Cool, pale, moist skin U/O decreased	Decreased CO Increased SVR
Cardiogenic	Hypotension, tachycardia Weak thready pulse Cool, pale, moist skin U/O < 30 ml/hr Crackles, tachypnea	Decreased CO Increased SVR
Neurogenic	Hypotension, BRADYCARDIA WARM DRY SKIN	Decreased CO Venous & arterial vasodilation, increased sympathetic tone
Anaphylactic	Hypotension, tachycardia Cough, dyspnea Pruritus, urticaria Restlessness, decreased LOC	Decreased CO Decreased SVR
Septic	Hypotension, Tachycardia Full bounding pulse, tachypnea Pink, warm, flushed skin Decreased U/O, fever	Decreased CO, Decreased SVR

Answer: ?

- Explanation: In adult victims of cardiac arrest, it is reasonable for rescuers to perform chest compressions at a rate of 100 to 120/min (Class IIa, LOE C-LD). The addition of an upper limit of compression rate is the result of 1 large registry study associating extremely rapid compression rates with inadequate compression depth.

inches [6 cm]) (Class I, LOE C-LD). The addition of an upper limit of compression depth followed review of 1 publication suggesting potential harm from excessive chest compression depth (greater than 6 cm, or 2.4 inches). Compression depth may be difficult to judge without use of feedback devices, and identification of upper limits of compression depth may be challenging. In adult cardiac arrest, total preshock and postshock pauses in chest compressions should be as short as possible (Class I, LOE C-LD) because shorter pauses can be associated with greater shock

- In adult cardiac arrest with an unprotected airway, it may be reasonable to perform CPR with the goal of a chest compression fraction as high as possible, with a target of at least 60% (Class IIb, LOE C-LD). The addition of this target compression fraction to the 2015 Guidelines Update is intended to limit interruptions in compressions and to maximize coronary perfusion and blood flow during CPR.
- For patients with known or suspected opioid addiction who have a definite pulse but no normal breathing or only gasping (ie, a respiratory arrest), in addition to providing standard BLS care, it is reasonable for appropriately trained BLS providers to administer intramuscular or intranasal naloxone (Class IIa, LOE C-LD). It is reasonable to provide opioid overdose response education with or without naloxone distribution to persons at risk for opioid overdose in any setting (Class IIa, LOE C-LD). For more information, see “Part 10: Special Circumstances of Resuscitation.”
- For witnessed OHCA with a shockable rhythm, it may be reasonable for emergency medical service (EMS) systems with priority-based, multi-tiered response to delay positive-pressure ventilation by using a strategy of up to 3 cycles of 200 continuous compressions with passive oxygen insufflation and airway adjuncts (Class IIb, LOE C-LD).
- We do not recommend the routine use of passive ventilation techniques during conventional CPR for adults, because the usefulness/effectiveness of these techniques is unknown (Class IIb, LOE C-EO). However, in EMS systems that use bundles of care involving continuous chest compressions, the use of passive ventilation techniques may be considered as part of that bundle (Class IIb, LOE C-LD).
- It is recommended that emergency dispatchers determine if a patient is unconscious with abnormal breathing after acquiring the requisite information to determine the location of the event (Class I, LOE C-LD)
- If the patient is unconscious with abnormal or absent breathing, it is reasonable for the emergency dispatcher to assume that the patient is in cardiac arrest (Class IIa, LOE C-LD).

Source: <https://eccguidelines.heart.org/wp-content/uploads/2015/10/2015-AHA-Guidelines-Highlights-English.pdf>

Q118: hypertensive male presented to ER with sever epistaxis from inferior posterior, what is the most artery cause this bleeding

A- Sphenopalatine

B- Greater Palatine

smle ,2016

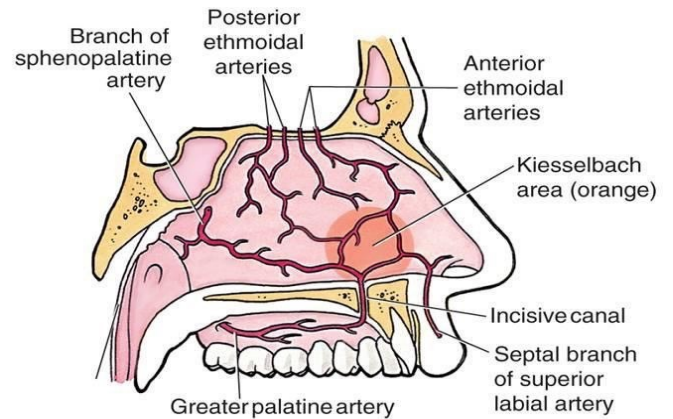
C- Anterior ethmoidal

Answer: A

Explanation: The bleeding site of a posterior epistaxis is either posterior to the middle turbinate or at the posterior superior aspect of the nasal cavity. Branches of the sphenopalatine artery supply the blood for such an epistaxis. The vast majority of posterior bleeding sites originate from the septum.

Source:

<http://emedicine.medscape.com/article/80545-overview>



Q119: girl come to ER complaining of RT hypochondrial pain, vomiting, fever with similar attacks Before On examination splenomegaly and Mild jaundice US show gallstones...your dx?

- A. Thalassemia
- B. SCA

Answer: B (Most likely)

Explanation: SCA patients have a high likelihood to develop cholecystitis, 50-70%, and in thalassemia intermediate likelihood, The development of gallstones may be more common in beta-thalassemia intermedia than in beta-thalassemia major.

Source: <http://bestpractice.bmj.com/best-practice/monograph/100/follow-up/complications.html>

<http://bestpractice.bmj.com/best-practice/monograph/251/follow-up/complications.html>

Q120: Patient came to ER after eating a lot of drug, came with eye dilatation What does he takes

- A-TCA
- B- Organophosphate

Answer: A

Explanation: Mydriasis is common in TCA poisoning Dilated pupils is part of the anticholinergic toxidrome, the scenario will describe salivation, lacrimation, urination in organophosphate.

Source: <http://bestpractice.bmj.com/best-practice/monograph/342/diagnosis/history-and-examination.html>

Q121: A 6-year-old girl, brought by parents to ER with history of falling from height... Not talking but crying, withdrawal from pain, open her eye only in response to Doctor talking... Calculate GCS.

- A- 9
- B- 10

smle ,2016

C- 11

D- 12

Answer: C

Explanation:

Eye response to verbal stimulus 3

Cries 4

Withdrawal to pain 4

Source: http://www.medscape.com/viewarticle/707292_4

Assessed Response	Score
Best eye response	
Spontaneously	4
To verbal stimulation or to touch	3
To pain	2
No response	1
Best verbal response	
Smiles, oriented to sounds, follows objects, interacts	5
Cries but is consolable, inappropriate interactions	4
Inconsistently consolable, moaning	3
Inconsolable, agitated	2
No vocal response	1
Motor	
Normal spontaneous movement	6
Withdraws to touch	5
Withdraws to pain	4
Flexion abnormal	3
Extension, either spontaneous or to painful stimuli	2
Flaccid	1

Medscape Source: J Am Emerg Med © 2009 Elsevier, Inc.

Q122: Male with abdominal stab wound, vital signs (hypotension, tachycardia), What to give him first:

A- Ringer Lactate

B- Fresh Frozen Plasma

C- Whole Blood

D- Packed RBCs

Answer: A

Explanation: Most trauma patients with hypotension or signs of shock (eg, pale, cool, moist skin) are bleeding, and patients with severe hemorrhage have significantly higher mortality (table 3) [59]. Initial fluid resuscitation for these patients may consist of a **bolus of intravenous crystalloid (eg, 20 mL/kg isotonic saline)**. However, patients with obvious severe or ongoing blood loss should be transfused immediately with type O blood (women of childbearing age should be transfused with O negative blood). While mildly unstable patients may be treated with isotonic crystalloid in lieu of blood, unnecessary infusion of crystalloid should be avoided.

The particular type of IV solution

selected beyond this depends on the patient's needs. For instance, based on the osmotic movement of water as described previously, a person with a low volume of blood may benefit from a hypertonic or isotonic crystalloid solution that will increase blood volume, whereas a hypotonic crystalloid would be more appropriate for a person suffering from

In the prehospital setting, LR and NSS are commonly used for fluid replacement because of their immediate ability to expand the volume of circulating blood. However, over the course of about 1 hour, approximately two-thirds of these IV fluids eventually leave the blood vessels and move into the cells. Some authorities recommend that for every 1 liter of blood lost, 3 liters of an isotonic crystalloid be administered for replacement. This is only a guide, and the volume of IV fluid administered should be based on medical direction or local protocol, as well as the patient's clinical response to fluid administration.

Source: <http://www.uptodate.com/contents/initial-management-of-trauma-in-adults?source=machineLearning&search=road+traffic&selectedTitle=1~150§ion->

smle ,2016

[Rank=1&anchor=H1929661#H1929754](#)

<http://catalogue.pearsoned.co.uk/samplechapter/0131186116.pdf>

Q123: 5 year old with blunt abdominal trauma, Upper GI series showed coil spin in 2nd 3rd duodenal and high amylase, How to manage:

- A- Laparotomy and hematoma evacuation
- B- gastroenterostomy
- C- bowel rest
- D- CT guided needle for hematoma extraction

Answer: C

Explanation: duodenal haematoma does not require laparotomy. Patients can be successfully managed with free nasogastric drainage and parenteral nutrition, and duodenal patency should return within 10-14 days

Low Grade (I or II) blunt injuries of the duodenum and pancreas are initially managed nonoperatively rather than with operative exploration and repair. Most of these injuries heal without the need for surgical intervention although about 10 percent of patients will fail nonoperative management. Nonoperative management includes bowel rest and nutritional support (enteral or parenteral). Nonoperative management has not been reported for penetrating mechanisms. (See 'Nonoperative management' above.)

Source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1121303/>
https://www.uptodate.com/contents/management-of-duodenal-and-pancreatic-trauma-in-adults?source=search_result&search=Duodenal+hematoma&selectedTitle=1~12#H2054950

Q124: **Pneumothorax management**

- A- Needle decompression

Answer: A

Explanation: Classical management of tension pneumothorax is emergent chest decompression with needle thoracostomy. A 14-16G intravenous cannula is inserted into the second rib space in the mid-clavicular line.

Tension pneumothorax: Immediate decompression

- Achieved by immediate insertion of a standard 14-gauge intravenous catheter into the pleural space at the intersection of the midclavicular line and the second or third intercostal space. Intervention should not be delayed by awaiting radiographic confirmation of the tension pneumothorax.

Primary spontaneous pneumothorax: Observation and supplemental oxygen therapy

- Clinically stable patients who are experiencing a small primary spontaneous pneumothorax can be observed and treated conservatively with supplemental high-flow (10 L/min) oxygen.

Source: <http://www.trauma.org/archive/thoracic/CHESTtension.html>
<http://bestpractice.bmj.com/best-practice/monograph/504/treatment/details.html>

Q125: Pts playing tennis, something bites him (birds I think) after few minutes he has respiratory distress and he was collapsed what is the immediate treatment for this patient?

A- Antihistamine

B- Epinephrine

Answer: B

Explanation: Anaphylactic shock, Patients may present with a range of severities, but cardiac collapse and respiratory compromise cause the most urgent concern as they can be fatal. Patients presenting with milder symptoms can rapidly deteriorate and should be closely monitored, Unless precluded by shortness of breath or vomiting, the patient should be placed in a flat supine position with legs elevated (shock or Trendelenburg position). This will augment venous return, and thereby increase pre-load and enhance cardiac output. Studies have shown that an upright position may contribute to a fatal outcome.

If no contra-indication, all patients should be given oxygen. In rare cases of advanced COPD, chronic severe CO₂ retention causes the respiratory drive to become dependent on a certain degree of hypoxia.

Breathing should be monitored by continuous oxygen saturation or blood gas determination. Inadequate respiratory efforts may indicate the need for ventilatory support

Immediate administration of adequate doses of epinephrine (adrenaline) will decrease patient mortality and morbidity. [14] All patients with signs of a systemic reaction, especially hypotension, airway swelling, or difficulty in breathing, should receive immediate intramuscular (**IM**) epinephrine (adrenaline) in the anterolateral thigh, This may be repeated every 5-15 minutes as needed, The anterolateral thigh is superior over IM administration in the deltoid or subcutaneous injection. **children: 0.01 mg/kg, adults: 0.3 to 0.5 mg**

Source: <http://bestpractice.bmj.com/best-practice/monograph/501/treatment/details.html>

Q126: Case scenario about patient who had injury in his right knee, the doctor applied a valgus stress to examine which ligament

A- Anterior cruciate ligament

B- Posterior cruciate ligament

C- Fibular collateral

D- Tibial collateral

Answer: D

Explanation: Medical collateral ligament injury, **laxity on Valgus stress testing**, The abduction stress test (i.e., applying a valgus load to the knee) at 30° flexion is an excellent diagnostic tool. **View image** Pain and disproportionate laxity imply stretching or tearing of the MCL., Pain and laxity with valgus stress in a fully extended knee suggest coexistent anterior cruciate ligament tear.

Source: <http://bestpractice.bmj.com/best-practice/monograph/828/diagnosis/history-and-examination.html>

smle ,2016

Q127: A patient came to ER with multiple fracture no loss of conscious with Low bp , tachycardia, normal RR, O2 saturation = 95%?

A- IV Fluid

B- Save airway

Answer: B

Explanation: Primary survey, Airway management is one of the key components of emergency care. Its primary objective is to diagnose an obstructed or potentially obstructed airway, to clear the obstruction and keep the airway patent. No medical emergency, short of a complete cardiopulmonary arrest, is more immediately life-threatening than the loss of an adequate airway. Failure to adequately manage airway patency and ventilation has been identified as a major cause of preventable death in trauma (27–30).

Source: http://www.who.int/violence_injury_prevention/publications/services/en/guidelines_traumacare.pdf

Q128: An Elderly patient presented to ER due to decreased level of consciousness lethargy Pco2 20 mmhg, K 2, pH 7.2 “I can't remember the rest of the labs and choices” What does she have?

A-

B-

C-

D-

Answer: Most likely Metabolic Acidosis)

Explanation: (Low pCO2 and Low pH)

The most common cause for hypokalemia and metabolic acidosis is GI loss (eg, diarrhea, laxative use). Other less common etiologies include renal loss of potassium secondary to RTA or salt-wasting nephropathy. The urine pH, the urine AG, and the urinary K⁺ concentration can distinguish these conditions.

The presence of metabolic acidosis is a clue to the possible existence of several underlying medical conditions. Arterial pH <7.35 defines acidosis. Metabolic acidosis is indicated by a decrease in the plasma bicarbonate level and/or a marked increase in the serum anion gap (AG).

Metabolic acidosis may occur due to the following reasons:

1. Addition of strong acid that is buffered by and consumes bicarbonate ion
2. Loss of bicarbonate ion from the body fluids, usually through the GI tract or kidneys
3. Rapid addition to the extracellular fluid of a non-bicarbonate solution.

Differentiating between the causes of metabolic acidosis begins with calculation of serum AG. Serum AG is calculated by subtracting the sum of major measured anions, chloride (Cl) and bicarbonate (HCO₃), from the major measured cation, sodium (Na⁺).

- $AG = Na - (Cl + HCO_3)$

Normal serum AG is due to the difference between unmeasured anions such as sulfate (SO₄), phosphate (PO₄), albumin, and organic anions, and unmeasured cations such as potassium (K⁺), magnesium (Mg⁺), and calcium (Ca²⁺). Plasma proteins also play a role in maintaining normal serum AG

Source: <http://bestpractice.bmj.com/best-practice/monograph/460.html>
<http://emedicine.medscape.com/article/242975-overview#a5>

Q129: Why CT is best in blunt trauma?

- A- It is best in unstable patient
- B- Better to detect retroperitoneal bleeding

Answer: B

Explanation: In blunt abdominal trauma, US is the investigation of choice in hemodynamically unstable patients, Computed tomography is the investigation of choice in hemodynamically stable patients, **Computed tomography also accurately evaluates the retroperitoneum.** A CT scan of the abdomen is highly sensitive for the diagnosis of solid organ injury, vascular injury, and pelvic fractures, and is the radiographic study of choice to rule out intra-abdominal injury.

It is less effective in the diagnosis of diaphragmatic or bowel injuries. Other disadvantages of abdominal CT scanning are that it exposes the patient to radiation and intravenous contrast dye, is expensive, is relatively time-consuming (although it is becoming relatively fast), and requires transfer of the patient to a scanner.

The presence of free intraperitoneal fluid on an abdominal CT scan, without evidence of a solid organ injury, raises concern of a hollow organ injury. View image In this group of patients, diagnostic peritoneal lavage (DPL) may be useful.

Source:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2335258>
<http://bestpractice.bmj.com/best-practice/monograph/1187/diagnosis/step-by-step.html>

Q130: **patient come to ER unconscious**

- A- Check Pulse
- B- Examine pupil
- C- IV Fluid infusion
- D- Clear the airway

Answer: D

smle ,2016

Explanation: Guidelines for essential trauma care
 Airway management Airway management is one of the key components of emergency care. Its primary objective is to diagnose an obstructed or potentially obstructed airway, to clear the obstruction and keep the airway patent. No medical emergency, short of a complete cardiopulmonary arrest, is more immediately life-threatening than the loss of an adequate airway. Failure to adequately manage airway patency and ventilation has been identified as a major cause of preventable death in trauma (27–30). In the initial assessment and management of any critically ill patient, the airway, breathing and circulation (ABC) are the first steps. The response to any acutely ill or injured patient must be met using a systematic approach, with the airway being the priority. If any abnormalities are detected, measures to intervene are instituted immediately. The skills to assess a patient for obstruction of the airway, to establish and maintain a patent airway, and to ensure adequate ventilation and oxygenation of the patient, are therefore essential.

Source:

http://www.who.int/violence_injury_prevention/publications/services/en/guidelines_traumacare.pdf

Q131: MVA with weak heart sounds and silent right side of the chest, distended neck veins, next?

A- Needle decompression

B- Cardiac window

C- Pericardiocentesis

Answer: A

Explanation: In clear cut cases: shock with *distended neck veins*, reduced breath sounds, deviated trachea, it could be lifesaving.

Chest tube placement is the definitive treatment of traumatic *pneumothorax*.

Pericardiocentesis is considered as a Part of circulation in ABC,

Needle decompression is considered as a part of Breathing

Source:

<http://www.trauma.org/archive/thoracic/CHESTtension.html>

http://www.fprmed.com/Pages/Trauma/Trauma_initialSurvey.html

Table 1: Differential Diagnosis of Massive Hemothorax, Tension Pneumothorax and Cardiac Tamponade

Assessment	Massive Hemothorax	Tension Pneumothorax	Cardiac Tamponade
Pulse	Rapid	Rapid	Rapid
Blood Pressure	Low	Low	Low
Pulsus paradoxus	No	Yes	Possibly
Heart sounds	Audible	Audible	Muffled
Neck veins	Flat	Distended	Distended
Percussion	Dull	Hyperresonant	Normal
Trachea	Midline/deviated	Deviated	Midline
Chest symmetry	Normal/asymmetrical	Asymmetrical	Normal
Breath sounds	Absent/rhonchi/rales	Absent	Present

Q132: MVA victim presented to ER with hypotension, given crystalloid his BP return to normal, and chest tube was inserted. what to do next?

A- Re-examine the chest

B- ABG

smle ,2016

Answer: A

Explanation:

Procedure

The steps in insertion of a chest drain are as follows:

1. The area is prepped and draped appropriately
2. An incision is made along the upper border of the rib below the inter- costal space to be used.

The drain track will be directed over the top of the lower rib to avoid the intercostal vessels lying below each rib.

The incision should easily accommodate the operator's finger.

3. Using a curved clamp the track is developed by blunt dissection only. The clamp is inserted into muscle tissue and spread to split the fibers. The track is developed with the operator's finger.
4. Once the track comes onto the rib, the clamp is angled just over the rib and dissection continued until the pleural is entered.
5. A finger is inserted into the pleural cavity and the area explored for pleural- al adhesions. At this time the lung, diaphragm and heart may be felt, depending on po- sition of the track.
6. A large-bore (32 or 36F) chest tube is mounted on the clamp and passed along the track into the pleural cavity.
7. The tube is connected to an underwater seal and sutured / secured in place.
8. If desired, a U-stitch is placed for subsequent drain removal (see below).
9. **The chest is re-examined to confirm effect.**
10. A chest X-ray is taken to confirm placement & position.

Source: <http://www.trauma.org/archive/thoracic/CHESTdrain.html>

Q133: **The fastest way to clean child stomach with iron over dose?**

A-Gastric lavage

B- Syrup something?

C- Enema something?

D- ?

Answer: ? Deferoxamine

Explanation:

The first step in treating a case of acute iron toxicity is to provide appropriate supportive care, with particular attention paid to fluid balance and cardiovascular stabilization. Initial treatment should also address the issue of preventing further absorption of iron by the GI tract.

Gastric lavage is not recommended because iron tablets are relatively large and become sticky in gastric fluid, making lavage unlikely to be of benefit.

Whole bowel irrigation has been used to speed the passage of undissolved iron tablets through the GI tract, although there is no convincing evidence from clinical studies that it improves the outcome.^[2] A polyethylene glycol electrolyte solution (eg, GoLYTELY) may be administered orally or nasogastrically at a rate of 250-500 mL/h for toddlers and preschoolers and 2 L/h for adolescents. Continue irrigation until the repeat radiographic findings are negative or rectal effluent is clear.

Deferoxamine is the iron-chelating agent of choice. Deferoxamine binds absorbed iron, and the iron-deferoxamine complex is excreted in the urine. Deferoxamine does not bind iron in

smle ,2016

hemoglobin, myoglobin, or other iron-carrying proteins. Base the indications for using deferoxamine on both clinical and laboratory parameters. Indications for treatment include shock, altered mental status, persistent GI symptoms, metabolic acidosis, pills visible on radiographs, serum iron level greater than 500 µg/dL, or estimated dose greater than 60 mg/kg of elemental iron. Initiate chelation if a serum iron level is not available and symptoms are present.

Once the doctor makes sure the child is breathing normally, the child likely will have his or her whole bowel cleaned by drinking a strong laxative fluid. Severe poisonings will require IV chelation therapy - **a series of IVs containing deferoxamine mesylate (Desferal)**, a chemical that binds to iron in a cell and is then excreted in urine.

Source:

<http://emedicine.medscape.com/article/1011689-treatment>
http://www.emedicinehealth.com/iron_poisoning/page3_em.htm#iron_poisoning_in_children_treatment

Q134: A case of heat stroke?

- A- Warm
- B- Fluid
- C- Core
- D- Cooling the whole body
- E- Electrolyte replacement

Answer: D

Explanation: **Immediate initiation of rapid and effective cooling is crucial in a patient with heatstroke.**²⁴If feasible, cooling should be initiated while the patient is awaiting transport. Blood should be drawn for chemistries and abnormalities addressed once the cooling process has begun. Cooling methods generally are categorized as external or internal. External methods include evaporative and immersion cooling, with evaporative methods being most commonly used in the field. In evaporative cooling, a mist of cool water (15°C [59°F]) is sprayed on the patient's skin, while warm air (45°C [113°F]) is fanned over the body. Cooling rates with this technique have been measured at 0.31°C (0.56°F) per minute.²⁵

Initial treatment of heat stroke in adults is aimed at rapidly decreasing core temperature. This may be initiated in the field (e.g., by external cooling) before definitive diagnosis is made.

Source: <http://www.aafp.org/afp/2005/0601/p2133.html>

<http://bestpractice.bmj.com/best-practice/monograph/849/treatment/details.html>

Q135: The effectiveness of ventilation during CPR measured by

- A- Chest rise
- B- Pulse oximetry

smle ,2016

C- Pulse acceleration

Answer: A

Explanation:

Source:

Obstetric & Gynecological Emergencies

By Deepti Goswami, Sangeeta Bhasin, Swaraj Batra

-

Emergency Care and Transportation of the Sick and Injured By American Academy of Orthopaedic Surgeons

Ensure that the mask makes a good seal around the mouth and nose such that when the bag is inflated there is visible chest rise in the infant. If the chest does not rise the possible reasons could be:

- The seal is inadequate
- Airway is blocked
- Insufficient inflation pressure

chest rise in most adults. However, because it is not possible for the EMT-B to accurately measure tidal volumes in milliliters per kilogram for each patient ventilated in the field, the key is to watch for visible rise and fall of the chest—let these observations determine the appropriate amount of volume to deliver.

Q136: Trauma Or depressed skull fracture what immediate thing to do (ER)

A- Intubate

B- O2 Supplement

C- IV Fluid

Answer: A

Explanation:

A clear, simple, and organized approach is needed when managing a severely injured patient. The primary survey promulgated in Advanced Trauma Life Support™ (ATLS™) provides such an approach [25]. The primary survey is organized according to the injuries that pose the most immediate threats to life and is performed in the order described below. In settings with limited resources, the primary survey simplifies priorities and any problems identified should be managed immediately before moving on to the next step of the survey. However, at major trauma centers, many capable clinicians may be present, allowing the team to address multiple problems simultaneously.

The primary survey consists of the following steps:

- **Airway assessment and protection (maintain cervical spine stabilization when appropriate)**
- Breathing and ventilation assessment (maintain adequate oxygenation)
- Circulation assessment (control hemorrhage and maintain adequate end-organ perfusion)
- Disability assessment (perform basic neurologic evaluation)
- Exposure, with environmental control (undress patient and search everywhere for possible injury, while preventing hypothermia)

Source: <http://www.uptodate.com/contents/initial-management-of-trauma-in-adults>

Extra info: ANTIDOTES IN ER

- Iron overload → Desferoxamine
- Copper overload → Penicillamine
- Opiate toxicity → Naloxone
- Benzodiazepines → Flumazenil
- Acetaminophen → N-acetylcysteine (NAC), if patient was conscious and asymptomatic you can give smle ,2016

- charcoal first "up to 2 hours only"
- Aspirin (tinnitus, respiratory alkalosis followed by metabolic acidosis) → alkalinize the urine with NaHCO₃
 - What causes seizure: Tricyclic toxicity, Cocaine toxicity, Benzodiazepine withdrawal and flumazenil antagonizing benzodiazepine dependence
 - TCA (seizure and wide QRS arrhythmia) → Sodium bicarbonate (Protect the heart)
 - Caustic agents: flush out with high volume of water "contraindicated to do gastric lavage"
 - CO poisoning → 100 O₂, or in severe cases → hyperbaric oxygen
 - Methemoglobinemia → best initial Rx is 100% O₂, most effective is methylene blue
 - Organophosphate poisoning and nerve gas → Atropine is the initial. Pralidoxime is the specific antidote
 - Digoxin toxicity (N&V, abdominal pain, hyperkalemia, confusion, visual disturbance and yellow halos around objects, arrhythmia) → best initial test is K and EKG, best accurate test is digoxin level.
Rx: digoxin specific anti-body

Family, community medicine and Ethics



1- What is most common serious chronic infection found in expatriates coming to Saudi Arabia?

- a. Hepatitis A
- b. Hepatitis B
- c. Hepatitis C
- d. HIV

Answer: B

Explanation: Hepatitis B infection was the most common cause (57.5%), followed by noncommunicable diseases (21.2%) and hepatitis C infection (17.4%).

Reference: http://applications.emro.who.int/emhj/v19/07/EMHJ_2013_19_7_664_670.pdf?ua=1

Reference: <http://www.alliedacademies.org/articles/profile-of-viral-hepatitis-in-saudi-arabia.pdf>

<http://www.ncbi.nlm.nih.gov/pubmed/24975313>

2- The most difficult method to prevent transmission:

- a. Person to person
- b. Vector
- c. Droplet
- d. Airborne

Answer: D

Explanation: airborne route are the most difficult to prevent and thus are able to infect large number of individuals in a relatively short period of time.

Reference: preventive medicine and public health (p.25 answer of Q6)

<https://books.google.com.sa/books?id=IyMW5MODmXAC&pg=PA25&dq=prevent+mode+of+transmission+difficult&hl=ar&sa=X&ved=0ahUKEwjvreaH9IjVAhUGbxQKHcskAdUQ6AEIJTAA#v=onepage&q=prevent%20mode%20of%20transmission%20difficult&f=false>

3rd Edition UQU last touch > Family medicine and statistics > Q 3.

<http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/airborne/>

http://www.medscape.com/viewarticle/741245_3

3- The chairman of the public health wants to reduce the incidence of stroke. He is reading the literature but he is confused. What is the best intervention?

- a. Cholesterol level test for all population
- b. Anti Smoking campaign
- c. Hypertension booth in the malls
- d. Obesity booth in the mall

Answer: C

Explanation: Hypertension remains the most important, well-documented modifiable stroke risk factor, and treatment of hypertension is among the most effective strategies for preventing both ischemic and hemorrhagic stroke

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5020564/>

4- An adult(18 years old he did not receive varicella vaccine) came to you for smle ,2016

varicella vaccine. How will you give it to him?

- a. one dose now and one after 2 weeks.
- b. one dose now and one after 3 months
- c. one dose now and one after 6 weeks
- d. just give one dose now

Answer: C

Explanation: Adolescents ≥ 13 years and adults who have not received varicella vaccine and have no evidence of chickenpox should receive two doses of single-antigen varicella vaccine, separated by four to eight weeks

Another explanation:

For adult; two doses of varicella vaccine **at least** 4 weeks apart (the 2nd dose can be given after 4 -6 weeks)

For children; two doses of varicella vaccine **at least** 3 months apart

References:

http://www.uptodate.com/contents/vaccination-for-the-prevention-of-chickenpox-primary-varicella-infection?source=search_result&search=varicella+vaccine+adult&selectedTitle=1~113#H21209874

http://www.immunize.org/askexperts/experts_var.asp

5. Patient take one dose of varicella vaccine and after one year present to your clinic..

- A - give double dose Nd
- B - give 2 dose
- C - start over
- D - antibody test

Answer: B

Explanation: give dou The varicella vaccine in adult take 2 dose with 4-8 w in between . you must catch up vaccination with a second dose for all adolescent and adult who may have missed a second dose .

References: Reviewed by Family medicine professor

6- Least harmful vaccine in immunocompromised patient.

- a. BCG
- b. pneumococcal vaccine
- c. measles
- d. Mumps

Answer: B

Explanation: Pneumococcal vaccine (both conjugate and polysaccharide) classified as a subunit vaccine, which is like inactivated vaccine can be given to immunocompromised patients.

BCG, measles and mumps are a live attenuated vaccine, which should not be given to immunocompromised patient.

References: <http://www.phac-aspc.gc.ca/publicat/cig-gci/p03-07-eng.php>

7- Which of the following vaccines is less harmful to immune-compromised

smle ,2016

pt?

- A. Hepatitis recombinant B vaccine
- B. BCG
- C. salk polio
- D. sabin polio

Answer: A

Explanation: For patients undergoing hemodialysis and for other immunosuppressed patients, higher vaccine doses or increased number of doses are required. A special formulation of one vaccine is now available for such persons (Recombivax HB, 40 ug/mL).

References:

<https://www.cdc.gov/hepatitis/hbv/hbvfaq.htm#D14>
<https://www.cdc.gov/mmwr/preview/mmwrhtml/00023141.htm>

8- HIV patient scenario but no dx (no cd4 count), which vaccine he should not receive?

- A. Hep B
- B. Varicella
- C. DTaP

Answer: B

Explanation:

HIV is a defect in cell-mediated immunity

Previous answer: If CD4 > 200, MMR and varicella are only live vaccine that should be given to HIV patient

Don't give OPV to HIV patient or their contact

References: the answer reviewed by family medicine professor

<http://hivinsite.ucsf.edu/InSite?page=kb-03-01-08#S4.8X>
http://www.who.int/vaccine_safety/committee/topics/varicella/Jul_2013/en/

9- There is a new outbreak of TB. What will you do?

- a. Give Ethambutol chemoprophylaxis.
 - b. Give Rifampicin chemoprophylaxis.
 - c. Bacillus Calmette-Guérin vaccine
- Other 2 irrelevant choices.

Answer: B

Explanation: Rifampicin: Prophylaxis for those exposed to people with N. meningitidis or HiB meningitis.

Reference: Toronto Notes

http://www.medscape.com/viewarticle/410023_2

10- What would you advise someone who is travelling to (?) to do most importantly, as precaution from Traveler's diarrhea?

- A. Eat fruits that you can peel
- B. Eat washed fruits and vegetables
- C. Prophylactic antibiotics
- D. Drink iced water.

Answer: A

Reference:

<https://wwwnc.cdc.gov/travel/yellowbook/2016/the-pre-travel-consultation/food-water-precautions>

11. Treatment of traveler's diarrhea?

Answer: ciprofloxacin

Explanation: As empiric therapy or to treat a specific bacterial pathogen, first-line antibiotics have traditionally been the fluoroquinolones, such as ciprofloxacin or levofloxacin. A potential alternative to fluoroquinolones is azithromycin.

References: <https://wwwnc.cdc.gov/travel/yellowbook/2016/the-pre-travel-consultation/travelers-diarrhea>

12- What is the most common problem faced by community medicine in PHCC.

- a. HTN
- b. Coryza
- c. UTI

Answer: B, from FM consultant (OM al Qura, family medicine)

The questions reviewed by family medicine professor and he said I need to see more options!!

13- What questionnaire to ask about alcohol intake?

Answer: CAGE questionnaire is indicated in alcoholism

1. Have you ever felt you needed to Cut down on your drinking?
2. Have people Annoyed you by criticizing your drinking?
3. Have you ever felt Guilty about drinking?
4. Have you ever felt you needed a drink first thing in the morning (Eye- opener) to steady your nerves or to get rid of a hangover?

References: <http://www.niaaa.nih.gov/research/guidelines-and-resources/recommended-alcohol-questions>

14- An example of secondary prevention is:

- a. Detection of asymptomatic diabetic patient
- b. Coronary bypass graft
- c. Measles vaccination
- d. Rubella vaccination

Answer: A

Explanation:

smle ,2016

- Primary prevention aims to prevent disease or injury before it ever occurs such as immunization)
- Secondary prevention (screening) aims to reduce the impact of a disease or injury that has already occurred such as regular exams and screening tests to detect disease in its earliest stages.
- Tertiary prevention aims to soften the impact of an ongoing illness or injury that has lasting effects "improves the quality of life by limiting the complications" such as cardiac or stroke rehabilitation programs.

References: <https://www.iwh.on.ca/wrmb/primary-secondary-and-tertiary-prevention>

15- An example for secondary prevention.

- A) Vaccine
- B) Screening for HTN
- C) Coronary bypass graft

Answer: B

Explanation: same as previous question

References: <https://www.iwh.on.ca/wrmb/primary-secondary-and-tertiary-prevention>

16- Healthy young adult with high cholesterol level. When will you follow him up again for dyslipidemia?

- a. 6 months
- b. 12 months
- c. 24 months
- d. 36 months

Answer: A

Explanation:

- The benefits of lifestyle modifications usually become evident within 6 to 12 months. However, the success of lipid lowering with lifestyle modification varies widely, and healthcare providers sometimes elect to begin drug therapy before this time period is over.
- Less than two Cardiac Risk Factors with elevated lipids: Repeat lipid panel in 3- 6 months

Reference:

http://www.uptodate.com/contents/high-cholesterol-treatment-options-beyond-the-basics?source=see_link,

<http://www.fpnotebook.com/cv/Lipid/Hypcrchlstrlm.htm>

17- A patient is concerned about microwave radiation and its risk of cancer on their children. They are asking for your advice, what will you tell them?

- a. Microwave cause cancer but not in children
- b. Microwave don't cause cancer

Answer: B

Explanation: When microwaves are absorbed by food containing water, it causes the water molecules to vibrate, which produces heat. Microwaves do not use x-rays or gamma rays, and they do not make food radioactive.

Microwave ovens can cook food, but they do not otherwise change the
smle ,2016

chemical or molecular structure of it. If you use a microwave oven in the correct way there is no known harmful effect on humans.

References:

<https://www.cancer.org/cancer/cancer-causes/radiation-exposure/radiofrequency-radiation.html>

18- Vegetarian patient having angular cheilitis:

- a. [Vit B6 deficiency](#)

Answer: A

Explanation: Causes of angular cheilitis: Vit B2, Vit B5, Vit B12, Vit B3, Vit B6 deficiencies, zinc and iron deficiency,

Vitamins deficiency among vegetarians: Vit B12, D, B6, ...

B12 deficiency is a common problem among people who follow a vegan diet.

Reference: Webmed + Wikipedia + Medscape.

What is the organism found in undercooked meat?

- a. [Entameba histolytica](#)

Answer: A

Explanation:

Organisms that can be found in raw meat:

- ⊕ Beef: E. coli O157:H7, Salmonella, Shigella, Staphylococcus aureus and Listeria monocytogenes
- ⊕ Poultry: Salmonella and Campylobacter
- ⊕ Shellfish: Vibrio gastroenteritis, Salmonellas, Plesiomonas shigelloides, Staphylococcus and Bacillus cereus

Table 10. Comparison of Select Biological Contaminants of Food and Effects on Human Health

	Source	Effects
Salmonella	Raw eggs, poultry, meat	GI symptoms
Campylobacter	Raw poultry, raw milk	Joint pain, GI symptoms
Escherichia coli	Various including meat, sprouts Primarily undercooked hamburger meat	Watery or bloody diarrhea Hemolytic uremic syndrome (esp. children)
Listeria monocytogenes	Unpasteurized cheeses, prepared salads, cold cuts	Listeriosis: nausea, vomiting, fever, headache, rarely meningitis or encephalitis
Clostridium botulinum	Unpasteurized honey, canned foods	Dizziness, weakness, respiratory failure, GI symptoms: thirst, nausea, constipation
Prion (BSE)	Beef and beef products	Creutzfeldt-Jakob disease

BSE = bovine spongiform encephalopathy

Reference: Toronto Notes.

19- Best types of carbohydrate in DM.

- a. [Monosaccharide](#)
- b. [Disaccharide](#)

smle ,2016

c. Polysaccharide

Answer: C

Explanation: Simple carbs have only one or two sugars, so they are digested quickly, making blood glucose rise rapidly to a high peak, which is what diabetics need to avoid. Examples of simple carbs include the sugars found in fruits and milk, the added sugars in processed foods, and table sugar.

Complex carbs contain three or more sugars, so these take longer to digest and thus they cause a less rapid rise in blood glucose and a lower peak. Examples of complex carbs include the fibers in spinach, watercress, buckwheat, barley, wild or brown rice, beans, and some fruits.

References: the answer reviewed by Family medicine professor

20- Children who are living in a poor country with poor hygiene will have a high risk to hepatitis:

- a. A
- b. D
- c. E

Answer: A

Explanation: Hepatitis A is usually spread when the Hepatitis A virus is taken in by mouth from contact with objects, food, or drinks contaminated by the feces (or stool) of an infected person. Most common type of hepat

References: <http://www.cdc.gov/hepatitis/hav/afaq.htm#overview>

21- A school did a screening test for their students and they found that there is a good number of obese students(BMI) . The school doctor wants to know more about these students before educating their parents. What should you provide him with?

- a. HDL\LDL
- b. Girth measurement
- c. Dietary habits

Answer: C

Explanation: The role of the GP and primary care team :

Screening: Identification of obese patients and patients in need of dietary advice for other reasons

Reference: Oxford General practice, 4th edition, obesity (P:174)

22- Medical director discovered cretinism in 90% of children in his village, when he analyzed the water he found that it is deficient in iodine. The director wants to prevent and manage cretinism. What he is going to do initially?

- a. Iodine supplementation
- b. Thyroxin supplement (Levothyroxine).
- c. TSH and T4 in 2 weeks.

Answer: B

Explanation: The mainstay in the treatment of congenital hypothyroidism is early diagnosis and thyroid hormone replacement. Optimal care may include diagnosis before age 10-13 days and normalization of thyroid hormone blood levels by age

smle ,2016

3 weeks

Reference: Medscape. <http://emedicine.medscape.com/article/919758-treatment>

23- What is the mineral found in water prevents teeth cavities?

- a. Folic acid
- b. Iron
- c. Fluoride

Answer: C

Explanation: Drinking water with fluoride (called “nature’s cavity fighter”) is one of the easiest and most beneficial things you can do to help prevent cavities.

References: <http://www.mouthhealthy.org/en/nutrition/food-tips/water-best-beverage>

24- The targeted glycated hemoglobin in a patient with type 1 DM should be:

- a. 6.50
- b. 8.00
- c. 9.50
- d. 11.0

Answer: A

- Ⓓ **Explanation:** Therapy in most individuals with type 1 or type 2 diabetes should be targeted to achieve a **HbA1c \leq 7.0%** in order to reduce the risk of microvascular and if implemented early in the course of disease, macrovascular complications.
- Ⓓ More intensive glucose control, **HbA1c $<$ 6.5%**, may be targeted in patients with a shorter duration of diabetes with no evidence of significant CVD and longer life expectancy, to further reduce risk of nephropathy and retinopathy, provided this does not result in a significant increase in hypoglycemia.
- Ⓓ A **HbA1c target $<$ 8.5%** may be more appropriate in type 1 and type 2 patients with limited life expectancy, higher level of functional dependency, a history of recurrent severe hypoglycemia, multiple co-morbidities, extensive CAD, and a failure to attain established glucose targets despite treatment intensification.

Reference: Toronto notes.

25- (long scenario) old man with DM and HTN, came for routine checkup. (CBC, FBS, Lipid profile .. etc.). What is the targeted glycosylated hemoglobin?

- a. 6.50
- b. 7.00

Answer: B

See the explanation of previous question

26- 32-year-old athlete man, who has a family history of HTN and DM, came for check up. He has good musculature and doing weight-lifting exercises. His blood glucose level within normal range also his lipid profile except for total serum cholesterol 210 mg/dl. What is your action?

smle ,2016

- a. Start statin.
- b. Change diet.
- c. Check up in next few months.
- d. Reassure him.

Answer: B

Explanation: Borderline high cholesterol treated with diet modification.

References: the answer reviewed by family medicine professor

27- Young female with height of 167 cm and weight of 153 kg. In which class of BMI ?

- a. Overweight.
- b. Obesity class I.
- c. Obesity class II.
- d. Obesity class III.

Answer: D

Explanation:

BMI = $\frac{\text{weight (kg)}}{\text{height}^2 \text{ (m)}}$	BMI	NIH Classification
	<18.5	Underweight
18.5-24.9	Normal Weight	
25-29.9	Overweight	
30-34.9	Obesity I	
35-39.9	Obesity II	
>40	Extreme Obesity	

Easy way to calculate BMI: Wt. 153 kg, Ht. 167 cm → 1.67 meter.

Step 1: Wt./Ht. (in meters) = 153/1.67 = 91.6

Step 2: Result of step one divided again by Ht. (in meters) = 91.6/1.67 = 54.8

Answer is 54 Which is extreme obese.

28- 28-year-old girl came for checkup. She asks about when to do breast self examination?

- a. Not advised.
- b. Advise every 4 months.
- c. Advise every 12 months.
- d. Advise 3 years.

Answer: A

Explanation: Breast awareness means knowing what your breasts look and feel like normally. Evidence suggests that there is no need to follow a specific or detailed routine such as breast self-examination, but you should be aware of any changes in your breasts.

Reference: Oxford General practice, Edition 4 (P:686)

Breast awareness Breast awareness means knowing what your breasts look and feel like normally. Evidence suggests that there is no need to follow a specific or detailed routine such as breast self-examination, but you should be aware of any changes in your breasts.

The breast awareness 5-point code

1. Know what is normal for you
2. Know what changes to look and feel for
3. Look and feel
4. Report any changes to your GP without delay
5. Attend for routine breast screening if you are aged 50 or over

29- Saudi Arabia has a good screening for military job. what the infection he man can't take the job?

- a. Hepatitis A virus
- b. Hepatitis B virus
- c. Hepatitis C virus
- d. HIV

Answer: D

Explanation: Disqualifying Conditions: HIV/AIDS

Reference: <http://www.beforejoiningthemilitary.com/military-medical-requirements-and-disqualifying-conditions/>

30- What is the vaccine type of Hepatitis B?

- a. Subunit
- b. Recombinant

Answer : B

Explanation: (Recombinant) is a non-infectious subunit viral vaccine derived from Hepatitis B surface antigen (HBsAg) produced in yeast cells.

References: <https://www.drugs.com/drp/hepatitis-b-vaccine-recombinant.html>

32-/What is the vaccine type of Pneumococcal vaccine?

- A. .Active vaccine
- B. Live attenuated vaccine
- C. Conjugated
- D. Inactive vaccine

Answer: C

Explanation: Both conjugate and polysaccharide are classified as a subunit vaccine (which is like an inactivated vaccine)

References: Refer to the table at the end of FM section.

33- Patient G2P0 had two abortions, came to you in clinic asking to give her any vaccine to help her to get a baby, HCG is positive. Which vaccine will you give her?

- a. Varicella
- b. Rubella
- c. Mumps
- d. Influenza

Answer: D

smle ,2016

Explanation:

- Influenza (flu) — pregnant women are at especially high risk of developing complications of the flu. Vaccination against the seasonal flu is recommended for all women who are or will be pregnant during influenza season. Influenza vaccine injection (flu shot) during pregnancy has no known harmful effects on the unborn baby, and can help protect the baby from influenza in the first six months after birth, before the baby is eligible for the flu vaccine. The nasal spray influenza vaccine should be avoided because it is made from a live virus
- Varicella, Rubella and Mumps vaccines are all contraindicated in pregnancy.

Reference: Uptodate. <https://www.uptodate.com/contents/vaccination-during-pregnancy-beyond-the-basics#H525731036>

34- Pregnant woman came to the clinic asking about tetanus risks and prevention. There is a history of contact with patients who have tetanus. On examination: Normal and the measurement of uterine level from symphysis is 12 cm. What is the action to prevent baby from tetanus?

- a. Introduce Acyclovir to the mother at 18 weeks.
- b. Tetanus immunoglobulin and vaccine to the baby after delivery.
- c. Give Acyclovir to mother and baby after delivery.
- d. Give tetanus vaccine to the mother.

Answer: D

Explanation: Unknown or Incomplete Tetanus Vaccination: To ensure protection against maternal and neonatal tetanus, pregnant women who never have been vaccinated against tetanus should receive three vaccinations containing tetanus and reduced diphtheria toxoids.

Reference: <http://www.cdc.gov/vaccines/pubs/preg-guide.htm#tdap>

35 - Best way of prevention:

- A. Screening program
- B. Genetic counseling
- C. Increase individual health awareness
- D. ENVIRONMENT MODIFICATION

Answer: Increase individual health awareness (or behavioral modification of the person)

References: the answer reviewed by family medicine professor

36- which of the following will potentially will decrease the disease

- A. screening
- B. environmental modification
- C. improve the personal health
- D. education

Answer : A (the family medicine professor said " All of them. To select one of these options, we need to have the full stem of the question ")

Explanation: **Screening** — Screening is the identification of asymptomatic disease or risk factors. Screening tests start in the prenatal period (as in alpha-fetoprotein testing) and continue throughout life (for example, when inquiring about hearing in the elderly). Much of this chapter discusses scientific principles of screening.

References:

http://cursoenarm.net/UPTODATE/contents/mobipreview.htm?10/12/10433?source=see_link

37- What is the best measure in health care?

- A. improve personal something
- B. screening
- C. individual education (behavioral modification of the person(newly added)

Answer: C

The family medicine professor said the question not clear !

Statistical questions ..one about sensitivity and spectifity Another one about mortality rate

38- THE MOST R.F OF STROKE?

- A. DM
- B. HTN
- C. SMOKING

Answer: B

Explanation: Hypertension remains the most important, well-documented modifiable stroke risk factor, and treatment of hypertension is among the most effective strategies for preventing both ischemic and hemorrhagic stroke

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5020564/>

39- THE MOST ""REVERSIBLE"" CAUSE OF STROKE IS ?

- A. OBESITY
- B. DM
- C. HTN
- D. HYPERLIPIEMIA

Answer:C

Explanation: Hypertension is a major reversible risk factor for stroke and heart disease.

References: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3657667/>

40- patient with normal glucose level and HBA1c, he is 42 male that smokes for 20 years, when do you do these tests again?

- A. .after 3 months
- B. 6 months
- C. 12 months
- D. 36 months

Answer : D

The answer reviewed by family medicine professor

41- Pt came with HTN and get controled by medication after 1 week she came with dry cough which medication is prescribed ?

- A. Perindopril (ACE)

Answer: A

Explanation: cough is one of the complication of ACEI (enalapril, quinapril, ramipril and benazepril,...)

References: <http://cursoenarm.net/UPTODATE/contents/mobipreview.htm?9/18/9505>

42- increase of which of the following prevalence cause reactivation of TB in developed countries?

- A. DM
 - B. HIV
- smle ,2016

Answer: B

Explanation: HIV as a risk factor for active tuberculosis — Concomitant infection with HIV is a leading risk factor for progression from LTBI to active disease

References: <http://cursoenarm.net/UPTODATE/contents/mobipreview.htm?32/53/33616>

43-72 old patient start to have memory loss ...gradually since 2 years back ..but he is capable of doing his daily activity... dressing himself but lately he start to forget the burner on.. and his personality changed from kind and caring father to agg. And irritable...what u will do

- A. Do cost effective lx
- B. [Refer to geriatric](#)
- C. TCA trial
- D. Give him Risperidone (antipsychotic)
- E. Arrange to transfer him to caring facility true for severe case

Answer: B

References: (UQU sle) q151 p447 4th edition, the answer reviewed by family medicine professor

44- Which type of hepatitis have available vaccine

A. **HBV**

Answer:

A

Explanation: Although there are no vaccines for hepatitis C, D, or E, there are safe and effective vaccines that can prevent hepatitis A and B.

References: <http://www.webmd.com/a-to-z-guides/prevention-15/vaccines/need-hepatitis-vaccines>

45-In KSA, there is strict rules for who are working in restaurant in order to prevent which type of hepatitis:

- A. A
- B. B
- C. D
- D. E "

answer :A , the answer reviewed by family medicine professor

46- Frequency of Blood sugar test screening in healthy man?

Answer: 3 years

Explanation: If the decision is to screen, consider a frequency of every 3 years using either fasting plasma glucose or HbA1c.

References: <https://www.ghc.org/static/pdf/public/guidelines/diabetes2.pdf>

47- Virus that can turn into a new virus and cause a pandemic?

- A. [Influenza](#)
- B. [Rhinovirus](#)
- C. [Parainfluenza](#)
- D. [RSV](#)

Answer: A

smle ,2016

Explanation: three types of viruses called influenza A, B, and C. Influenza types A and B are responsible for the respiratory disease that occurs almost every winter, cause Influenza. Influenza type C usually causes a very mild disease, often without symptoms. Only type A influenza causes pandemics in humans.

Certain conditions have to be met for a pandemic to occur:

A new influenza A virus (that is the result of a major change to the virus) is present. With a new virus, people will have little or no immunity.

A virus that is easily passed from human to human.

The virus is able to cause serious illness or death

References: https://www.ccohs.ca/oshanswers/diseases/pandemic_flu.html

48-17. Most common infection that is found in expatriates before they start working? (Repeated question)

- A. HIV
- B. Hep B
- C. Hep C

Answer : B

Explanation: Hepatitis B infection was the most common cause (57.5%), followed by noncommunicable diseases (21.2%) and hepatitis C infection (17.4%).

Reference: http://applications.emro.who.int/emhj/v19/07/EMHJ_2013_19_7_664_670.pdf?ua=1

Reference: <http://www.alliedacademies.org/articles/profile-of-viral-hepatitis-in-saudi-arabia.pdf>
<http://www.ncbi.nlm.nih.gov/pubmed/24975313>

49-the community department want to decrease the incidence on Stroke what is the appropriate action?

- A. [education the population about the Hypertension in mall](#)
- B. check for HYPERLIPIDEMIA in mall
- C. check for BMI for people in malls.

Answer: A

Explanation: Hypertension remains the most important, well-documented modifiable stroke risk factor, and treatment of hypertension is among the most effective strategies for preventing both ischemic and hemorrhagic stroke

Reference: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5020564/>

50-risk for osteoporosis :

Answer: Age(Agingprocess)

Explanation: assessment of risk factors that are independent of BMD is important for fracture prediction. Validated risk factors that are independent of BMD include the following:

- Advanced age
- Previous fracture
- Long-term glucocorticoid therapy
- Low body weight (less than 58 kg [127 lb])
- Family history of hip fracture

smle ,2016

- Cigarette smoking
- Excess alcohol intake

References: <http://cursoenarm.net/UPTODATE/contents/mobipreview.htm?6/42/6817>

51- Viral gastroenteritis prevented by which vaccine:

A-Rota vaccine

Answer: Rota vaccine

Explanation: Rota vaccine prevent GI and given at 2 , 4 month

We recommend universal immunization of infants against rotavirus (**Grade 1A**).

References:- Uptodate.com

<http://cursoenarm.net/UPTODATE/contents/mobipreview.htm?8/4/8257?source=see link>

52-Vaccination contraindicated during pregnancy?

Answer: Rubella vaccination

Explanation: Intrapartum immunization :

- Administration is dependent on the risk of infection vs. risk of immunization complications
- safe: tetanus toxoid, diphtheria, influenza, hepatitis B, pertussis
- avoid live vaccines (risk of placental and fetal infection): polio, measles/mumps/rubella, varicella
- contraindicated: oral typhoid
- **References:** Toronto Notes. 2016,
- **another references:** <https://www.uptodate.com/contents/vaccination-during-pregnancy-beyond-the-basics#H525731036>

53- 29 yrs old female , came for her annual checkup , her father was dx with dyslipidemia one year ago and she is anxious about she will have the same thing , he lab were all normal except for high triglycerides , what will you give her ?

Answer: diet and exercise for 3 month

Explanation: Hypertriglyceridemia is often induced or exacerbated by secondary, potentially correctable disorders .Thus. non-pharmacological interventions such as weight loss in obese patients. aerobic exercise. avoidance of concentrated sugars and medications that raise serum triglyceride levels, and strict glycemic control in diabetics should be first-line thereby.

References:

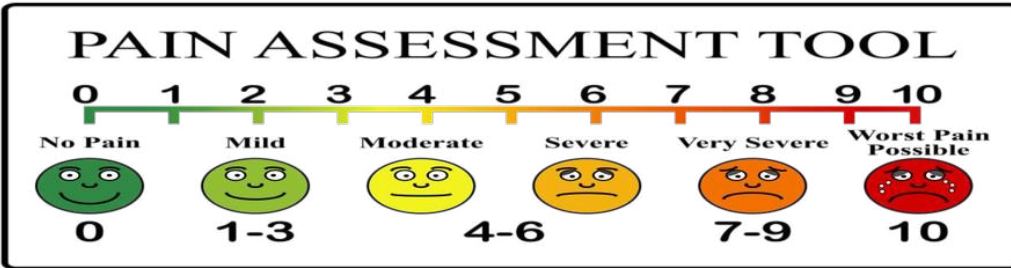
<http://cursoenarm.net/UPTODATE/contents/mobipreview.htm?35/25/36241#H17>

54- Effective Way for detected severity of pain with people non-communicated face .الرسومات. (the question not clear !)

A- number

B- verbal

Answer: A , number



55- If mammogram free when repeat it (

- A-2 y
- B-3 y
- C-4 y
- D-5y

Answer: B , Every 3 Yrs

Explanation: Women >50y two-view mammographic screening is currently available to women aged 50–70y every 3y

References: Oxford Handbok of General Practice 4th Ed. Chapter 20 page 694-695

56- What is the best sentence you ask him to know about his satisfaction about the asthma?

Incomplete ! (the question not clear !)

ANS: night symptoms ?

57-Vaccine of hepatitis A missed second dose what to do ?

Answer: Children who have not received the 2nd dose by age 2 years should be vaccinated as soon as feasible.

References: http://www.immunize.org/askexperts/experts_hepa.asp

58- patient with low back pain and normal neurological examination , MRI showed mild spinal stenosis .. What is Tx :

- a- surgery
- b- physiotherapy
- c- biofeedback

answer: B

Explanation: In general, a trial of conservative, nonsurgical treatment precedes surgical treatment. The exception is the rare patient with progressive neurologic deficits, especially the cauda equina syndrome, which indicates more urgent surgical decompression.

Nonsurgical treatments used for lumbar spinal stenosis (LSS) have included physical therapy, analgesic and anti-inflammatory medications, and epidural steroid injections

References:

<http://cursoenarm.net/UPTODATE/contents/mobipreview.htm?0/54/8>

64

59- Splenectomy what vaccine he should took?

Answer: pcv +menengococcal vaccine + hib

Explanation: Spleen is an organ that remove damaged RBCs and also it's also protect the body smle ,2016

against bloodstream infection by removing the bacteria from the blood . (is important to fight infection..)

So, splenectomy or un-functional spleen can cause sepsis

Most common organism which cause sepsis is streptococcus pneumoniae, less commonly Neisseria meningitidis or Hib

So ,pneumococcal vaccine is recommended and it has 2 types :

1- PPSV23

2- PCV13

3- Hib vaccine

meningococcal vaccine _ meningococcal conjugated vaccine

References: http://www.uptodate.com/contents/preventing-severe-infection-after-splenectomy-beyond-the-basics?source=outline_link&view=text&anchor=H1#H1

60- Mumps in child what is the most common complication?

A. orchitis

B. meningitis

Answer: B commonest

Explanation:

Complications :

- common: aseptic meningitis, orchitis/oophoritis
- less common: encephalitis, pancreatitis, thyroiditis, myocarditis, arthritis, GN, ocular complications, hearing impairment

Source: Toronto note in (infectious diseases)

The most common complication of mumps in children is meningitis, sometimes associated with encephalitis, and in young adults orchitis.

WHO

References: <http://www.who.int/biologicals/areas/vaccines/mmr/mumps/en/>

61-Enteric fever best diagnosed in the first week of presentation by ?

A -blood culture

B -stool culture

Answer:-A

Explanation: A blood culture during the first week of the fever can show S. typhi bacteria .urine and stool in second week .

<https://www.nlm.nih.gov/medlineplus/ency/article/001332.htm>

Blood cultures are positive in 40 to 80 percent of patients, depending upon the series and culture techniques used. Blood cultures may require several days of incubation. The diagnosis can also be made by culture of stool, urine, rose spots, or duodenal contents (via string capsule) .Stool culture is positive in up to 30 to 40 percent of cases, but is often negative by the time that systemic symptoms bring patients to medical attention .

References: Uptodate.

62 - women came for check up, her husband is+ve of HBsAg but all investigation like HBcAb, HBsAg for women are -ve which marker should be detect if +ve or -ve in this women :

A. HB IgM

B. HBeAg

Answer A

Explanation: Detection of IgM for hepatitis B core antigen (HBcAg) in serum is required to smle ,2016

make the diagnosis of acute hepatitis B virus (HBV) infection. Hepatitis B surface antigen (HBsAg) may be present in acute infection or in patients who are chronic carriers. HBsAg will be elevated first
IGM Anti HB indicate an acute infection within <6 months

References: <http://emedicine.medscape.com/article/775507-workup>

63- 2 years child came with Hx of fall down on x-ray # in radial what will do for this child:

- A. referral to pediatrics
- B. " to ortho
- C. admission
- D. splint for hand

ORTHO Qs

Answer: B (the answer reviewed by family medicine professor)

Explanation: forearm fracture is evaluated according to age , deformity of the hand , stability of the fracture

The younger the child more likely that a simple closed reduction and casting so I think orthopedic the one who can evaluated better

64-the most effective nonpharmacological treatment for hypertension ??

a-Low sodium diet

b-Decrease Wight

Answer :A

Explanation:

Non-pharmacological (lifestyle measures) as well as pharmacological means. Lifestyle changes should be the initial approach to hypertension management and include dietary interventions (reducing salt, increasing potassium, alcohol avoidance, and multifactorial diet control), weight reduction, tobacco cessation, physical exercise, and stress management

DASH diet + Low Sodium Diet is most effective measures for high BP

References:

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3028941/>

65-Doctor is asking the patient to perform Physical examination.

Getting informed consent.

Show respect to the patient

Answer: explain what you will do and take permission

66-patients with a specific disease in a thousand. 2.5 days are disability and 1.5 absent workers calculate the incidence of disability annually

answer : I didn't find the correct answer

67-A question about the definition of specificity (it was written in a very complex english so understand the definition very well and read the Q with focus)

answer : the quality or condition of being specific also called true negative

68- Which of the following vaccination is appropriate for asplenic patients: (Missing options)

Pneumococcal vaccine
smle ,2016

answer: Streptococcus pneumoniae , Haemophilus influenzae type B mNeisseria meningitides

Reference: http://www.surgicalcriticalcare.net/Guidelines/splenectomy_vaccines.pdf

69- Case about addict person and ask which of the following questions is include in criteria of CAGE questionnaire? (Missing options)

Answer: CAGE questionnaire is indicated in alcoholism

1. Have you ever felt you needed to Cut down on your drinking?
2. Have people Annoyed you by criticizing your drinking?
3. Have you ever felt Guilty about drinking?
4. Have you ever felt you needed a drink first thing in the morning (Eye- opener) to steady your nerves or to get rid of a hangover?

References: <http://www.niaaa.nih.gov/research/guidelines-and-resources/recommended-alcohol-questions>

70- Female patient did mammogram which was negative, the doctor told her that it will repeated every 2 years, she insists to do it regularly, how many years the cancer develop before detection by mammogram?

- a. 1
- b. 2
- c. 4
- d. 7

Answer: B (Correct answer depends on the woman's age)

Explanation:

ACA recent screening guidelines dictate the following for women at the average risk: Women ages 40 to 44 should have the choice to start annual breast cancer screening with mammograms if they wish to do so. The

risks of screening as well as the potential benefits should be considered.

Women age 45 to 54 should get mammograms every year.

Women age 55 and older should switch to mammograms every 2 years, or have the choice to continue yearly screening.

Screening should continue as long as a woman is in good health and is expected to live 10 more years or longer.

Reference: <http://www.cancer.org/cancer/breastcancer/moreinformation/breastcancerearlydetection/breastcancer-early-detection-acs-recs>

71- Patient can't take BCG vaccine Because he deficiency in?

- a. IL
- b. INF gama

Answer: B

Referance: Davidson's principles and practice of medicine 22Ed, page: 695

72- 22 female healthy with regular cycle, never had sex. History of bilateral breast pain 3 days before her cycle ,, no family history of cancers. She said she wants to get pregnant within 2 years !!! What will you screen her for ,,,, I DON" T KNOW !!!

- a. US breast
- b. PaP Smear
- c. human papilloma virus

smle ,2016

d. Gram stain for (streptococcus I think)

Answer: A?? for possible fibrocystic breasts.

Reference: surgical recall, Page: 416

(This is mostly the description of fibrocystic breasts. First tests to order is ultrasound)

73- the most effective way to prevent cardiac anomaly in pregnancy is ?

- a. family (Missing options)
- b. smoking cessation
- c. genetic screen

Answer: In general, Diabetic control is the most important to prevent cardiac anomaly because it's associated Cardiomyopathy with ventricular hypertrophy.

Reference: <http://emedicine.medscape.com/article/974230-overview#a2>

74- What is the developmental Screening tool that relies on the parents information only?

Answer: Milestone

75- Patients with a specific disease in a thousand. 2.5 days are disability and 1.5 absent workers calculate the incidence of disability annually

Answer: ??? I didn't find the correct answer

There were also missing questions about the following:

Vaccination types

Different types of research sampling

Vaccine Type	Mechanism	Immune Response	Adverse Reactions	Examples	Comments
Live Attenuated Vaccine	Weakened but live agent	Strong cellular and humoral immunity similar to wild-type pathogen Presence of memory	May be unpredictable with rare potential to revert to virulent form May be associated with anaphylaxis and febrile seizures	BCG (tuberculosis vaccine), oral polio vaccine (OPV, Sabin), intranasal influenza vaccine, and vaccines against smallpox, measles, mumps, and rubella (MMR), varicella (chickenpox), zoster (shingles), <i>Salmonella typhi</i> , yellow fever, and rotavirus	May be contraindicated in immunocompromised subjects/close contacts with a few exceptions (e.g. administration of MMR vaccine is recommended among HIV-positive subjects).
Inactivated Vaccine	Killed agent via physical or chemical processes	Humoral immunity Repeated doses need to "boost" immune response Presence of memory	Safe with no risk of inducing disease Adverse reactions limited to local edema, erythema, and transient low-grade fever	Injectable influenza vaccine, inactivated polio vaccine (IPV, Salk), and vaccines against HAV, pertussis (wP), and rabies	More stable and safer than live attenuated vaccines
Subunit, Recombinant, Polysaccharide, & Conjugate Vaccine	<u>Subunit Vaccine</u> Protein-based and contain only a specific purified antigen or epitope that elicits immune response. <u>Recombinant Vaccine</u> Subunits may be recombinant when an antigen is inserted into another agent by genetic engineering <u>Polysaccharide Vaccine</u> Polysaccharides that are normal constituents of bacterial surface capsules and help bacteria to evade immune cells among infants and young children (have weaker immunity than older children) <u>Conjugate Vaccine</u> Special subunit vaccine that links an immunologically recognizable antigen or toxoid to a polysaccharide. Conjugate vaccines are especially helpful among infants and young children)	Humoral immunity Repeated doses do not result in "boost" immune response No memory	Safe with no risk of inducing disease Adverse reactions limited to local edema, erythema, and transient low-grade fever	<u>Subunit Vaccine</u> Vaccines against HBV and acellular pertussis (aP) <u>Recombinant Vaccine</u> Recombinant HBV vaccine and recombinant HPV vaccine <u>Polysaccharide Vaccine</u> Vaccines against <i>Salmonella typhi</i> , pneumococcal disease (PPSV), and meningococcal disease <u>Conjugate Vaccine</u> Vaccines against <i>Haemophilus influenzae</i> B (Hib), pneumococcal disease (PCV), and meningococcal disease	More stable and safer than live attenuated vaccines
Toxoid Vaccine	Presence of toxoids, which are detoxified bacterial exotoxins	Humoral and cellular immunity Presence of memory	Safe with no risk of inducing disease Adverse reactions limited to local edema, erythema, and transient low-grade fever	Vaccines against diphtheria toxoid (DT) and tetanus toxoid (TT), both of which are components of the DTaP vaccine	More stable and safer than live attenuated vaccines

76- Old lady with osteoporosis best prevention is :

a- weight bearing exercise

b- Vit. D supplements

Answer: B

Reference: Toronto notes, Page; E43

77- a boy dreamed of a bad dream and he woke up crying and feared but he does not remember any of the dream which stage of sleep he was on:

a.1

b.2

c.3

d.4

Answer: D ?? The answer should be Stage5 sleep(REM Sleep) "is the stage of sleep associated with dreaming"

smle ,2016

Reference: <https://www.sleepassociation.org/sleep/stages-of-sleep/>

78- Male patient K/C asthma on inhalor medication . Has oral white plaques difficult to remove . What medication causing these SE ?

- a. Ipratropium
- b. betamethasone
- c. sulbutamol
- d. cromolyn

Answer: B “Patients using ICS who present with white patches (plaques) in their mouth should be referred to their GP, as this could be oral candidiasis”

Reference: <http://www.pharmaceutical-journal.com/learning/learning-article/inhaled-corticosteroids-managing-side-effects/20067896.article>

79- Male was in swimming pool. 2 days later Has vomiting, headache ,fever , No neck stiffness What is the possible bacterial ?

- a. S.pneumonia
- b. H.influenza
- c. N.meningitides
- d. Naegleria

Answer: D

Reference: <http://www.cdc.gov/parasites/naegleria/>

80- most common cause of cough in adult

Post nasal drip

Explanation: "The most common causes of chronic cough are postnasal drip, asthma, and acid reflux from the stomach. These three causes are responsible for up to 90 percent of all cases of chronic cough”

Reference: <https://www.uptodate.com/contents/chronic-cough-in-adults-beyond-the-basics>

81-a case of T score of -3.5 what is the diagnosis:

- a. osteopenia
- b. osteoporosis

Answer: B

Explanation:

“T-score of -1 to -2.5 SD indicates osteopenia. T-score of less than -2.5 SD indicates osteoporosis. T-score of less than -2.5 SD with fragility fracture(s) indicates severe (established) osteoporosis”

Reference: <http://emedicine.medscape.com/article/330598-workup#c10>

82-Diabetic pt on metformin and gliclazide not control what to add : (I didn't find the correct answer)

- A. acarbos – pioglitazon ??

83- How to treat water from entamoeba histolytica?

- a. Boiling
 - b. Chlorine
- smle ,2016

Answer : A

Explanation:

“Amebic cysts are not killed by soap or low concentrations of chlorine or iodine; therefore, water in endemic areas should be boiled for more than 1 minute”

Reference: <http://emedicine.medscape.com/article/212029-treatment#d11>

84- What is the prevention method for food poisoning?

- a. prolong heating and re cooking
- b. antibiotic
- c. prolong mastication

Answer: a??

Explanation: The four C's of prevention: cleaning, cooking, chilling & cross contamination (avoiding it)

Reference: <http://www.nhs.uk/Conditions/Food-poisoning/Pages/Prevention.aspx>

Q84: What is the prevention method for food poisoning?

- A. prolong heating and cooking
- B. antibiotic
- C. prolong mastication

Answer: A

Q85: Man his wife diagnosed with osteoporosis, he has history of recurrent renal stone, labs showed "can't remember" what is the diagnosis? "

Q86: Parent came for counseling "Hx of pt known to has HTN and now newly diagnosed with DM", a medication was given for HTN , what was this medication?

- a. ACEI
- b. beta blocker
- c. ARB
- d. diuretics

Answer: A

Explanation: ACE inhibitors have proved beneficial in patients who have had a myocardial infarction or congestive heart failure, or who have diabetic renal disease (early or established).⁶ These agents are considered preferred therapy in patients with hypertension and diabetes, according to guidelines from the ADA, the NKF, the World Health Organization, and the JNC VI.

Reference: <http://www.aafp.org/afp/2002/1001/p1209.html>

Q87: -صورة ساق مكسوره من تحت الركبه النبض موجود What to do?

- A. angiograph
 - B. Venograph
 - C. duplex US
 - D. MRI
- smle ,2016

Answer: duplex US "doctors' opinion"

Q88: Healthy young adult with high cholesterol level. When will you follow him up again for dyslipidemia?

A - 6 months

B - 12 months

C - 24 months

D - 36 months

Answer: A

Fasting lipid levels should be obtained 6-8 weeks following the initiation or alteration of therapy. For patients at goal, lipid profiles should be performed annually.

Reference:

https://ghcscw.com/SiteCollectionDocuments/Clinical_Practice_Guidelines/8_CPG_DyslipidemiaA.pdf

Less than two Cardiac Risk Factors with elevated lipids: Repeat lipid panel in 3- 6 months.

Reference: <http://www.fpnotebook.com/cv/Lipid/Hypcrchlstrlm.htm>

Q89: Know about HSV1 and HSV2? What is the different?

- The herpes simplex virus, or herpes, is categorized into 2 types: herpes simplex virus type 1 (HSV-1) and herpes simplex virus type 2 (HSV-2).
- HSV-1 is mainly transmitted by oral-to-oral contact to cause oral herpes (which can include symptoms known as “cold sores”), but can also cause genital herpes.
- HSV-2 is a sexually transmitted infection that causes genital herpes.
- Both HSV-1 and HSV-2 infections are lifelong.
- Most oral and genital herpes infections are asymptomatic.
- Symptoms of herpes include painful blisters or ulcers at the site of infection.
- Herpes infections are most contagious when symptoms are present but can still be transmitted to others in the absence of symptoms.
- Infection with HSV-2 increases the risk of acquiring and transmitting HIV infection.

Reference: <http://www.who.int/mediacentre/factsheets/fs400/en/>

Q90: patient with normal glucose level and HBA1c, he is 42 y/o male who's smoked for 20 years, when do you do these tests again?

A - after 3 months

B - 6 months

C - 12 months

D - 36 months

smle ,2016

Answer: D

Q92: Prevention medicine When to do lipid profile?

You can read about it: <https://labtestsonline.org/understanding/analytes/lipid/tab/test/>

Q93: Pt with hx of dyslipidemia on statins lipid profile is normal which drug would you add to the medications? "They mentioned the other medications of dyslipidemia"

Q94: Drug cause hypoglycemia? And they mentioned some types of anti-diabetics

Answer: sulfonylurea

Know more about the oral hypoglycemic: <http://www.diabetes.co.uk/diabetes-medication/diabetes-and-oral-hypoglycemics.html>

Q95: Type 2 diabetic patient on gliclazide and another oral hypoglycemic agent - I forgot what it - heard about incretins in the news and he wants to know more about it, what is its mechanism of action?

- A. Increases sensitivity of the receptors to insulin
- B. Delay gastric emptying
- C. Decrease gluconeogenesis
- D. Increase insulin secretion

Answer: D

Reference: <https://www.diabetesselfmanagement.com/diabetes-resources/definitions/incretin-hormone/>

Q96: 45 years old male, came for regular checkup, apart from bronchial asthma, his blood pressure is 125/80, HgbA1c is 5.9, when is the next time he should check his blood glucose level?

- A. 3 months
- B. 6 months
- C. 12 months
- D. 36 months

Answer: D

Screening for type 2 diabetes mellitus

[in adults", section on 'ADA criteria'](#) and ["Clinical presentation and diagnosis of diabetes mellitus in adults", section on 'WHO criteria'](#):

- A FPG value ≤ 100 mg/dL (5.6 mmol/L) or A1C < 5.7 percent should be considered normal. We suggest retesting at three-year intervals.
- For those with borderline results (FBG 100 to 125 mg/dL or A1C 5.7 to 6.4 percent) we suggest follow-up every one to two years.
- The diagnosis of diabetes is confirmed if two consecutive A1C levels are ≥ 6.5 percent, two consecutive FPG levels are ≥ 126 mg/dL (7.0 mmol/L), or if both the A1C and FPG are above their diagnostic thresholds ([table 1](#)).
- If A1C and FPG are discordant, the test that is diagnostic of diabetes should be repeated to confirm the diagnosis.

Appropriate management of patients meeting the criteria for diagnosis of diabetes or increased risk for diabetes ([table 2](#)) is discussed elsewhere. (See ["Prevention of type 2 diabetes](#)

Hypertension:-
-hypertension screening every year for adults ≥ 40 years and for those who are at high risk for high blood pressure (patients with high-normal blood pressure [130-139/85-89 mmHg] who are overweight or obese and African Americans).
-Adults aged 18 to 39 years with normal blood pressure ($< 130/85$ mmHg) without risk factors should be rescreened every three to five years

Q97: girl with depression in first 2 days of menstruation what is the dx? “Mood swings, depression”

Premenstrual syndrome

Q98: Pt diagnosed as HTN and started meds came back with high glucose. What was the drug?

Thiazides

Reference: http://www.medscape.com/viewarticle/489521_8

Know more about side effects of antihypertensive medications:

<http://www.webmd.com/hypertension-high-blood-pressure/guide/side-effects-high-blood-pressure-medications#1>

Q99: Pt diabetic for years and was just dx as HTN, what to give?

ACEI (pril family drugs)

Explanation: ACE inhibitors have proved beneficial in patients who have had a myocardial infarction or congestive heart failure, or who have diabetic renal disease (early or established). These agents are considered preferred therapy in patients with hypertension and diabetes, according to guidelines from the ADA, the NKF, the World Health Organization, and the JNC VI.

Reference: <http://www.aafp.org/afp/2002/1001/p1209.html>

Q100: Pt with high cholesterol on treatment has muscles aches what she was given:

Statins

Reverence: <http://www.webmd.com/cholesterol-management/side-effects-of-statin-drugs#2>

Q101: 60 y/o has only HTN the best drug for him?

A- Diuretics

B- CCB

C- ACEI

Answer: B

Q102: Side effect of atropine:

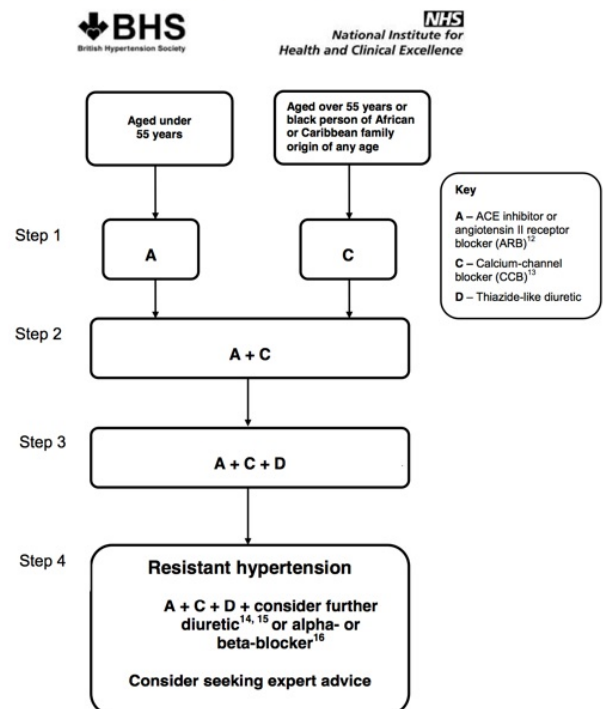
Dry mouth.

Explanation: Common side effects of atropine sulfate include:

- dry mouth,
- blurred vision,
- sensitivity to light,
- lack of sweating,
- dizziness,
- nausea,
- loss of balance,
- hypersensitivity reactions (such as skin rash), and

smle ,2016

Summary of antihypertensive drug treatment



- Rapid heartbeat (tachycardia).

Reference: <http://www.rxlist.com/atropine-side-effects-drug-center.htm>

Q103: diabetic on oral hypoglycemic with hypoglycemia:

- A- Rosiglitazone
- B- Metformin
- C- Glyburide is sulfonylurea

Answer: C

Reference: go back to Q 94

Q104-Most risk of CAD:

- A - 50ys, DM, high cholesterol
- B - 55, HTN, obesity
- C -young age, DM, obesity .

Answer: B

Q105: NO Q WAS FOUND!!

Q106: old female smoker, most risk for osteoporosis?

- A. age
- B. Smoking
- C. vitamin d deficiency

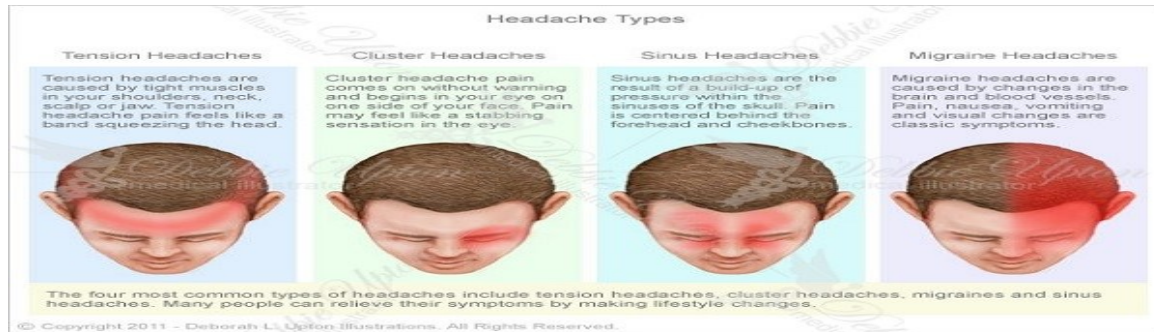
Answer: A

Reference: <http://www.webmd.com/osteoporosis/guide/osteoporosis-risk-factors>

Q107: 16 year old came with headache band like, behind eye throbbing. Stressful life

- A. migraine
- B. tension

Answer: B



Q108: NO Q WAS FOUND!!

Q109: Best time to do self-breast examination?

- A. Daily
- B. Weekly
- C. Monthly
- D. Annually

Answer: C

Reference: http://www.breastcancer.org/symptoms/testing/types/self_exam

Q110: Best first investigation to apply in pandemic disease?

- A. Establish the diagnosis
- B. Know the population who are in risk

Answer: A

Reference: http://sphweb.bumc.bu.edu/otlt/mph-modules/ph/outbreak/outbreak_print.html

Q111: Case of SSRI or TCA overdose (I am not sure) and they asked about diagnosis?

Q112: no Hx of DM in the family, asthmatic pt now his Bp is within normal range when to check again?

Answer: Any one with no HTN or DM , recheck after 3 years .

Q113: 10 or 12 years girl diabetic since 3 years which of the following should be checked annually?

- A. Ophthalmoscopy
- B. Celiac test
- C. kidney ultrasound

Answer: A

Explanation: (annual follow-up visits with an optometrist or ophthalmologist examination through dilated pupils whether symptomatic or not.

smle ,2016

Reference: (tornto notes - endocrinology)

Q114: Question about Tx of Alzheimer

Treatment Prevention of associated symptoms.

- Provide supportive therapy for the patient and family.
- Treat depression, agitation, sleep disorders, hallucinations, and delusions.
- Prevention of disease progression: Cholinesterase inhibitors (donepezil , rivastigmine, galantamine, tacrine) are first-line therapy for mild to moderate disease. Tacrine is associated with hepatotoxicity and is less often used.
- Meantime, an NMDA receptor antagonist, may slow decline in moderate to severe disease.

Reference: (step 2 CK, P 266)

Q115: another Question about Alzheimer drug that is hepatotoxic?

Tacrine is associated with hepatotoxicity and is less often used (step 2 CK, P 266)

Q116: how poliovirus vaccine works?

Explanation: OPV consists of a mixture of live attenuated poliovirus strains of each of the three serotypes, selected by their ability to mimic the immune response following infection with wild polioviruses, but with a significantly reduced incidence of spreading to the central nervous system. Three or more spaced doses of OPV are required to generate adequate levels of seroconversion. The action of oral polio vaccine (OPV) is two-pronged. OPV produces antibodies in the blood ('humoral' or serum immunity) to all three types of poliovirus, and in the event of infection, this protects the individual against polio paralysis by preventing the spread of poliovirus to the nervous system. OPV strains also produce a local immune response in the lining ('mucous membrane') of the intestines - the primary site for poliovirus multiplication. The antibodies produced there inhibit the multiplication of subsequent infections of 'wild' (naturally occurring) virus. This intestinal immune response to OPV is probably a reason why mass campaigns with OPV have been shown to stop person-to-person transmission of wild poliovirus. In very rare cases, the administration of OPV results in vaccine-associated paralysis associated with a reversion of the vaccine strains to the more neurovirulent profile of wild poliovirus. In a few instances, such vaccine strains have become both neurovirulent and transmissible and have resulted in infectious poliomyelitis.

Reference: <http://www.who.int/biologicals/areas/vaccines/polio/opv/en/>

Q117: Live attenuated vaccines (measles, mumps, DPT)

Q118: Pt with high level of cholesterol, what to avoid?

- A. Organ meat
 - B. Avocado
 - C. Chicken
- smle ,2016

D. White egg

Answer: A

Reference: <http://www.webmd.com/cholesterol-management/foods-to-avoid-for-high-cholesterol>

Q119: 70 y/o female brought to your clinic by her daughter. The daughter said her mother's memory deteriorated in the last 2 years. She can dress herself but e difficulty, she can cook for herself but sometimes leave the oven on, what's the management?

Answer: Refer her to geriatric clinic

Q120: Black man with high BP , +ve family Hx of HTN . Best drug to give?

A. B blocker

B. ACEI

C. CCB firs then thiazide

Answer: C

Explanation: (first line antihypertensives: thiazide/thiazide- like diuretic, ARB, long-acting CCB, β -blocker (if age <60) ,Reference: tornto notes

Q121: Tonsillitis case:

A. amoxicillin / clavilonic

B. vancomycin

C. ciprofloxacillin

D. trimethoprim / sulpham

Answer: A

Reference: <http://www.webmd.com/oral-health/tc/tonsillitis-medications>

Q122: DM+HTN what to give medication:

ACEI

Q123: pt on metformin, lab values given with low PH, normal urine osmolalrity, no ketones:

A. DKA

B. Hyperosmolar hyperglycemia

C. Lactic acidosis

Answer: C

Reference: <http://www.medscape.com/viewarticle/827622>

Q124: Smoking withdrawal symptoms peak at?

A. 1-3days

B. 4-7 days

C. 2 weeks

smle ,2016

Answer:?

Explanation: After you quit smoking, you will have some withdrawal symptoms. Such symptoms generally peak in intensity 3 -5 days after you quit, and usually disappear after 2 weeks, although some may persist for several months.

Reference: <http://www.nytimes.com/health/guides/disease/nicotine-withdrawal/symptoms-of-withdrawal.html>

Q125: Traveler diarrhea treatment:

Explanation: rehydration therapy and antibiotic like” fluoroquinolone antibiotics” are the drugs of choice. Trimethoprim-sulfamethoxazole and doxycycline are no longer recommended because of high levels of resistance to these agents.

Q126: viral gastroenteritis prevented by which vaccine?

Rota vaccine

Reference: <http://www.mayoclinic.org/diseases-conditions/viral-gastroenteritis/basics/prevention/con-20019350>

Q127: Best medication for chronic pain disease?

A. Ibuprofen

B. acetaminophen

Answer: B "I'm not sure"

Explanation:

<https://www.practicalpainmanagement.com/patient/treatments/medications/medications-chronic-pain>

Q128: Best muscle relaxant in severe back pain?

A. Diazepam

B. Metaxalone

Answer: ? " NSAIDs are the most commonly used"

Explanation:

- Diazepam: relieves symptoms of anxiety and alcohol withdrawal and is used in seizure disorders such as epilepsy. Diazepam is usually limited to one to two weeks of use. This limitation is due to its habit-forming potential.
- Metaxalone: Treating discomfort associated with acute painful muscle

Reference: <https://www.spine-health.com/treatment/pain-medication/muscle-relaxants>

Q129: farmer had sand fly related infection, how to treat?

Treatment: Medicines called antimony-containing compounds are the main drugs used to treat leishmaniasis. These include:

- Meglumine antimoniate
 - Sodium stibogluconate
- smle ,2016

Other drugs that may be used include:

- Amphotericin B
- Ketoconazole
- Miltefosine
- Paromomycin
- Pentamidine

Plastic surgery may be needed to correct the disfigurement caused by sores on the face (cutaneous leishmaniasis). Patients with drug-resistant viral leishmaniasis may need to have their spleen removed (splenectomy).

Reference: <http://www.nytimes.com/health/guides/disease/leishmaniasis/overview.html>

Q130: Student had meningitis what should you do for other students?

Answer: Antibiotics prophylactic, such as rifampin, ciprofloxacin, ceftriaxone, minocycline, and spiramycin.

Reference: <http://emedicine.medscape.com/article/1165557-treatment#d11>

Q131: A scenario about a patient who deals with flowers and got pricked by rose thorn, presented with redness at the prick site. Which of the following is the cause?

Answer: *Sporothrix schenckii*.

Explanation: Sporotrichosis (also known as "Rose gardener's disease") is a disease caused by the infection of the fungus *Sporothrix schenckii*.

Reference: <https://en.wikipedia.org/wiki/Sporotrichosis>

Q132: case of gonorrhoea, what are you going to give his close contacts:

- A. Rifampin chemoprophylaxis
- B. Isolate all contacts for 4 weeks
- C. Meningococcal vaccine

Answer: oral cefixime and azithromycin is used for treatment of the partner using Expedited partner therapy. Isolate maybe the correct answer ONLY in case of resistant gonorrhoea

Explanation:

All individuals who have had sexual contact with patients diagnosed with *N. gonorrhoeae* within the past 60 days of the diagnosis should be evaluated and treated.

smle ,2016

Expedited partner therapy — Expedited partner therapy (EPT) is the clinical practice of treating the sex partners of patients diagnosed with sexually transmitted infections (STIs) without formal evaluation of the partner(s), by providing prescriptions or medications to the patient to deliver to the partner(s). Oral cefixime and azithromycin is used for treatment of the partner.

Reference: Uptodate:

http://www.uptodate.com/contents/treatment-of-uncomplicated-gonococcal-infections?source=search_result&search=gonorrhoea&selectedTitle=1~150

Q133: F/u of blood lipids and F/u of blood sugar:

(You may try surfing this website and know normal values if you want)

<http://www.e-mercy.com/images/cholesterol-metabolism/research/2/Guidelines-to-Interpreting-Results-from-Health-Screening.pdf>

Q134: High triglyceride what to add to statins?

Answer: fibrate (such as fenofibrate, gemfibrozil), Or omega-3 PUFAs (fish oils) But most likely it is fibrate.

Explanation:

For patients with a triglyceride level above 500 mg/dL (5.7 mmol/L) in whom pharmacologic therapy is indicated, we suggest treatment with a fibrate (such as fenofibrate), followed by the addition of a statin once the triglyceride levels are brought down.

- Main goal is to keep triglyceride <5.7 mmol/L (<500 mg/dL) to reduce the risk for acute pancreatitis. Optimal goal is triglyceride <1.7 mmol/L (<150 mg/dL), but is typically not realistic. Drug treatment follows hospitalisation when inpatient therapy is needed to clear chylomicronaemia.
- Fibric acid derivatives and omega-3 PUFAs (fish oils) can be initiated as single agents or in combination.

Reference: <https://www.uptodate.com> <http://bestpractice.bmj.com>

Q135: athletic come for checkup all thing normal except Xanthelasma on achllis tendon and cholesterol?

- A. -LDL receptor
- B. -Apo II
- C. -Apo c

Answer: A

Explanation: Familial hypercholesterolemia (FH) is a genetically modulated clinical syndrome in which the phenotype is characterized by a high - low density lipoprotein cholesterol (LDL-C) level - from birth, a propensity to tendon xanthomata, and early onset coronary heart disease (CHD).

smle ,2016

it has been estimated that about 95 percent of patients with FH carry a functional mutation of one of three genes:

- A. the LDL receptor;
- B. the apolipoprotein B gene, which impairs binding of LDL particles to the LDL receptor;
- C. gain of function mutations of the proprotein convertase subtilisin kexin 9 gene, leading to decreased LDL metabolism

Reference: <https://www.uptodate.com>

Q136: Normally, the child can sit without support and support his head, laughing and cooing at the age of:

- A. 4 months
- B. 6 months
- C. 8 months
- D. 16 months

Answer: Could be at 6 months or at 8 months, most likely it is 8 months

Explanation:

- Coos and Social smile at age of 2 months
- Laughs out loud at age of 4 months
- Sits with pelvic support at age of 5 months
- Sits momentarily propped on hands at age of 6 months
- Sits without support – steady and Puts arms out to sides for balance (lateral protection) at age of 7 months
- Gets into sitting at age of 8 months

Reference:

<https://drive.google.com/file/d/0B79CmIZYhcHsWFJwZktLVIR-ROU0/view?usp=sharing>

<https://www.uptodate.com> , <https://www.uptodate.com>

Q137: Most Important risk factor for cardiac diseases is:

- A. LDL
- B. Total cholesterol
- C. HYPERTENSION
- D. Smoking

Answer: Most likely hypertension, But I couldn't find a reference for that except videos of Kaplan.

Explanation:

smle ,2016

Hypertension Is the most common cause for hypertension Diabetes have the worst outcome for CAD

Reference: Kaplan videos 2012 cardiology, Chapter 1 CAD part 1 11:00 m

Q138: Burn patient, weighing 70 kg, had circumferential upper and lower left limbs + anterior trunk. How much fluid you'll give in the first 8 hours?

- A. 4 liters
- B. 6 liters
- C. 8 liters
- D. 10 liters

Answer: B

Explanation:

In burn cases, fluid resuscitation is a priority. The amount of fluid that should be given to the patient is determined by the size of the burn. For 2nd and 3rd degree burns, rule of 9 should be followed (this is in adults and children > 10 years of age; in children < 10 years of age, Lund-Browder Chart should be used).

Rule of 9 divides total body surface area (TBSA) into:

Anterior head and neck < 4.5 % of TBSA Posterior head and neck < 4.5 % of TBSA Anterior trunk < 18 % of TBSA 872 Posterior trunk < 18 % of TBSA

Anterior upper limbs < 9 % of TBSA (each is 4.5% alone) Posterior upper limbs < 9 % of TBSA (each is 4.5% alone) Anterior lower limbs < 18 % of TBSA (each is 9% alone) Posterior lower limbs < 18 % of TBSA (each is 9% alone) Perineum < 1 % of TBSA

In this Question, upper left (9% because it is circumferential) and lower left (18% because it is circumferential) and anterior trunk (18%) [9 + 18 + 18 = 45% TBSA].

Resuscitation should follow Parkland Formula. 4ml x TBSA (%) x body weight (kg); 50% given in first eight hours; 50% given in next 16 hours.

During the first 24 hours. Half of the total fluid should be given during the first 8 hours, and the remaining half during the following 16 hours.

For this Question ($4 * 70 * 45 = 12600$ ml (12.6 Liters) during the first 24 hours.

Thus, during the first 8 hours, ($12.6 / 2 = 6.3$ Liters).

Monitoring of resuscitation will be through monitoring urine output. In adults, it should be >0.5 cc/kg/h. For pediatrics, it should be >1.0 cc/kg/h.

Reference: Toronto Notes 2015 – Plastic Surgery Section

Q139: Child is doing fine, his brother died while heading to work! What we should investigate for?

Answer: Hypertrophic cardiomyopathy

Explanation:

Familial hypertrophic cardiomyopathy is a heart condition characterized by thickening (hypertrophy) of the heart (cardiac) muscle.

Thickening usually occurs in the interventricular septum, which is the muscular wall that separates the lower left chamber of the heart (the left ventricle) from the lower right chamber (the right ventricle). In some people, thickening of the interventricular septum impedes the flow of oxygen-rich blood from the heart, which may lead to an abnormal heart sound during a heartbeat (heart murmur) and other signs and symptoms of the condition. Other affected individuals do not have physical obstruction of blood flow, but the pumping of blood is less efficient, which can also lead to symptoms of the condition. Cardiac hypertrophy often begins in adolescence or young adulthood, although it can develop at any time throughout life.

The symptoms of familial hypertrophic cardiomyopathy are variable, even within the same family. Many affected individuals have no symptoms. Other people with familial hypertrophic cardiomyopathy may experience chest pain; shortness of breath, especially with physical exertion; a sensation of fluttering or pounding in the chest (palpitations); lightheadedness; dizziness; and fainting. While most people with familial hypertrophic cardiomyopathy are symptom-free or have only mild symptoms, this condition can have serious consequences. It can cause abnormal heart rhythms (arrhythmias) that may be life threatening. People with familial hypertrophic cardiomyopathy have an increased risk of sudden death, even if they have no other symptoms of the condition. A small number of affected individuals develop potentially fatal heart failure, which may require heart transplantation.

Reference: <https://ghr.nlm.nih.gov/condition/familial-hypertrophic-cardiomyopathy>

Q140: theoretically which of the following cancer will be prevented by vaccination?

- A. ALL
- B. CML
- C. adult T cell leukemia
- D. myocois something

Answer: No clear answer for me, even after searching in EBM sites.

Q141: 76 years old woman came for check up and said she has decrease calcium intake. She had a pelvic fracture 10 years ago. What is the most important risk factor of osteoporosis for this woman?

- A. Gender
- B. AGE
- C. Calcium level
- D. Previous fragility fracture

Answer: most likely age

Rate of reduction of bone mass accelerates at age 50 for women and age 65 for men.

Previous fragility fracture is another very likely to be true, but we don't know in this question whether it was low trauma fracture (from minimal activities) or high trauma fracture.

Explanation:

Osteoporosis Risk factors include an older age, female gender, white ancestry, low BMI, FHx of maternal hip fracture, post-menopause, glucocorticoid use, prior fracture, hypogonadism, loss of height, secondary amenorrhoea, smoking, excessive alcohol use, prolonged immobilisation, vitamin D deficiency, hyperthyroidism, weight loss of >10% of body weight, smle ,2016

androgen deprivation treatment (in men), aromatase inhibitor treatment (in women), tobacco use, heparin use, anticonvulsant use, or kidney stone disease. The most robust non-BMD (bone mineral density) risk factors are age and previous low trauma fracture. Advancing age and previous personal history of fracture are two of the most important BMD-independent risk factors for fracture.

This lady has primary osteoporosis type 2– which is most common in elderly above 75. All the options are considered risk factors for this lady’s osteoporosis; however, THE AGE is the most important risk factor for her.

Primary osteoporosis type 1 is more common post-menopausal women, which is due to decline in estrogen levels.

Reference: https://www.uptodate.com/contents/osteoporotic-fracture-risk-assessment?source=see_link#H57538184 https://www.uptodate.com/contents/epidemiology-and-etiology-of-premenopausal-osteoporosis?source=search_result&search=osteoporosis&selectedTitle=3~150

Q142: Patient with muscle and joint pain. He takes anti-lipid medication; which medication is most likely responsibly for his complaint?

- A. STATIN
- B. Fibrate
- C. Niacin
- D. Bile acid sequestrates

Answer: A

Explanation:

Statins (HMG Co-A reductase inhibitor) are among the most common dyslipidemia medication that is used. One of the most common side effects for is myalgia (muscle pain).

Fibrate can cause muscle pain as well; if COMBINED with statins.

Muscle injury — Development of muscle toxicity is a concern with the use of statins.

Reference:

Toronto Notes 2015 – Endocrinology Section https://www.uptodate.com/contents/statins-actions-side-effects-and-administration?source=see_link#H13

Q143: Couples will get marry, and they are relatives. Which screening test should be done before marriage?

- A. G6PD qualitative test
- B. HIV 1 & 2 antibodies screening
- C. HB ELECTROPHORESIS (SICKLE CELL DISEASE)
- D. Hepatitis B surface antigen

Answer: SICKLE CELL DISEASE or thalassemia

Explanation:

usually choose the answer which contains a test for an autosomal recessive disease.

e.g. SICKLE CELL DISEASE or thalassemia

Reference: Toronto Notes 2015 – Hematology Section

Q144: 45 years old male came for regular check-up. Apart from bronchial asthma, his BP is 125/80, HbA1C is 5.9. When is the next time he should check his blood glucose level?

- A. After 1 month
- B. After 3 months
- C. After 6 months
- D. After 12 months

Answer: C Or D, Most likely D

Explanation:

The question didn't mention if the patient is diabetic or not. Some patients may have HbA1c below diabetic range in one visit, But they could have had High HbA1c previously and been diagnosed with diabetes.

If this patient IS NOT diabetic: the HbA1c for him 5.9 is in the prediabetic ranges, and if he was started with metformin the ADA guidelines suggest that Patients treated with metformin require at least annual monitoring (A1C or fasting glucose) for the development of diabetes.

If the patient is diabetic: We check blood pressure and visually inspect the feet at every visit, and in addition, perform a more thorough foot examination and refer patients for a dilated eye exam annually. We also measure A1C every three months if A1C is not in the goal range and therapy requires adjustment, and every six months in patients with stable glycemic control who are meeting A1C goals. We also measure fasting lipids and urine albumin-to-creatinine ratio annually.

Reference:

https://www.uptodate.com/contents/prevention-of-type-2-diabetes-mellitus?source=see_link#H32 <https://www.uptodate.com/contents/overview-of-medical-care-in-adults-with-diabetes-mellitus>

Q145: A child with DM type 1 was brought to school clinic unconscious. His last insulin dose is unknown. What is the next best step to do?

- A. IV DEXTROSE
- B. RL
- C. Insulin
- D. Urgent referral to hospital

Answer: A

Explanation:

smle ,2016

Patients with severe hypoglycemia (ie, unresponsiveness, seizures) require intervention with glucagon and/or intravenous dextrose.

Glucagon is administered subcutaneously or intramuscularly, Every child should have a glucagon kit at home, school/ daycare, and in the car during long journeys.

Intravenous dextrose can be given at a dose of 0.25 gram/kg (maximum single dose 25 grams) if there is intravenous access and competent medical personnel are available to administer the dose.

Reference: https://www.uptodate.com/contents/hypoglycemia-in-children-and-adolescents-with-type-1-diabetes-mellitus?source=search_result&search=hypoglycemia&selectedTitle=3~150#H1570474938

146- What is the treatment of choice for respiratory syncytial virus?

- A. Supportive therapy
- B. Antibiotic (amoxicillin)
- C. Antiviral (ribavirin)
- D. Beta 2 agonist (salbutamol)

Answer: A

Explanation:

Therapy for RSV infection of the lower respiratory tract is primarily supportive.

Supportive care for children with RSV lower respiratory tract infection (LRTI) may include hospitalization and fluid and respiratory support.

We do not routinely suggest inhaled bronchodilators for children with RSV bronchiolitis. Meta-analyses of randomized trials and systematic reviews suggest that bronchodilators may provide modest short-term clinical improvement, but do not affect overall outcome, may have adverse effects, and increase the cost of care.

The routine use of nebulized ribavirin in infants and children with RSV lower respiratory tract infection (LRTI) is **not recommended**. The efficacy of ribavirin in this population has not been clearly proven.

Reference: <https://www.uptodate.com/contents/respiratory-syncytial-virus-infection-treatment>

147- What is the best way to prevent transmission of brucellosis to humans?

- A. Vaccination of domestic livestock
- B. Prophylactic course of antibiotics (doxycycline)
- C. Vaccination for humans
- D. Pasteurization of milk products

Answer: A is the best answer

smle ,2016

Explanation:

There are no human vaccines against Brucella species.

Animal vaccination is considered the most effective method to achieve this goal.

Brucellosis may be prevented via **vaccination of domestic live- stock**, serologic testing, quarantine of herds, and slaughter of infected animals.

Vaccination is effective for cattle, sheep, and goats but requires a sustained vaccination program over several years.

Other measures include the quarantine of herds and the slaugh- ter of infected animals (with protective measures in slaughter- houses). **Pasteurization** of milk is also very important for the prevention of transmission to humans.

Reference:

<http://bestpractice.bmj.com/best-practice/monograph/911/ prevention/primary.html>

<https://www.uptodate.com/contents/clinical-manifestations- diagnosis-and-treatment-of-brucellosis>

14-8 Which vaccination can cause diarrhea?

- A. DTaP
- B. Varicella
- C. Rota virus
- D. MMR

Answer: C

Explanation:

Rotavirus immunization is safe. In prelicensure studies, the rates of death (<0.1 percent) and serious adverse events (ap- proximately 2.5 percent) were similar among vaccine and place- bo recipients. Vaccine and placebo recipients also reported simi- lar rates of solicited events, including of fever (approximately 42 percent), vomiting (approximately 13 percent), and diarrhea (ap- proximately 19 percent), all of which were mild.

Reference:

<https://www.uptodate.com/contents/rotavirus-vaccines-for- infants>

14-9 Calculation of BMI and what are the degrees of obesity?

Reference: Toronto Notes 2015 – Family Medicine Section

Table 4. Classification of Weight by BMI, Waist Circumference, and Associated Disease Risks in Adults

	BMI (kg/m ²)	Men ≤102 cm (40 in) Women ≤88 cm (35 in)	Men >102 cm (40 in) Women >88 cm (35 in)
Underweight	<18.5		
Normal	18.5-24.9		
Overweight	25.0-29.9	Increased	High
Obesity Class I	30.0-34.9	High	Very High
Obesity Class II	35.0-39.9	Very High	Very High
Obesity Class III (Extreme Obesity)	40.0 +	Extremely High	Extremely High

150 What is the type of Pneumococcal vaccine PCV?

Answer: maybe PCV13

Explanation:

Pneumococcal infections, including pneumonia and invasive disease such as bacteremia and meningitis, are important sources of morbidity and mortality in infants and young children, older adults (≥ 65 years of age), and persons with conditions that affect their ability to make antibody to capsular polysaccharides.

More than 90 different pneumococcal capsular serotypes have been identified. Since it is not possible to include all of the serotypes in a pneumococcal vaccine, available vaccines contain capsular polysaccharides from serotypes that are most commonly implicated as causes of pneumococcal disease.

- **Pneumococcal polysaccharide vaccine** (PPSV)
This vaccine was modified to include capsular polysaccharides from the 23 most commonly infecting pneumococcal serotypes and is marketed as Pneumovax 23 (PPSV23)
- **Pneumococcal conjugate vaccine** (PCV)
This vaccine consists of capsular polysaccharides from the 13 most common pneumococcal types that cause disease PCV13

Reference: https://www.uptodate.com/contents/pneumococcal-vaccination-in-adults?source=see_link

151 Most common cause HTN in adult ?

Answer: essential hypertension (idiopathic)

Explanation:

Most patients with hypertension have primary hypertension (formerly called "essential" hypertension). The pathogenesis of primary hypertension is not well understood but is most likely the result of numerous genetic and environmental factors that have multiple compounding effects. Numerous risk factors for developing hypertension have been identified, including age, black race, a history of hypertension in one or both parents, a high sodium intake, excess alcohol intake, excess weight, and physical inactivity.

Reference:

https://www.uptodate.com/contents/overview-of-hypertension-in-adults?source=search_result&search=hypertension&selectedTitle=1~150#H4502595

15-2 What is more present in Cow's milk than breast milk?

- A. Proteins
- B. Fat
- C. Carbs

smle ,2016

D. Calories

Answer: A

Table 12.2 A comparison of human milk, cow's milk and infant formula (per 100 ml)

	Mature breast milk	Cow's milk	Infant formula (modified cow's milk)
Energy (kcal)	62	67	60–65
Protein (g)	1.3	3.5	1.5–1.9
Carbohydrate (g)	6.7	4.9	7.0–8.6
Casein:whey	40:60	63:37	40:60 to 63:37
Fat (g)	3.0	3.6	2.6–3.8
Sodium (mmol)	0.65	2.3	0.65–1.1
Calcium (mmol)	0.88	3.0	0.88–2.1
Phosphorus (mmol)	0.46	3.2	0.9–1.8
Iron (μ mol)	1.36	0.9	8–12.5

Reference: Illustrated Textbook of Pediatrics 4th edition , page 206 (Nutrition Chapter)

15-3 Routine breast self-exam advice:

- A. Daily
- B. Weekly
- C. Monthly
- D. Yearly

Answer: Most likely none of the above, cuz it is not required

Explanation:

Multiple studies have failed to demonstrate a beneficial effect of regular breast self-examination in rates of breast cancer diagnosis, breast cancer death, or tumor stage or size. Additionally, breast self-examination is associated with higher rates of breast biopsy for benign disease.

Reference: https://www.uptodate.com/contents/screening-for-breast-cancer-evidence-for-effectiveness-and-harms?source=search_result&search=routine%20breast%20self-exam%20advice:&selectedTitle=2~150#H3757879

15-4 Contraindication for breastfeeding ?

- A. HCV
- B. HIV
- C. Herpes zoster
- D. wart

Answer: B

smle ,2016

Explanation:

The World Health Organization (WHO) recommends that HIV- infected women avoid breastfeeding if replacement feeding is affordable, feasible, acceptable, sustainable, and safe.

Women with herpetic breast lesions should not breastfeed from the affected breast until the lesions resolve. Mothers can pump and the expressed milk can be given to the infant.

Women with active tuberculosis should not breastfeed until they are no longer contagious (usually two weeks after starting antituberculin therapy).

Women with H1N1 influenza should be separated from their infants until they are afebrile.

Maternal hepatitis has been shown to be compatible with breastfeeding after proper immunoprophylaxis.

Reference: <https://www.uptodate.com/contents/breastfeeding-parental-education-and-support>

15-5 (long scenario) man traveled for business, went to his flat to re- lax, second day he noticed mold on his flat, he developed rash all over his body. We took sample of mold and injected him, inflammation occurs after 30 minutes. What does it indicate?

- A. Immediate hypersensitivity.
- B. delayed hypersensitivity

Answer: A

Explanation:

Historically, immunologic reactions, whether caused by drugs, infections, or autoimmune processes, have been divided into four categories (I to IV) according to the Gell and Coombs system

Gell and Coombs classification of immunologic drug reactions

Type	Description	Mechanism	Clinical features
I Immediate reaction (within one hour)	IgE-mediated, immediate-type hypersensitivity	Antigen exposure causes IgE-mediated activation of mast cells and basophils, with release of vasoactive substances, such as histamine, prostaglandins, and leukotrienes.	Anaphylaxis Angioedema Bronchospasm Urticaria (hives) Hypotension
II	Antibody-dependent cytotoxicity	An antigen or hapten that is intimately associated with a cell binds to antibody, leading to cell or tissue injury.	Hemolytic anemia Thrombocytopenia Neutropenia
III	Immune complex disease	Damage is caused by formation or deposition of antigen-antibody complexes in vessels or tissue. Deposition of immune complexes causes complement activation and/or recruitment of neutrophils by interaction of immune complexes with Fc IgG receptors.	Serum sickness Arthus reaction
IV	Cell-mediated or delayed hypersensitivity	Antigen exposure activates T cells, which then mediate tissue injury. Depending upon the type of T cell activation and the other effector cells recruited, different subtypes can be differentiated (ie, types IVa to IVd).	Contact dermatitis, Some morbilliform reactions Severe exfoliative dermatoses (eg, SJS/TEN) AGEP DRESS/DiHS Interstitial nephritis Drug-induced hepatitis Other presentations

156 pt develop cough during exercise: which medication want to give her before exercise?

- A. B2 agonist

Answer: A

smle ,2016

Explanation:

Exercise-induced bronchoconstriction (EIB) refers to the episodic bronchoconstriction that follows exercise in many asthmatic patients.

All patients with asthma should have a short-acting beta-agonist (SABA) available when exercising for relief of asthma symptoms. For patients who have well-controlled asthma, but who frequently have asthma symptoms with exercise, we recommend prophylactic use of a SABA (Short-Acting Beta Agonists) approximately 10 to 15 minutes prior to exercise.

Reference:

<https://www.uptodate.com/contents/exercise-induced-bronchoconstriction>

15-7 22 y/o lady health present to checkup she only complain of breast tenderness 3 days before menses /she never had sexual contact and wish to be pregnant in next 2 year what is the best thing to do for screening?

- A. breast US
- B. HPV
- C. pap smear
- D. colposcopy

Answer: C

Reference: <http://emedicine.medscape.com/article/1947979-overview#a2>

15-8 Pt with moderate persistent bronchial asthma on beta agonist PRN and low dose inhaled steroid Comes with uncontrolled BA ,What you will add to the steroid?

- A. Long acting beta agonist
- B. Theophylline

Answer: A

Explanation:

The patient was on step 2: **salbutamol** PRN + low dose **ICS** If uncontrolled step higher to step 3: **salbutamol** PRN + low- medium dose **ICS** + **LABA** (long acting beta2 agonist)

Reference:

smle ,2016

SINA guidelines(Page 27)
<http://saudithoracic.com/download/SINA%20Guidelines%202016.pdf>

15-9 what is the treatment for female pt with uncontrolled asthma (wake her up from sleeping at night) she is on short beta 2 agonist ?

- A. long acting beta 2
- B. steroid
- C. theophylline

Answer: B most likely (ICS)

The patient was on step 1: **salbutamol** PRN
If uncontrolled step higher to step 2: **salbutamol** PRN + low dose **ICS**

Reference:

SINA guidelines (Page 27)
<http://saudithoracic.com/download/SINA%20Guidelines%202016.pdf>

16-0 HTN came for follow up HbA1C 6.9 when to follow up again

- A. 1 months
- B. 3 months
- C. 12 months
- D. ...

Answer: most likely 6 months, none of the above, unless the patient was newly diagnosed with diabetes and having old HbA1C then 3 months is the correct answer.

Explanation:

This patient is diabetic

If the patient is diabetic

We check blood pressure and visually inspect the feet at every visit, and in addition, perform a more thorough foot examination and refer patients for a dilated eye exam annually. **We also measure A1C every three months if A1C is not in the goal range and therapy requires adjustment, and every six months in patients with stable glycemic smle ,2016**

control who are meeting A1C goals. We also measure fasting lipids and urine albumin-to-creatinine ratio annually.

A reasonable goal of therapy might be an A1C value of ≤ 7.0 percent for most patients

Patients with newly diagnosed diabetes should participate in a comprehensive diabetes self-management education program, which includes instruction on nutrition, physical activity, optimizing metabolic control, and preventing complications.

Patients with newly diagnosed diabetes require a history and physical examination to assess the characteristics of onset of diabetes, nutrition and weight history, physical activity, cardiovascular risk factors, history of diabetes-related complications, hypoglycemic episodes, diabetic ketoacidosis (DKA) frequency (type 1 diabetes only), and current management. **If not measured in the past two to three months, we measure glycated hemoglobin (A1C). If not measured in the past one year, we measure** fasting lipid profile, liver function tests, urine albumin excretion (spot urine), serum creatinine, and in type 1 diabetes only, serum thyroid-stimulating hormone (TSH).

Reference:

<https://www.uptodate.com/contents/overview-of-medical-care-in-adults-with-diabetes-mellitus?>

16-1 Treat HTN and BPH?

- A. atenolol
- B. prazosin

Answer: tamsulosin and other alpha blockers can treat Hypertension and BPH, But alpha-blockers should not be a first-line antihypertensive therapy for patients with symptomatic (BPH). You can treat his Hypertension with ACE, ARB, Thiazide or CCB + give alpha blocker such as (terazosin, doxazosin, tamsulosin, alfuzosin, and silodosin) for his BPH.

Explanation:

The ALLHAT study conclusively demonstrated that alpha-blockers should not be a first-line antihypertensive therapy for patients with symptomatic benign prostatic hypertrophy (BPH). In these patients, the preferred first-line antihypertensive options are the same as for most other groups (i.e., thiazide [or thiazide-like] diuretics, ACE inhibitors, angiotensin-II receptor antagonists, and calcium-channel blockers), and the alpha-blocker indication is simply to treat the BPH symptoms.

The approved alpha-1-adrenergic antagonists (terazosin, doxazosin, tamsulosin, alfuzosin, and silodosin) appear to have similar efficacy.

Prazosin, a short-acting alpha-1-antagonist, is generally not used for BPH, due to need for frequent dosing and the potential for more cardiovascular side effects.

The most important side effects of alpha-1-adrenergic antagonists are orthostatic smle ,2016

hypotension and dizziness.

While the hypotensive effect can be useful in older men who have hypertension, careful blood pressure monitoring is required in all patients. In elderly men who are hypertensive but also experience orthostatic hypotension, tamsulosin may be a reasonable option.

Reference:

<http://bestpractice.bmj.com/best-practice/monograph/26/treatment/step-by-step.html>

https://www.uptodate.com/contents/medical-treatment-of-benign-prostatic-hyperplasia?source=see_link#H619703294

16-2 How can prevent dust mite?

Avoidance measures for dust mites

First: Bedrooms
Cover pillows and mattresses with zippered covers, which are impermeable to mites and mite allergens.
Wash sheets, pillowcases, and blankets in hot or warm water with detergent or dry in an electric dryer on the hot setting weekly. When necessary, blankets should be replaced with those that can be washed. Comforters (or duvets) should be removed or covered with fine woven covers.
Use washable, vinyl, or roll-type window covers.
Remove clutter, soft toys, and upholstered furniture.
Where possible, carpets should be removed or replaced with area rugs that can be cleaned/washed.
Second: Rest of house
Reduce upholstered furniture, particularly old sofas.
Replace carpets with polished flooring where possible. Carpets on concrete slabs or over poorly-ventilated crawl spaces are a problem and should be replaced with polished flooring, if possible.
Vacuum weekly using a cleaner with a high-efficiency particulate air (HEPA) filtration system.
Window coverings should be washable, vinyl, or roll-type.
Control humidity to <50% relative humidity at normal temperatures (ie, 68 to 72°F).
Third: Changing houses*
In general, allergy sufferers should not be encouraged to move from their home except in those cases where they are living in basements or overtly damp housing.
Individuals who are allergic to mites (or molds) should be advised about the potential benefit of moving to an apartment (second floor or higher) or a house with second floor bedrooms and wooden floors.

Reference:

<https://www.uptodate.com/contents/allergen-avoidance-in-the-treatment-of-asthma-and-allergic-rhinitis>

16-3 what is the cause to use every year influenza vaccine ?

- A- resistance of antimicrobial
- B- new antigen
- C different type of transmission

Answer: Not sure what new antigen means, But influenza virus- es **change their antigenic characteristics (Not new antigens though).**

Explanation:

Influenza is an acute respiratory illness caused by influenza A or B viruses. It occurs in epidemics nearly every year, mainly during the winter season in temperate climates. **Influenza viruses change their antigenic characteristics** frequently, and their subsequent spread depends upon the susceptibility of the population to viruses with novel antigens. Influenza virus is remarkable for its high rate of mutation, compromising the ability of the immune system to protect against new variants.

Small point mutations in the proteins that make up the influenza virus cause **antigenic drift**, and this is the reason why new vaccines are required each influenza season.

smle ,2016

Larger changes that result in new haemagglutinin or neuraminidase proteins cause **antigenic shifts** and may result in pandemics.

Reference:

https://www.uptodate.com/contents/seasonal-influenza-vaccination-in-adults?source=search_result&search=influenza%20-vaccine&selectedTitle=1~150

<http://bestpractice.bmj.com/best-practice/monograph/6/basics/aetiology.html>

16-4 Difference between types 1 and 2 of DM?

- A. Cpr
- B. Level of insulin
- C. Insulin growth factor
- D. Islet of b cell

Answer: D

Explanation:

The process responsible for type 1 diabetes is destruction of insulin-secreting pancreatic islet cells. This is manifested by a mononuclear infiltrate and beta-cell lysis in the islets. The underlying defect that causes type 2 diabetes is insulin resistance.

Reference:

<http://www.medscape.com/viewarticle/449804>

165- 80 years old man with history of 3 fractures, he is on vitamin D and ca, what to add?

- A.
- B.
- C.
- D.
- E.

Answer: most likely bisphosphonates like alendronate or rise- dronate.

Explanation:

The treatment of osteoporosis in men includes lifestyle measures, calcium and vitamin D supplementation, and hormonal or pharmacologic therapy.

1. Important lifestyle measures include exercise, smoking cessation, counseling on fall prevention, and avoidance of heavy alcohol use for all men with osteoporosis.

smle ,2016

2. In men with osteoporosis (T-score below -2.5), we suggest calcium and vitamin D supplementation.
3. For men with osteoporosis and symptomatic hypogonadism (or a clear etiology for hypogonadism) and who do not have any contraindications to testosterone therapy, we recommend testosterone replacement therapy.
4. For the treatment of men with osteoporosis (T-score below -2.5 or fragility fracture) who do not have symptomatic hypogonadism or in hypogonadal men in whom testosterone therapy is contraindicated, we recommend pharmacologic therapy.
 5. For the treatment of high risk men with T-scores between -1.0 and -2.5, we also suggest pharmacologic therapy.
 6. For pharmacologic therapy in men, we suggest bisphosphonates as first-line therapy. We

favor alendronate or risedronate over other available bisphosphonates because of clinical trial data demonstrating efficacy in men with osteoporosis.

Reference:

https://www.uptodate.com/contents/treatment-of-osteoporosis-in-men?source=search_result&search=osteoporosis&selectedTitle=4~150#H19

166- What is the effect of polio vaccines (IPV& OPV) on body?

- A. All lead to the formation of ag in the anterior horn
- B. All lead to the formation of the ab in the serum which fight the virus
- C. they all enter the intestinal mucosa where the entry of the virus is
- D. they all lead to the formation of interferon gamma

Answer: B

Explanation:

Mechanism of Action: Poliovirus vaccine, inactivated, IPV stimulates the immune system to produce antibodies against poliovirus wild-types 1, 2, and 3. Following intramuscular or subcutaneous administration, the antigens (inactivated viruses) get presented to the antigen-presenting cells (e.g., B cells, macrophages). The antigen-presenting cells process and present the antigens and allow B-cells to proliferate, differentiate, and produce anti-poliovirus serum antibodies. The serum anti-poliovirus antibodies are capable of opsonization, neutralization, and complement activation. In natural infection, the polio viruses invade and replicate in mucosal tissues. The virus may invade the blood stream and produce disease at distant systemic sites. Parenteral immunization with non-replicating agents, such as the IPV may fail to induce specific mucosal responses. Vaccination with either IPV or the live attenuated oral poliovirus vaccine (OPV) usually induces secretory antibody (IgA) production in the pharynx and gut, but mucosal immunity induced by IPV is less than mucosal immunity induced by OPV. The development of serum anti-poliovirus antibodies caused by either OPV or IPV are effective in the prevention of systemic disease despite their different routes of administration. The IPV helps reduce pharyngeal acquisition of poliovirus and to a lesser extent, intestinal acquisition. Herd immunity is possible with IPV, including populations vaccinated only with IPV.

Reference:

<http://www.pdr.net/drug-summary/Ipol-poliovirus-vaccine-inactivated-973>

167- What cause infection by food with soil contaminated?

- A. Ascariasis
- B. Tinae
- C. Schistosoma
- 7.

Answer: Ascariasis

Explanation:

Ascaris Lumbricoides is the round worm that cause ascariasis

Ascariasis is the most common helminthic infection, with an estimated worldwide prevalence of 25% (0.8-1.22 billion people). [1] Usually asymptomatic, ascariasis is most prevalent in children of tropical and developing countries, where they are perpetuated by contamination of soil by human feces or use of untreated feces as fertilizer. [2] For more information on ascariasis in children, see the Medscape article Pediatric Ascariasis. Symptomatic ascariasis may manifest as growth retardation, pneumonitis, intestinal obstruction, or hepatobiliary and pancreatic injury. Ascariasis may exist as a zoonotic infection associated with pigs and use of hog manure, [3, 4] but, in most endemic areas, it is most likely transmitted from person to person. [5]

Reference:

<http://emedicine.medscape.com/article/212510-overview>
<http://emedicine.medscape.com/article/788398-overview#a4>

168- Parasite transmitted by meat?

- A. Trichinosis

Answer: Trichinosis

Explanation:

Trichinellosis, also called trichinosis, is a disease that people can get by eating raw or undercooked meat from animals infected with the microscopic parasite Trichinella

Reference:

<http://www.cdc.gov/parasites/trichinellosis/>

169- A 43 y/o female undergone for a mammogram, and the result was negative, when do you advise her to get tested again:

- A. After 1 year.
- B. After 3 year.
- C. After 5 year.
- D. Other choices, I cannot remember.

Answer: if average risk after 2 or 1 years. depends on which guideline you choose. If high risk after 1 year.

Explanation:

Breast Cancer Screening Guidelines for Women aged 40 to 49 with average risk

U.S. Preventive Services Task Force¹ 2016:

The decision to start screening mammography in women prior to age 50 years should be an individual one. Women who place a higher value on the potential benefit than the potential harms may choose to begin **biennial** screening between the ages of 40 and 49 years.

American Cancer Society² 2015:

Women aged 40 to 44 years should have the choice to **start annual** breast cancer screening with mammograms if they wish to do so. The risks of screening as well as the potential benefits should be considered. Women aged 45 to 49 years should get mammograms **every year**.

American College of Obstetricians and Gynecologists³ 2011:

Screening with mammography and clinical breast exams **annually**.

International Agency for Research on Cancer⁴ 2015:

Insufficient evidence to recommend for or against screening.

American College of Radiology⁵ 2010:

Screening with mammography **annually**.

American College of Physicians⁶:

Discuss benefits and harms with women in good health and order screening with **mammography every two years if a woman requests it**.

American Academy of Family Physicians⁷ 2016:

The decision to start screening mammography should be an individual one. Women who place a higher value on the potential benefit than the potential harms may choose to begin screening.

Women at higher than average risk

Twice yearly clinical breast exams, annual mammography, annual breast MRI, and breast selfexams.

Reference:

<https://www.cdc.gov/cancer/breast/pdf/breastcancerscreeningguidelines.pdf>

170- Most common cause of hepatitis HBA

Answer: most likely something related to fecal-oral route transmission.

Explanation:

Hepatitis A infection is caused by the hepatitis A virus (HAV) that occurs worldwide. Hepatitis A is usually a self-limited illness that does not become chronic.

HAV is typically transmitted by the fecal-oral route (either via person-to-person contact or consumption of contaminated food or water). Risk factors for HAV transmission include residence in or travel to areas to poor sanitation, household or sexual contact with another person with hepatitis A, ho- mosexual activity in men, exposure to daycare centers, exposure to residential institutions, and illicit drug.

Reference:

https://www.uptodate.com/contents/hepatitis-a-virus-infection-in-adults-an-overview?source=search_result&search=hepatitis%20a&selectedTitle=1~150

smle ,2016

171- Most common infectious disease in preemployment ex HBV?

Not clear question for me and there is no choices

172- **Best sport for cardiovascular pt?**

Answer: low-impact aerobic activity

Explanation:

Advise low-impact aerobic activity to minimize the risk of musculoskeletal injury.

Recommend gradual increases in the volume of physical activity over time

Explore daily schedules to suggest how to incorporate increased activity into usual routine (e.g., parking farther away from entrances, walking 2 flights of stairs, and walking during lunch break

Terminate exercise immediately if warning signs or symptoms occur. These include dizziness, dysrhythmias, unusual shortness of breath, angina or chest discomfort. No exercise in case of unusual asthenia, fever or viral syndrome (29). The level of supervision and monitoring during exercise training depends on the result of risk stratification from patient assessments and clinical evaluations. Medical supervision and monitoring are particularly recommended for patients with multiple risk factors, and with moderate-to-high risk of cardiac events (i.e., recent revascularization, heart failure).

Reference:

<https://www.ncbi.nlm.nih.gov/pubmed/17513578>

http://exerciserx.cheu.gov.hk/files/DoctorsHanbook_ch8

173- **Best sport for old DM?**

Answer: 30 inutes of moderate-to-vigorous intensity aerobic exercise at least 5 days a week or a total of 150 minutes per week

Reference:

<http://www.diabetes.org/food-and-fitness/fitness/types-of-activity/what-we-recommend.html?referrer=https://www.google.com.sa/>

174- **You advice pt for walking:**

- A. Walk 1.5 km 4 days/ week
- B. Do brisk walking 30 min 5 days
- C. Reduce sodium intake
- D. Give potassium

Answer: B

Explanation:

By definition, aerobic exercise involves the use of large muscle groups and must be sustained for a minimum of 10 minutes. Ex- amples of aerobic activities include **brisk walking**, jogging,

smle ,2016

swimming, water aerobics, tennis, golf without use of a cart, aerobic exercise classes, dancing, bicycle riding, and use of "cardio" equipment (eg, elliptical machines, stair climbing machines, stationary bicycles, and treadmills).

AHA Recommendation

For Overall Cardiovascular Health:

At least 30 minutes of moderate-intensity aerobic activity at least 5 days per week for a total of 150

OR

At least 25 minutes of vigorous aerobic activity at least 3 days per week for a total of 75 minutes; or a combination of moderate- and vigorous-intensity aerobic activity

AND

Moderate- to high-intensity muscle-strengthening activity at least 2 days per week for additional health benefits.

Individuals with chronic disabling conditions may not be able to achieve the minimal recommended amount of physical activity but should be as physically active as can be achieved without harm. Many months at levels below the recommended minimum guidelines may be appropriate for certain individuals. An emphasis on reducing sedentary behavior (to sit less, move more) and adding light activity, such as short walks, may be more reasonable goals for many older adults, who are unable or unlikely to adopt more intensive exercise prescriptions

Reference:

<https://www.uptodate.com/contents/physical-activity-and-exercise-in-older-adults>

175- At which temperature does the blood bank preserve the blood?

- A. 37 C
- B. 4 C
- C. 22 C

Answer: C

depends on what product you want but most likely it is C 22^C cause it can give RBCs, platelets or plasma.

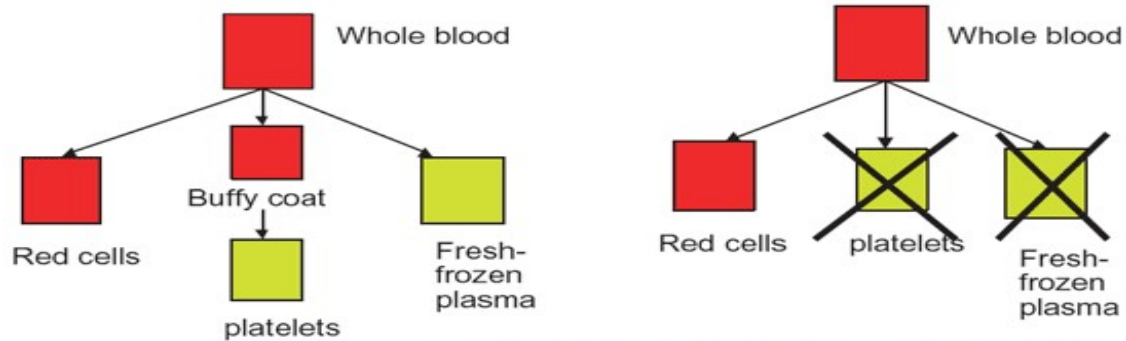
Explanation:

The initial storage temperature of whole blood in which platelet or plasma would be produce is 22°C

However, for the production of red cells, whole blood can be stored at 4°C for 48-72 hours prior to separation.

Day of blood collection <8 hours or after 24 hours at 22°C

After storage at 4°C for 24–72 hours



Source: Transfusion All Transfusion Med © 2008 Blackwell Publishing Ltd.

Reference:

http://www.medscape.com/viewarticle/583145_3

176- **What most commonly cause itching?**

- A. Bile salt retention
- B. Eczema
- C. Pregnancy

Answer: Most likely B

Explanation:

Pruritus, or itch, is most commonly associated with a primary skin disorder such as xerosis, atopic dermatitis, urticaria, psoriasis, arthropod assault, mastocytosis, dermatitis herpetiformis, or pemphigoid.

Reference:

<http://emedicine.medscape.com/article/1098029-overview>

177- **Which of the following enhance non-heme iron absorption?**

- A. Coffee
- B. Tea
- C. Milk
- D. Vitamin C

Answer: D

smle ,2016

Explanation:

Non-heme iron is absorbed throughout the small intestine, especially in the duodenum. Absorption is increased by **vitamin C** and certain amino acids, and is inhibited by calcium, phytic acid, and tannates.

Reference:

https://www.uptodate.com/contents/overview-of-dietary-trace-minerals?source=search_result&search=non-heme%20iron%20absorption&selectedTitle=2~150#H36

178- which of the following is prescribed with iron supplement for better absorption?

- A. Vit D
- B. Vit E
- C. Vit C
- D. Calcium

Answer: C Vitamin C

Explanation:

Non-heme iron is absorbed throughout the small intestine, especially in the duodenum. Absorption is increased by **vitamin C** and certain amino acids, and is inhibited by calcium, phytic acid, and tannates.

Reference:

https://www.uptodate.com/contents/overview-of-dietary-trace-minerals?source=search_result&search=non-heme%20iron%20absorption&selectedTitle=2~150#H36

179- a man who eat rice only, which vitamin will be deficient?

- A. B1
- B. B2
- C. B6
- D. B12

Answer: D is the best answer A is probable answer

Explanation:

Most people can prevent vitamin B12 deficiency by eating enough meat, poultry, seafood, dairy products, and eggs.

If you don't eat animal products, or you have a medical condition that limits how well your
smle ,2016

body absorbs nutrients, you can take vitamin B12 in a multivitamin or other supplement and foods fortified with vitamin B12.

Thiamine is found in larger quantities in food products such as yeast, legumes, pork, brown rice, and cereals made from whole grains. Milk products, fruits, and vegetables are poor sources of thiamine. However, thiamine is very low in white ("polished" rice) or milled white cereals including wheat flour, because the processing removes thiamine. The thiamine molecule is denatured at high pH and high temperatures. Hence, cooking, baking, and canning of some foods as well as pasteurization can destroy thiamine. **Thiamine deficiency is most commonly reported in populations in which the diet consists mainly of polished rice or milled white cereals, including some refugee populations.**

Reference:

<http://www.webmd.com/diet/vitamin-b12-deficiency-symptoms-causes#2>
https://www.uptodate.com/contents/overview-of-water-soluble-vitamins?source=search_result&search=Beriberi&selectedTitle=1~57

180- Which in lipid profile is most important risk for coronary heart disease?

- A. LDL,
- B. HDL,
- C. Triglyceride ,
- D. total cholesterol

Answer: most likely D

Explanation:

When a decision is made to screen lipids to assess CV risk, we suggest measuring the total cholesterol and high density lipoprotein cholesterol (HDL-C) rather than a complete lipid profile or other lipid marker or fractions,

There are numerous studies examining the power of each of these various lipoproteins in predicting CHD risk. There is generally a consensus that non-HDL cholesterol (total cholesterol minus HDL-C) or the total cholesterol to HDL-C ratio is a better predictor of CHD risk than LDL-C alone.

Reference:

<https://www.uptodate.com/contents/screening-for-lipid-disorders>

181- they want to stop screening for breast cancer for women under 47 to decrease unnecessary anxiety to the public , you didn't agree cuz there is gene that cause cancer in young women , what is the gene ?

Answer: (BRCA1) or (BRCA2)

smle ,2016

Explanation:

Most women with breast or ovarian cancer have a sporadic rather than an inherited cancer. However, the majority of women with inherited breast and/or ovarian cancers carry a deleterious mutation in one of two susceptibility genes, breast cancer susceptibility gene 1 (BRCA1) or breast cancer susceptibility gene 2 (BRCA2).

Reference:

https://www.uptodate.com/contents/overview-of-hereditary-breast-and-ovarian-cancer-syndromes?source=see_link

med

Screening:

Time of screening in common diseases:

colon cancer:

1. No family Hx: age of 50 repeated annual for occult blood and 5 yrs for sigmoidoscopy, the preferred modality is colonoscopy every 10 yrs.
2. With family Hx: Colonoscopy at age of 40 or 10 before the age of the youngest affected relative, colonoscopy repeated every 5 yrs.

1. Breast cancer:

manual breast exam (monthly) + mammography (every 1-2 yrs from age 50-74).

*ACS no longer recommends manual breast exam.

2. Cervical cancer:

Pap smear at age of 21 yrs, every 3 yrs until age 65.

as an alternative pap smear + HPV test every 5 yrs in women (30- 65 yrs).

3. cholesterol:

4. MEN:

5. No risk factors for CAD: Age 35

6. Risk :20 yrs, repeat in 5 yrs in low risk individuals.

WOMEN: Risk: Age 45 and Older USPSTF strongly recommends screening.

DM:

Age 45 every 3 years, testing should be considered at an earlier age or be carried out more frequently if diabetes risk factors are present.

ETHICS

1. If you successfully treated your patient. Then the patient brought to you an expensive watch

. What would be your response?

- A. Accept the gift and say thank you
- B. Refuse the gift politely
- C. ask him for more gifts.
- D. Shout at him and say "I do not accept gifts"

Answer: B

it is unwise of the doctor to accept gifts or expensive meals

Reference: The Cambridge Textbook of Bioethics

(long scenario) lady complaining about work partner. She is agitated and mad. What is your action?

- A. Instruction to deal with him.
- B. Empathy during session.
- C. Avoid him.

Answer: Most likely B

Understanding others is essential in a globalizing world. Understanding our- selves and others requires what Ninian Smart (1995) has called “structured empathy” and “cross-disciplinary study of world views/beliefsystems.”

The essence of care ethics is a reliance on the natural inclination of a health professional to extend care to dependent and vulnerable people and to react sensitively to such “moral” feelings as compassion, love, and trustworthiness. The approach fits well with psychiatry since its practitioners rely significantly on empathy in order to understand the wishes and needs of patients and their families. show empathy and compassion

Reference:

The Cambridge Textbook of Bioethics

2. You have old patient who can't understand you. What will you do to get more information?

- A. you will take him to your clinic and ask him open ended question

Answer: A. question is not clear.

The physician has an ethical and legal obligation to make reasonable efforts to ensure understanding. Supplementing verbal information with written material might be helpful as it enables the patient to read or review the information if desired. Educational video or computer programs may assist patients who face a complicated decision.

Reference:

The Cambridge Textbook of Bioethics

(long scenario) lady complaining about work partner, she is agitated and mad. What is your action ?

- B. Instruction to deal with him.
- C. Empathy during session.
- D. Avoid him.
- E. !!!!

Answer:? question is not clear. **Answer: Most likely B**

7- You have a patient and you took her permission to examine her. What are you doing?

- A. Taking informed consent
- B. Being efficient in your job

Answer : A. no enough information

The requirement to obtain patient consent is affirmed by most international and national health professional organizations. For example, the World Medical Association’s (2005) Declaration on the Rights of the Patient states: The pa- tient has the right to self- determination, to make free decisions regarding him- self/herself. The physician will inform the patient of the consequences of his/ her decisions. A mentally competent adult patient has the right to give or withhold consent to any diagnostic procedure or therapy. The patient has the right to the information necessary to make his/her decisions. The patient should understand clearly what is the purpose of any test or treatment, what the results would imply, and what would be the implications of withholding consent.

Reference:

The Cambridge Textbook of Bioethics

Case control	Cohort study																										
<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td colspan="2" rowspan="2"></td> <th colspan="2">Disease</th> </tr> <tr> <th>Yes</th> <th>No</th> </tr> <tr> <th rowspan="2">Exposure</th> <th>Yes</th> <td>a</td> <td>b</td> </tr> <tr> <th>No</th> <td>c</td> <td>d</td> </tr> </table> <p>- % exposed among cases = $\frac{a}{a+c}$</p> <p>- % exposed among control = $\frac{b}{b+d}$</p> <p>- Odds ratio (OR) = $\frac{a \times d}{c \times b}$</p>			Disease		Yes	No	Exposure	Yes	a	b	No	c	d	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td colspan="2" rowspan="2"></td> <th colspan="2">Disease</th> </tr> <tr> <th>Yes</th> <th>No</th> </tr> <tr> <th rowspan="2">Exposure</th> <th>Yes</th> <td>a</td> <td>b</td> </tr> <tr> <th>No</th> <td>c</td> <td>d</td> </tr> </table> <p>Incidence among exposed = $\frac{a}{a+b}$</p> <p>Incidence among non-exposed = $\frac{c}{c+d}$</p> <p>Relative Risk (RR) = $\frac{\frac{a}{a+b}}{\frac{c}{c+d}}$</p> <p>Attributable Risk (AR) = $\left(\frac{a}{a+b}\right) - \left(\frac{c}{c+d}\right)$</p>			Disease		Yes	No	Exposure	Yes	a	b	No	c	d
			Disease																								
		Yes	No																								
Exposure	Yes	a	b																								
	No	c	d																								
		Disease																									
		Yes	No																								
Exposure	Yes	a	b																								
	No	c	d																								
RCT	Likelihood Ratios																										
<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td colspan="2" rowspan="2"></td> <th colspan="2">Outcomes</th> </tr> <tr> <th>+</th> <th>-</th> </tr> <tr> <th rowspan="2">experimental control</th> <th>+</th> <td>a</td> <td>b</td> </tr> <tr> <th>-</th> <td>c</td> <td>d</td> </tr> </table> <p>Control Event Rate (CER) = $\frac{c}{c+d}$</p> <p>Experimental Event Rate (EER) = $\frac{a}{a+b}$</p> <p>Absolute Risk Reduction (ARR) = CER - EER</p> <p>Relative Risk Reduction (RRR) = 1 - RR</p> <p>Relative Risk Ratio (RR) = $\frac{EER}{CER}$</p> <p>Number Needed to Treat (NNT) = $\frac{1}{ARR}$</p>			Outcomes		+	-	experimental control	+	a	b	-	c	d	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td colspan="2" rowspan="2"></td> <th colspan="2">Disease</th> </tr> <tr> <th>Yes</th> <th>No</th> </tr> <tr> <th rowspan="2">Test</th> <th>+ve</th> <td>a True positive</td> <td>b False positive</td> </tr> <tr> <th>-ve</th> <td>c False negative</td> <td>d True negative</td> </tr> </table> <p>Sensitivity = $\frac{a}{a+c}$</p> <p>Specificity = $\frac{d}{b+d}$</p> <p>LR + = $\frac{\text{sensitivity}}{1 - \text{specificity}}$</p> <p>LR - = $\frac{1 - \text{sensitivity}}{\text{specificity}}$</p> <p>Positive Predictive Value (PPV) = $\frac{a}{a+b}$</p> <p>Negative Predictive Value (NPV) = $\frac{d}{c+d}$</p> <p>Pretest Probability (Prevalence) = $\frac{a+c}{a+b+c+d}$</p> <p>Pretest Odds = $\frac{\text{Prevalence}}{1 - \text{Prevalence}}$</p> <p>Post-test Odds = Pre-test Odds X Likelihood Ratio</p> <p>Post-test Probability = $\frac{\text{Post-test Odds}}{1 + \text{Post-test Odds}}$</p>			Disease		Yes	No	Test	+ve	a True positive	b False positive	-ve	c False negative	d True negative
			Outcomes																								
		+	-																								
experimental control	+	a	b																								
	-	c	d																								
		Disease																									
		Yes	No																								
Test	+ve	a True positive	b False positive																								
	-ve	c False negative	d True negative																								

Quantifying risk

Definitions and formulas are based on the classic 2×2 or contingency table.

	Disease	
	⊕	⊖
⊕	a	b
⊖	c	d

Odds ratio

Typically used in case-control studies. Odds that the group with the disease (cases) was exposed to a risk factor (a/c) divided by the odds that the group without the disease (controls) was exposed (b/d).

$$OR = \frac{a/c}{b/d} = \frac{ad}{bc}$$

Relative risk

Typically used in cohort studies. Risk of developing disease in the exposed group divided by risk in the unexposed group (eg, if 21% of smokers develop lung cancer vs 1% of nonsmokers, $RR = 21/1 = 21$). If prevalence is low, $OR = RR$.

$$RR = \frac{a/(a+b)}{c/(c+d)}$$

Attributable risk

The difference in risk between exposed and unexposed groups, or the proportion of disease occurrences that are attributable to the exposure (eg, if risk of lung cancer in smokers is 21% and risk in nonsmokers is 1%, then 20% of the lung cancer risk in smokers is attributable to smoking).

$$AR = \frac{a}{a+b} - \frac{c}{c+d}$$

Relative risk reduction

The proportion of risk reduction attributable to the intervention as compared to a control (eg, if 2% of patients who receive a flu shot develop the flu, while 8% of unvaccinated patients develop the flu, then $RR = 2/8 = 0.25$, and $RRR = 0.75$).

$$RRR = 1 - RR$$

Absolute risk reduction

The difference in risk (not the proportion) attributable to the intervention as compared to a control (eg, if 8% of people who receive a placebo vaccine develop the flu vs 2% of people who receive a flu vaccine, then $ARR = 8\% - 2\% = 6\% = .06$).

$$ARR = \frac{c}{c+d} - \frac{a}{a+b}$$

Number needed to treat

Number of patients who need to be treated for 1 patient to benefit.

$$NNT = 1/ARR$$

Number needed to harm

Number of patients who need to be exposed to a risk factor for 1 patient to be harmed.

$$NNH = 1/AR$$

1. **tell the pt information about his disease and side effect of medication is kind of**

A- establish rapport B- information **Answer:** B not sure.

2. **Pt came to ur clinic and upset b/c u have been late wt to do ... apologized**

3. **tell the pt information about his disease and side effect of medication is kind of:**

1. establish rapport

2. information

answer : B not sure.

The core elements of a conversation to deliver serious news include preparation and setting, asking the patient/family what they understand, sharing the news and avoiding jargon, attending to emotions, and planning for next steps. **Reference:**

https://www.uptodate.com/contents/discussing-serious-news?source=search_result&search=breaking%20bad%20new&selectedTitle=1~12#H6928175

3. **Whats the best approach in hx?**

A. Open ended Q

Answer: A

After reflecting on root causes, addressing conflicts in end of life care should begin with a few open-ended questions

Reference:

The Cambridge Textbook of Bioethics

4. **Patient entered the clinic, then the physician took the history from him, after that the physician told the patient "Would you please let me examine you". This sentence is under category of?**

1. Taking Informed Consent

2. Respect the patient

Answer: A

similar Q in 7th update p. 507-

3. **Doctor informed pt about his disease, prognosis , medications , & side effect, what do you call this form of talk?**

1. Improve communication

2. Patient Doctor relationships

3. instructional communication?

4. Davo.. something

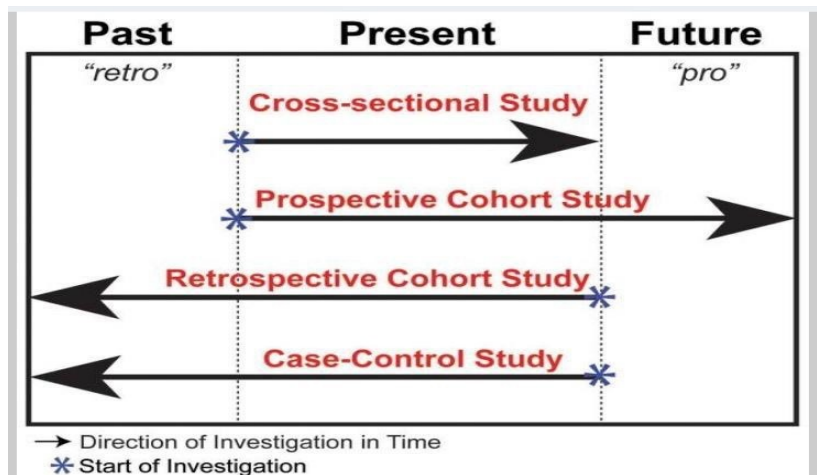
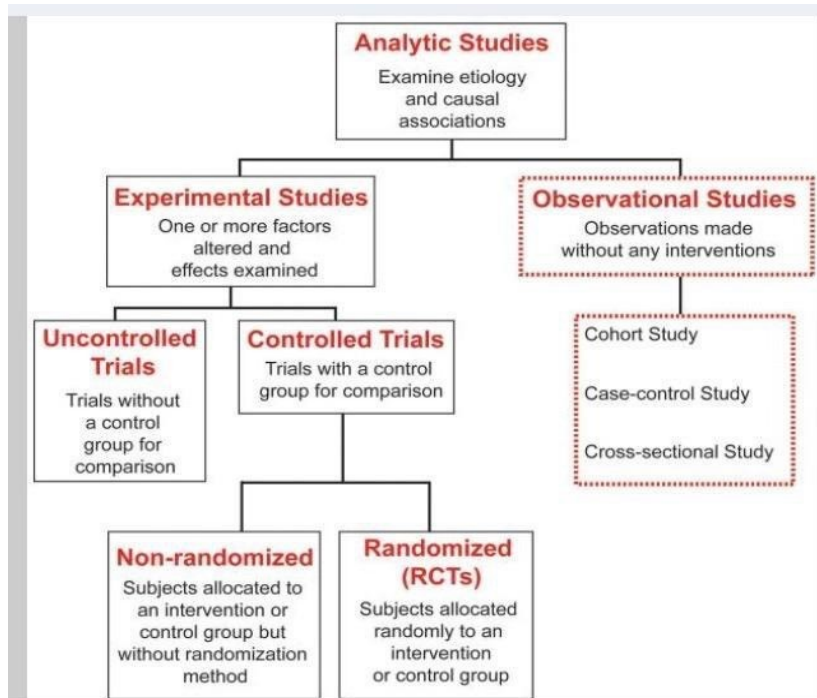
5. Educational care

Answer: C not sure

.U take hx from the pt & u want to examine him & u want to tell him . What's this?!

-Informed consent-Respect pt

Community medicine and research



Advantages and Disadvantages of the Case-Control Study

Advantages
Good for examining rare outcomes or outcomes with long latency
Relatively quick to conduct
Relatively inexpensive
Requires comparatively few subjects
Existing records can be used
Multiple exposures or risk factors can be examined
Disadvantages
Susceptible to recall bias or information bias
Difficult to validate information
Control of extraneous variables may be incomplete
Selection of an appropriate comparison group may be difficult
Rates of disease in exposed and unexposed individuals cannot be determined

Advantages and Disadvantages of the Cohort Study

Advantages
Gather data regarding sequence of events; can assess causality
Examine multiple outcomes for a given exposure
Good for investigating rare exposures
Can calculate rates of disease in exposed and unexposed individuals over time (e.g. incidence, relative risk)
Disadvantages
Large numbers of subjects are required to study rare exposures
Susceptible to selection bias
Prospective Cohort Study
May be expensive to conduct
May require long durations for follow-up
Maintaining follow-up may be difficult
Susceptible to loss to follow-up or withdrawals
Retrospective Cohort Study
Susceptible to recall bias or information bias
Less control over variables

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2998589/#!po=20.9677>

1- Important equations:

Prevalence of Disease = People who have the disease / Total × 100

Sensitivity = $A/(A+C) \times 100$

Specificity = $D/(D+B) \times 100$

smle ,2016

Positive Predictive Value = $A/(A+B) \times 100$

Negative Predictive Value = $D/(D+C) \times$

100 **Control event rate (CER) = $c/c+d$**

Experimental event rate (EER) = $a/a+b$

(a) Relative Risk (RR) = $EER/CER=(a/a+b)/(c/c+d)$

(b) Relative Risk Reduction (RRR) = $CER-EER/CER$

(commonest reported measure of dichotomous treatment effect)

(c) Absolute Risk Reduction (ARR) = $CER-EER$

(d) Number Needed to Treat (NNT) = $1/ARR$

A certain risk reduction may appear impressive but how many patients would you have to treat before seeing a benefit? This concept is called "number need to treat" and is one of the most intuitive statistics for clinical practice. For example if:

	Yes	No
Exposed	8(a)	992(b)
Not Exposed	10(c)	990(d)

The RR = $(8/1000) / (10/1000) = 0.8$ making the RRR = $(1-0.8/1)=0.2$ or 20%.

Although this sounds impressive, the absolute risk reduction is only $0.01-0.008=0.002$ or 0.2%. Thus the NNT is $1/0.002=500$ patients. It is obvious that on an individual patient basis the pre-intervention risk or probability is a major determinant of the degree of possible post-intervention benefit, yield, or risk reduction.

2- Measure of Variability

- Range; the difference between highest and lowest score (for small data)
- Variance: the degree of spread within distribution (stable measure)
- Standard deviation: measure how the average score deviated away from the mean (most stable measure)

3- Definition of epidemiology

The study of the distribution and determinants of health related events (including diseases and application of this study to control of diseases and the others health problems) (Om al Qura, family medicine)

4- Definition of endemic or epidemic disease

<https://www.vocabulary.com/articles/chooseyourwords/endemic-epidemic/>

Endemic refers to the constant presence and/or usual prevalence of a disease or infectious agent in a population within a geographic area.

Hyperendemic refers to persistent, high levels of disease occurrence.

Occasionally, the amount of disease in a community rises above the expected level.

Epidemic refers to an increase, often sudden, in the number of cases of a disease above what is normally expected in that population in that area.

<http://www.cdc.gov/ophss/csels/dsepd/ss1978/lesson1/section11.html>

5- Definition of epidemic curve?

An epidemic curve gives a graphical display of the numbers of incident cases in an outbreak or epidemic, plotted over time.

http://www.med.uottawa.ca/sim/data/Public_Health_Epidemic_Curves_e.htm

smle ,2016

6- Definition of evidence based medicine (biosocial)

Practice according available scientific evidence

Is about trying to improve the quality of the information on which decisions are based. It helps practitioners to avoid 'information overload' but, at the same time, to find and apply the most useful information

Evidence-based medicine (EBM) is the integration of best research evidence with clinical expertise and patient values.

<http://ktclearinghouse.ca/cebm/intro/whatisebm>

7- Cross sectional: observational study that assesses risk factor and outcome at snapshot in time also called prevalence study

8- Best sentence describe case-control study: (Read about it)

- A study that compares patients who have a disease or outcome of interest with patients who do not have the disease or outcome, and looks back retrospectively to compare how frequently the exposure to a risk factor is present in each group to determine the relationship between the risk factor and the disease
- One of the most significant triumphs of the case-control study was the demonstration of the link between tobacco smoking and lung cancer
- observational study that assesses risk factor and outcome at snapshot in time also called prevalence study

9- Definition of case report research

Retrospective analysis of one (1), two (2), or three (3) clinical cases <http://viceprovost.tufts.edu/HSCIRB/case-reports/>

10- What's mean by Standard Deviation?

- The standard deviation is the measure of spread used most commonly with the arithmetic mean.

<http://www.cdc.gov/ophss/csels/dsepd/ss1978/lesson2/section7.html>

- Measure that is used to quantify the amount of variation or dispersion of a set of data values. A standard deviation close to 0 indicates that the data points tend to be very close to the mean (also called the expected value) of the set, while a high standard deviation indicates that the data points are spread out over a wider range of values.
- Positive square root

variance

11- Why we use standard deviation? For Measurement (UQU)

It is a measure that is used to quantify the amount of variation or dispersion of a set of data values

12- Definition of specificity

Specificity is the probability that an individual without the disease will test negative. It is the number of patients who have a negative test and do not have the disease (true negatives) divided by the number of patients who do not have the disease. A test with high specificity will infrequently identify patients as having a disease when they do not (ie, low false

smle ,2016

positive results). Uptodate

13- Definition of Positive predictive value & Negative predictive value

PPV: is the probability that subjects with a + screening test truly **have** the disease.

NPV: is the probability that subjects with a - screening test truly **don't** have the disease.

http://sphweb.bumc.bu.edu/otlt/MPH-Modules/EP/EP713_Screening/EP713_Screening5.html

14- What is the definition of Attributable risk?

A- Difference in rate of a condition between an exposed population and an unexposed population.

Answer: A [100% in research]

–AR = the amount of disease incidence that can be attributed to a specific exposure

- Difference in incidence of disease between exposed and non-exposed individuals
- Incidence in non-exposed = background risk
- Amount of risk that can be prevented

<http://www.pitt.edu/~super7/30011-31001/30101-30111.ppt>

It is a measure of the public health impact of a causative factor. The calculation of this measure assumes that the occurrence of disease in the unexposed group represents the baseline or expected risk for that disease.

<http://www.cdc.gov/ophss/csels/dsepd/ss1978/lesson3/section6.html>

15- Calculate relative risk:

$$a / (a+b) / c / (c+d)$$

16- Research questions about:

- Prevalence,
- Most accurate test etc
- Formula of relative risk,
- Calculate and define the annual prevalence rate
- Cohort study advantage
- Definition of positive probability test
- association ratio
- relative rate or negative predictive value
- Determine the range

17- Cohort study, calculate the Relative Risk.

	Diseased	Healthy
Exposed	A	B
Not exposed	C	D

smle ,2016

Relative Risk = $(A / (A+B)) / (C / (C+D))$.

18- Case-control study, calculate the odds ratio.

Odds ratio: $(A/B) / (C/D)$ or $A*D / B*C$

Box 9.2.a: Calculation of risk ratio (RR), odds ratio (OR) and risk difference (RD) from a 2x2 table

The results of a clinical trial can be displayed as a 2x2 table:

	Event (‘Success’)	No event (‘Fail’)	Total
Experimental intervention	S_E	F_E	N_E
Control intervention	S_C	F_C	N_C

where S_E , S_C , F_E and F_C are the numbers of participants with each outcome (‘S’ or ‘F’) in each group (‘E’ or ‘C’). The following summary statistics can be calculated:

$$RR = \frac{\text{risk of event in experimental group}}{\text{risk of event in control group}} = \frac{S_E/N_E}{S_C/N_C}$$

$$OR = \frac{\text{odds of event in experimental group}}{\text{odds of event in control group}} = \frac{S_E/F_E}{S_C/F_C} = \frac{S_E F_C}{F_E S_C}$$

$$RD = \text{risk of event in experimental group} - \text{risk of event in control group}$$

$$= \frac{S_E}{N_E} - \frac{S_C}{N_C}$$

19- You conducted a study in which a group of epileptic patients using carbamazepine for 10 years. Now you compare them with their age equivalent healthy individuals. What is this type of study called?

- A- Case control study
- B- Retrospective cohort study
- C- C- Cross sectional
- D- Prospective cohort study

Answer: D, The English in this question is bad so the answer can also be B.

- Cohort study: compares a group with exposure (carbamazepine in this Q) to a group without such exposure. Done in two ways; either Prospective (you give the exposure and follow the subjects for a specific time) or retrospective (the exposure occurred already in the past, you look back in the history).
- Case control study: compares a group with disease to a group without disease.

20- In a study they are selecting every 10th family in the city, what is the type of study

- A- Systematic study
- B- Stratified study
- C- Non randomized study

Answer: A

Random sampling: preferred way of sampling, it is often difficult to do. It requires that a complete list of every element in the population be obtained. Computer generated lists are often used with random sampling.

Systematic sampling: every Nth element is taken. This is similar to lining everyone up and numbering off "1,2,3,4; 1,2,3,4; etc". When done numbering, all people numbered 4 would be used.

smle ,2016

Convenience sampling: readily available data is used. That is, the first people the surveyor run into.

Cluster sampling: accomplished by dividing the population into groups called clusters - usually geographically. The clusters are randomly selected, and each element in the selected clusters is used.

Stratified sampling: divides the population into groups called strata. For instance, the population might be separated into males and females. A sample is taken from each of these strata using either random, systematic, or convenience sampling.

<http://research-methodology.net/sampling-in-primary-data-collection/systematic-sampling/>

21- “Non response bias”. What is this study?

A- Cross sectional.

B- Cohort.

C- Case-control

Answer: A

- Non response bias (example of selection bias) occurs with cross sectional study.

22- Epidemiological study want to see the effect of smoking in lung cancer: 90% of lung cancer patients are smokers while 30% of those who don't have the disease are smokers. The specificity of smoking as a risk factor is:

A- 10%

B- 40%

C- 30%

D- 70%

E- 90%

Answer: D (100% in Research)

Explanation: Specificity = $70 / (30+70) = 70\%$

	Lung Cancer	No Lung Cancer
Smoker	A (90)	B (30)
Non smoker	C (10)	D (70)

23- At a daycare center 10 out of 50 had red eye in the first week; another 30 developed the same condition in the next 2 weeks. What is the attack rate (cumulative incidence)?

A- 40%

B- 60%

C- 80%

D- 20%

Answer: C

Attack Rate = cases due to a specific cause in a short period of time divided by the population at risk, often associated with an epidemic situation such as food borne disease (cumulative incidence) Ref: 3rd Edition UQU

24- 80 persons found to have Typhoid Fever in a population of 20,000 during the last 4 years. If we measure it on a population of 100,000, what will be the incidence in one year?

smle ,2016

- A- 20
- B- 100
- C- 150
- D- 200

Answer: B ??? according to a research specialist it's right.

Incidence in a population of 20,000 for 1 year is 20/20,000.

Therefore, the incidence in a population of 100,000 for 1 year is 100/100,000

25- With table of sensitivity, specificity, positive and negative predictive values

Answer

Sensitivity: the probability that a diseased pt will have a positive test result

Specificity: the probability that a non-diseased pt will have a negative test result See the table:

		The Truth		
		Has the disease	Does not have the disease	
Test Score:	Positive	True Positives (TP) a	False Positives (FP) b	$PPV = \frac{TP}{TP + FP}$
	Negative	False Negatives (FN) c	True Negatives (TN) d	
		Sensitivity	Specificity	
		$\frac{TP}{TP + FN}$	$\frac{TN}{TN + FP}$	
Or,		$\frac{a}{a + c}$	$\frac{d}{d + b}$	

Source :UQU

26- In a cohort study on lubricant oil use and urinary bladder CA done over 20 years 10,000 exposed 10,000 non exposed 750 exposed got CA 150 non exposed got CA Then they asked about the incidence in 1000 in one year? A- 2.25

- B- 45
- C- .45
- D- .225

Answer: A

In 20 y 20,000 p 900 Cases, so in one year 900/20=45 case for 20,000 popu- lation for 1000, 45/20=2.25

According to a research specialist.

27- What is the incidence rate for 10000 population, 2000 old cases, and 1000 new cases?

12.5

$1000/8000 = .125 > .125 * 100 = 12.5$

smle ,2016

28- Cohort study – 2 groups: one of them exposed to patient with positive MERSA and the other group is not exposed to these patients.

	-ve MERSA	+ve MERSA	Total
Exposed	20	80	100
Non-exposed	394	6	400
	414	86	500

What is the ratio of exposed to non-exposed?

A- 44:1

B- 55:1

C- 66:1

Answer: C

According to a research specialist, the equation should be: dividing the exposed over the non exposed.

What is the risk of exposure to MERSA-virus?

A-33

B-44

C-55

D-66

Answer: D

$(80 \div 100) \times (500 \div 6) = 66$

According to a research specialist it should be 100/500.

30- Question asking about the relative risk for exposure and none exposure to something. The numbers are 80 out of 1000 in exposure. 6 out 5000 in non exposure.

A- 66:1 [100% in research]

31- Lung cancer affected 80 of 100 smokers, 6 of 500 non smokers, What is Relative risk reduction?

A- 33:1

B- 55:1

C- 66:1

Answer: C

$RR = [\text{cases in exposed} / \text{total exposed}] / [\text{cases in non exposed} / \text{total non exposed}]$
 $= [80 / 100] / [6 / 500] = 66.6666$

32- A study with some people exposed to MRSA patient and a control group who didn't calculate the risk or the ratio ,, I DON'T KNOW !!(i think it was relative risk))

smle ,2016

	-ve MRSA	+ve MRSA	Total
Contact	20	80	100
No Contact	494	6	500
	514	86	600

Answer: relative risk ($a/(a+b) / (c/(c+d))$) $20/(20+80) / 494/(494+6) = 0.2$

33- It's found that patients on insulin something have a higher incidence of something compared to people who are taking another type of insulin Type one insulin event rate is 0.092 Type two insulin event rate is 0.022 Which one of the following is correct:

Peep is 0.07 Odd ratio something cases to harm is 8 Something cases to.... Is 14

Answer: ?

Control event rate (CER) = $c/c+d$

Experimental event rate (EER) = $a/a+b$

(a) Relative Risk (RR) = $EER/CER = (a/a+b)/(c/c+d)$

(b) Relative Risk Reduction (RRR) = $CER - EER / CER$

(commonest reported measure of dichotomous treatment effect)

(c) Absolute Risk Reduction (ARR) = $CER - EER$

(d) Number Needed to Treat (NNT) = $1/ARR$

A certain risk reduction may appear impressive but how many patients would you have

to treat before seeing a benefit? This concept is called "number need to treat" and is

one of the most intuitive statistics for clinical practice. For example if:

	Yes	No
Exposed	8(a)	992(b)
Not Exposed	10(c)	990(d)

The RR = $(8/1000) / (10/1000) = 0.8$ making the RRR = $(1-0.8/1) = 0.2$ or 20%.

Although this sounds impressive, the absolute risk reduction is only $0.01 - 0.008 = 0.002$ or 0.2%. Thus the NNT is $1/0.002 = 500$ patients. It is obvious that on an individual patient basis the pre-intervention risk or probability is a major determinant of the degree of possible post-intervention benefit, yield, or risk reduction.

34- Study of 1000 with congenital heart ,20 have gestational diabetes And control group of 5000 no congenital, 80 have gestational diabetes What is odd ratio and RR

http://www.graphpad.com/guides/prism/6/statistics/index.htm?stat_interpreting_results_contingen.htm

	Con gen i t al Heart Disease (cases)	No n-C on- g e n i t a l (control)	Total
Diabetes	20	80	100

smle ,2016

No Diabetes	980	4920	5900
	1000	5000	6000

Answer: $OR = (20/980) / (80/4930) = 1.255$
 $RR = (20/1000)/(80/5000) = 1.25$

35- Study about GDM association with malformation. 2 groups. 5000 control group, 50 developed. 1000 diseased group 20 developed.(not sure about the numbers) The best for risk factor association? (and calculate)

- A- Relative risk =2
- B- Odds ratio=2
- C- RR= ?
- D- OR =?

Answer: B (By community specialist)

OR used for case control study, $OR = (20 \cdot 4950) / (50 \cdot 980) = 2$

According to a research specialist, if it was a cohort study the answer would be relative risk.

36- There is Q about cumulative incidence " I'm not sure about the Q but I'm sure about the numbers" the new case if some disease for 2012 is 200 and the already existed disease is 80 out of population 8,000,000" what is the CI for 100,000:

Answer: 3.5

New cases 200 Old cases 80 Total 280 So, $(280/8000000) \cdot 100000 = 3.5$

37- Case control study showing this information: Odd ratio .75, Control rate .05 what's correct:

- A- Number needed to tx is 69
- B- Number needed to harm
- 69 C- Relative risk is .12

Answer: C

This question was not corrected.

38-a question about how to calculate the number need to treat. they provide you with experimental event rate and control event rate

$$ARR = CER - EER$$

$$1/ARR = NNT$$

39-A question that gives you control event rate and odds ratio and tells you what can you calculate from them?

- A- Experiment event rate
- B- Numbers to harm
- C- numbers to treat
- D-risk difference

answer: D

smle ,2016

This question was not corrected.

- 40-Researcher wants to do campaign to reduce stroke
- Smoking complain
 - Bp mall companion
 - Cholesterol complain

Answer: B

No source was found for this question.

41-Clinical trial study (two groups of breast cancer assigned to a group with treatment consist from modified mastectomy with radiation and other group modified mastectomy with chemotherapy and followed and look for recurrence. The question was what is the study type?

Answer: Randomized controlled trial

No source was found for this question.

42-Asked to calculate Attributable Risk

43-Asked to calculate Relative Risk

44- First step in epidemic prevention is :

A-diagnosis of the disease

B- define people at risk

c- Isolation of area affected 🧑🏻

Answer: A

No source was found for this question.

45- Epidemic investigation (study) what is the first step?

A- Identifying population at risk

B- Count the cases

C- Confirm Dx

Answer: A , (the most likely answer regarding the given information, otherwise check this out : <http://www.cdc.gov/ophss/csels/dsepd/ss1978/lesson6/section2.html>)

Not sure.

46- Risk of un-exposed population 2, risk of exposed population 3 , what is true ;

smle ,2016

A- Number to be treated
20

B- Patient event risk 2

C- Number to be harm..

Answer : $ARR = Risk1 - Risk2 = 3-2 = 1$, $NNT = 1/ARR = 1$

No source was found for this question.

47- You are reading a population study that states that 90% of lung cancer patient are smokers while 30% of lung cancer patient are non-smokers. What is the specificity of using smoking as a predictor of lung cancer?

A- 30

B- 70 + (umm alqura)

No source was found for this question.

48- Bladder cancer Cohort study done, 10,000 exposed to risk factor, 750 develop disease, 10,000 not exposed, 150 develop disease. What is the incidence?

- A- 0.2
- B- 2
- C- 4
- D- 16

Incidence among exposed = $750/10,000 = 0.075$, Incidence among nonex- posed = $150/10,000 = 0.015$, Relative Risk = $0.075 / 0.015 = 5$

No source was found for this question.

49-There is a study to the effect on intensive insulin regimen in the reduction of neuropathy in the patient, the results are as following:

Event in the regular insulin regimen:0.092
Event in the intensive insulin regimen:0.022

Which of the following is correct?

- A- Patient expected event rate:0.07
- B- Odd ratio is 4.2
- C- Number needed to harm:7
- D- Number needed to treat:12

Answer: I don't know + No source was found for this question.

50- Study we have 1000 DM 20 of them have congenital abnormal babies and 5000 control of non DM have 50 congenital abnormal babies... What determine accuracy of the study?

- A- OR 2.0
- B- RR 2.0
- C- OR 0.2
- D- RR 0.2

Answer: I don't know + No source was found for this question.

51- 2 groups, diseased and non,, exposed to smoking and non ..

- A- OR = 5
- B- RR =5
- C- OR= .5
- D- RR = .5

Answer :D

No source was found for this question.

52- Incidence of respiratory infection: 117 in 1000.

- A- 2.5
- smle ,2016

B- 1.2

Answer : B

53- You have devised a new test to diagnose a disease and you want to check it against a gold standard test. There were figures showing the number of those who actually have the disease according to the gold standard test and the number of those who were tested positive with your test. Also figures showing the number of true negatives with your test. What is the specificity of your new test?

A- 40%

B- 50%

C- 60%

E- 80%

Answer: I don't know + No source was found for this question.

54- Exposed odds ratio of 3 and non exposed odds ratio 2. Which of the following is true?

A- Number needed to treat is ...

B- Number needed to harm is ...

C- Relative risk is ...

Answer: I don't know + No source was found for this question.

55- In a cohort study to study the association of some kind of lubricant and skin cancer, the unexposed risk: 2, the exposed risk: 3, what can you calculate? Giving what's mentioned above

56- Case control study between lung cancer and smoking, Non smoker 1, Low smoker 1.3, Moderate 3, Heavy 5, What is the causation of the study?

57- Risk of infection among a population in a country in 2012, new cases 200, leave the country I think 12, died I think 20, total population 80,000,000, what is the risk in 100,000?

58- Study of relation of the bladder cancer and lubricating oil use, they take 10,000 male who use the oil and 10,000 who don't, and follow them for 20 years. From the one who use the lubrication oil, 750 developed cancer, and 150 who don't use the oil developed the cancer, calculate the incidence per 1000 per one year

59- Patients with a specific disease in a thousand. 2.5 days are disability and 1.5 absent workers calculate the incidence of disability annually

60- 70% of the population with lung cancer are smokers. And 30% of the population without lung cancer are smokers? What is the incidence and prevalence predicting the lung cancer in relation to smoking ?

61- Study compared effect of medication on baby whose mothers were/ were not taking the medication while pregnant and followed them till birth and after developing, type of the study?

- A- Cohort
 - B- Cross sectional
 - C- History cohort
- Answer: A
Research/commu
nity specialist

62- A research about a certain disease, on 10,000 populations, in the beginning there were 2000 pt but after 3 years of the study there were another 1000 pt, what is the incidence in one year?

Answer: 10%

No source was found for this question.

63- What is the following of these is true, specificity ,sensitivity ,Positive predictive value and Negative predictive value? 60 940 1000
The true answer specificity is 940/1000 (=94%) The other choices are wrong answer equation of sensitivity, PPV, NPV.

No source was found for this question.

64- The number of URTI cases per 1000 population this year is 117 case. The average number of disability from work is 2.5 days. What is prevalence of disability per 1000 ?

A- 292.5 [100% in research]

65- Incidence is 117 per 1000 per year. Median disability is 2.5 Median lost jobs is 1.6, what is the prevalence of disability?

2900.5

66- What most determine accuracy of a study?

- A- Specificity
- B- Sensitivity
- C- Positive predictive value
- D- Negative predictive value

Answer: C

No source was found for this question.

67- What type of study is used to comparing 2 groups of pregnant ladies on a specific diet, outcome of pregnancy?

- A- Cohort study
- B- Cross sectional
- C- Historical cohort

Answer: A , (its follow up study → Cohort)
Research specialist

Psychaitry



1- Obese boy is teased by his friends tells you that he wants to take pills and never wake up. What's your next step?

A. Immediate psychiatry referral

Answer: A

- (Risk for suicide should be considered high in patients who report active suicidal ideation (eg, "I want to kill myself") with a specific plan or intent and have access to lethal means. The clearer the intent, the higher the risk, particularly in the context of disinhibition (eg, impulsivity or intoxication) and access to lethal means. Nevertheless, passive suicidal ideation (eg, "I wish I would get run over by a car") should not be ignored.)
- (Although some pediatricians have the requisite training and experience to manage patients with suicidal ideation, **most patients are referred to psychiatrists and other mental health clinicians if these specialists are available. In particular, patients at moderate to high risk (eg, active suicidal ideation with a plan, or any recent/current suicidal behavior) should be referred promptly for a mental health evaluation**)

Reference: <https://www.uptodate.com/contents/suicidal-ideation-and-behavior-in-children-and-adolescents-evaluation-and-management>

2- What is the treatment of generalized anxiety disorder?

A. Escitalopram

Answer: A (Because it's an SSRI and they are a 1st line Medication for GAD, However The most effective treatment approach combines psychotherapy (e.g: CBT) and Pharmacotherapy)

Management of GAD:

- **lifestyle:** caffeine and EtOH avoidance, sleep hygiene
- **psychological:** CBT including relaxation techniques, mindfulness
- **biological:**
 - SSRIs and SNRIs are 1st line (paroxetine, escitalopram, sertraline, venlafaxine XL)
 - 2nd line: bupropion (caution due to stimulating effects), buspirone (tid dosing)
 - add-on benzodiazepines (short term, low dose, regular schedule, long half-life, avoid prn)

Reference: Toronto Notes / First Aid to psychiatry clerkships

3- Elderly patient his wife died recently. He's been depressed and having difficulty sleeping since that time. Which of the following is a short term medication that is suitable for him?

A. Diazepam

Answer: A (the patient most likely have an adjustment disorder, and the Q ask for a short term medication, most likely he meant benzodiazepine, However, I believe Diazepam is the only benzo in the choices. If other Benzo Meds are there> choose the one with short half life since Diazepam is long acting.)

- Typically, the goal of pharmacologic agents for individuals with adjustment disorder is the amelioration of debilitating symptoms (insomnia, anxiety, and panic attacks) rather than treatment of the disorder itself. The agents most commonly prescribed for individuals with this disorder are benzodiazepines and antidepressants. Antidepressants may be tried in patients with minor or major depressive disorders who have not responded to psychotherapy or other supportive interventions for 3 months.

Reference: <http://emedicine.medscape.com/article/2192631-treatment?src=refgatesrc1 - d11>

- When choosing benzodiazepines, Long acting agents with active metabolites should usually be avoided in the elderly e.g. diazepam, chlordiazepoxide, flurazepam, nitrazepam. When benzodiazepines are prescribed in older people, short acting benzodiazepines with few active metabolites are preferable e.g. lorazepam 0.5mg bd/ tid, temazepam 10-20mg nocte, alprazolam 0.25mg bd/tid.

Reference: <http://www.svhf.ie/documents/BenzoGoodPracticeGuide.pdf>

4- Why SSRI is the drug of choice for depression?

- A. More tolerable and less side effects
- B. Cheap

Answer: A

- We suggest SSRIs. Among the different antidepressants, SSRIs offer as much benefit as other medications with the least amount of risk in terms of safety and side effects. They are the most widely prescribed class of antidepressants.

Reference: <https://www.uptodate.com/contents/depression-treatment-options-for-adults-beyond-the-basics>

Reference: http://www.bpac.org.nz/BPJ/2012/december/docs/bpj_49_nzf_-_pages_34-35.pdf

5- A guy who is showing an erratic behavior lately. He is drinking a lot, spending too much money and having involved in sexual activities a lot. What is your diagnosis?

- A. Drinking problem
- B. drug use
- C. schizophrenia

Answer: B (we can answer this Q by exclusion, The symptoms does not apply for A nor C. However this clinical presentation goes with manic or hypomanic episodes which can be induced by drug use)

Reference: Toronto Notes PS 10

6- An alcoholic comes to you with symptoms of alcohol withdrawal. Last drink he consumed was 2 days back. What drug will you give?

- a. Naloxone
- b. Diazepam
- c. Nicotine
- d. Disulfiram

Answer: B (benzodiazepines is used for withdrawal symptoms, answer A & D are used for Alcohol Use Disorder not withdrawal)

Other treatments for Alcohol withdrawal symptoms:

- Diazepam 10-20 mg IV/PO or lorazepam 2-4 mg IV/PO q1hr until calm
- Thiamine 100mg IM/IV then 50-100mg/d
- Magnesium sulfate 4 g IV over 1-2 h (if hypomagnesemic)
- Admit patients with delirium tremens (DT), or multiple seizures.

Reference: Toronto Notes.

7- What is the best factor for smoking cessation?

- a. The patient desire.

Answer: A ??

- I couldn't find reference mentioning the best predictor for smoking cessation.
(Several factors are known to indicate whether a smoker is more likely to quit and our search has identified a number of common predictors such as late initiation of cigarette smle ,2016

smoking, longer duration of previous quit attempts, lack of depression and anxiety, low to moderate nicotine dependence, absence of alcohol problems, sustained level of motivation, being married and/or not having any other smokers in the household and/or in the workplace)

Reference: <http://www.sciencedirect.com/science/article/pii/S0954611108000930>

8- 50 Female presented with depression and she was given amitriptyline 30 mg (TCA). Later she came complaining of dizziness. What will you do? (Similar Q: A patient with depression on TCA came with dizziness. How will you manage?)

- a. Decrease dose to 10 mg
- b. Switch to SSRI

Answer: B (was approved by SMLE 12)

- (TCA are known to cause Cardiovascular side effects, Dizziness (postural hypotension) is common one. On the other hand, SSRI have fewer side effect including the effect on the CVS)

Reference: <http://www.emedexpert.com/compare/ssris-vs-tca.shtml>

- The dose mentioned in the question is not high. It's the beginning dose so, decreasing the dose would not be wise choice.

[Dosages Recommended by Investigators. Begin at 25 to 75 mg daily at bedtime and raised over two weeks to average of 200 and maximum of 300 mg. Taper gradually]

Reference: <http://www.anxieties.com/155/tricyclic-antidepressants-tcas-.WXBZ8NOGOCQ>

9- A depressed patient on medication, but he had weight gain and erectile dysfunction. What is the medication responsible for these side effects?

- a. Sertraline. (SSRI)
- b. Venlafaxine
- c. TCA.

Answer: C !

(Both A & C cause erectile dysfunction and Weight gain, however weight gain is a rare side effect of Sertraline and some references said it can cause weight loss as side effect)

Reference: [<http://www.rxlist.com/zoloft-side-effects-drug-center.htm>]

Reference: [<https://www.drugs.com/sfx/sertraline-side-effects.html>]

10- Old man, lives in a nursery home, missed his wife recently. Also he had heart failure and osteoarthritis recently which makes him more depressed. He is sad and having low mood. He doesn't eat that lead to loss of 4 kgs of his weight in the last month. Sometimes he forgets. What is the most likely diagnosis?

- a. Alzheimer's disease
- b. Depression

Answer: B (depression disorder is very common in old age. All the mentioned symptoms are part from major depression episode)

- Symptoms of major depression in the elderly often include problems with memory and cognitive functioning. Because this clinical picture may be mistaken for a major neurocognitive disorder (dementia), it is termed pseudodementia.

- Pseudodementia is the presence of apparent cognitive deficits in patients with major depression. Patients may appear demented. However, their symptoms are only secondary to their underlying depression, and it can be difficult to differentiate the two.

Reference: FIRST AID Psychiatry to the clerkship.

Table 3	Clinical and cognitive characteristics of MDE versus Alzheimer disease ^a	
Feature	MDE	Alzheimer disease
Age at illness onset	Before or after age 60 years	Uncommon before age 60 years
Affect	Depressed	Depressed or euthymic
Depressive symptoms	Typically meets MDE criteria	Depression less severe, but greater apathy and irritability
Cognitive course	Acute onset, cognitive changes often mood congruent	Gradual onset and progressive decline independent of mood
Subjective memory complaints	Usually present; complaints often exceed objective performance	Variable; complaints usually underestimate objective deficits
Memory performance	Improves with retrieval cues or mnemonic strategies Intrusion of previously learned information atypical; recognizes recently learned versus new information	Hints, cueing, or prompts do not help performance Intrusion of previously learned information in attempted recall of new material; difficulty in discriminating recently learned material from new material
Executive dysfunction	Typical	Variable, occurs later
Processing speed	Slowed	Normal
Aphasia/apraxia/agnosia	Uncommon	Impairments emerge at later stages of illness
Orientation	Normal or minor disorientation, such as incorrect date	Minor disorientation plus possible confusion about month, year, or physical location
Effort	Decreases with cognitive demand—disproportionate impairment on effortful cognitive tasks; “don’t know” responses; decreased persistence	Usually normal

MDE, major depressive episode.

11- What is an alternative medication for severe depression?

- a. Amitriptyline
- b. psychotherapy
- c. electroconvulsive therapy

Answer A ?? (The question is not clear.it says medication and there is only one medication in the choices. However, I included a helpful infographic pic.)

TREATMENT FOR SEVERE MAJOR DEPRESSION

For people with severe depression, we suggest a combination of antidepressant medication and psychotherapy. It's also reasonable to try antidepressants alone. (Psychotherapy is generally not used alone for patients with severe depression.) Another reasonable treatment for severe depression is electroconvulsive therapy (ECT), particularly in people who are actively thinking about suicide and who may be in danger of following through on their plans. ECT is discussed at elsewhere (See "Patient education: Electroconvulsive therapy (ECT) (Beyond the Basics).")

Severe depression — People with severe major depression have one or more of the following characteristics:

- They have thoughts of and plans for suicide or homicide.
- They have psychotic symptoms, such as delusions or hallucinations.
- They have a condition called catatonia, which involves being unable to move or talk normally.
- Their judgement is impaired such that people (including themselves) may be at risk for harm.
- Their basic functioning is impaired. For example, they may refuse to eat or drink which may lead to malnourishment or dehydration.

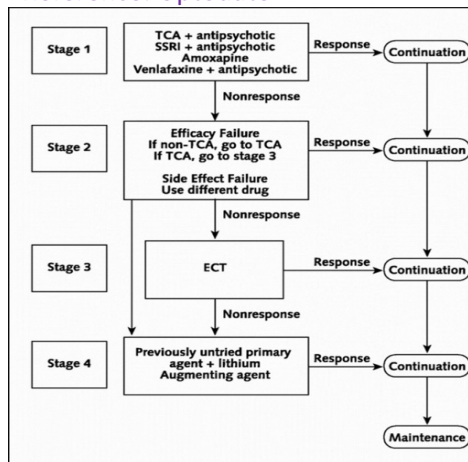
People with severe major depression usually need to be seen by a psychiatrist and sometimes need to be hospitalized.

Choosing an antidepressant — For the initial treatment of severe depression, we use serotonin-norepinephrine reuptake inhibitors (SNRIs) or selective serotonin reuptake inhibitors (SSRIs). In people who have symptoms of psychosis (hallucinations, delusions), starting with an antidepressant and antipsychotic medication may be appropriate.

Some healthcare providers start with SNRIs because studies suggest that these medications are more likely than SSRIs to alleviate severe depression. A reasonable alternative to SNRIs or SSRIs is a medication called mirtazapine (brand name: Remeron). It, too, has been shown to be effective in treating severe depression.

Tricyclic antidepressants are another reasonable alternative for severe depression. However, tricyclics can be dangerous in overdose and cause serious side effects, so some healthcare providers prefer to avoid prescribing them until safer alternatives have been tried.

Reference: Uptodate



Reference: <http://annals.org/aim/article/714094/psychopharmacologic-treatment-strategies-depression-bipolar-disorder-schizophrenia>

12-A patient moved to a new school...What is the most likely diagnosis?

- a. Adjustment syndrome

Answer: A (question is not complete)

[Adjustment disorders occur when behavioral or emotional symptoms develop after a stressful life event.]

Reference: FIRST AID PSYCHIATRY FOR CLERCKSHIP.

13- Which of the following is considered good prognostic factor for Schizophrenia ?

- a. No identified cause
b. Family history
c. Insidious onset
d. Affective symptoms

Answer: D

Good Prognostic Factors:

Acute onset, later age at onset, shorter duration of prodrome, female gender, good cognitive functioning, good premorbid functioning, no family history, presence of affective symptoms (mood symptoms), absence of structural brain abnormalities, good response to drugs, good support system.

Reference: Toronto Notes

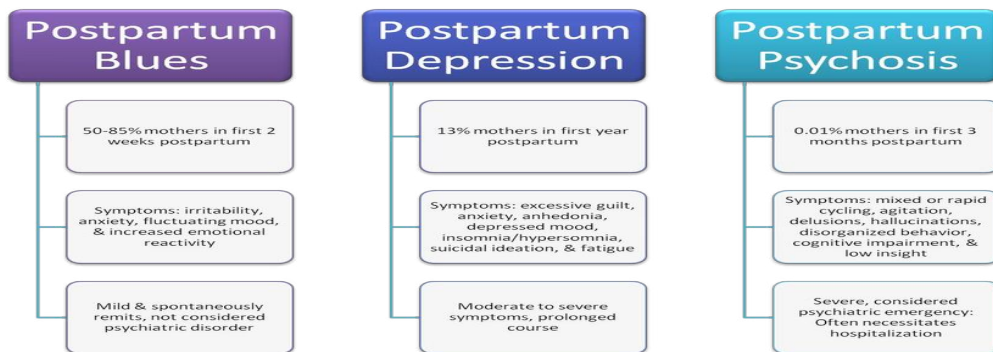
14- A female patient says her newborn is evil and won't live long. What is your diagnosis?

- A. Postpartum psychosis
- B. postpartum depression
- C. postpartum blue.

Answer: A (There are many symptoms in postpartum psychosis .One of them is Delusion and this is an example)

- It is a severe episode of mental illness which begins suddenly in the days or weeks after having a baby. Symptoms vary and can change rapidly. They can include high mood (mania), depression, confusion, hallucinations and delusions. Postpartum psychosis is a psychiatric emergency.
- Delusions: these are odd thoughts or beliefs that are unlikely to be true. For example, you might believe you have won the lottery. You may think your baby is possessed by the devil. You might think people are out to get you.

Reference: <http://www.rcpsych.ac.uk/healthadvice/problemsdisorders/postpartumpsychois.asp>



15- Acute onset of disorientation, change level of conscious, decrease of concentration, tremor, he mentioned that he saw monkey! He was well before.

What's the diagnosis:

- a) Parkinson dementia
- b) Schizo
- c) Delirium
- d) Delusion disorder

Answer: C (the mentioned symptoms are part of the criteria of Delirium)

Box 16-1. DSM-5 Diagnostic Criteria for Delirium

- A. A disturbance in attention (i.e., reduced ability to direct, focus, sustain, and shift attention) and awareness (reduced orientation to the environment).
- B. The disturbance develops over a short period of time (usually hours to a few days), represents a change from baseline attention and awareness, and tends to fluctuate in severity during the course of a day.
- C. An additional disturbance in cognition (e.g., memory deficit, disorientation, language, visuospatial ability, or perception).
- D. The disturbances in Criteria A and C are not better explained by another preexisting, established, or evolving neurocognitive disorder and do not occur in the context of a severely reduced level of arousal, such as coma.
- E. There is evidence from the history, physical examination, or laboratory findings that the disturbance is a direct physiological consequence of another medical condition, substance intoxication or withdrawal (i.e., due to a drug of abuse or to a medication), or exposure to a toxin, or is due to multiple etiologies.

16- Difference between delirium & dementia?

- A. Impaired memory
- B. state of consciousness
- C. confusion

smle ,2016

Answer: B

Table 4. Comparison of Dementia, Delirium and Pseudodementia of Depression

	Dementia	Delirium	Pseudodementia of Depression
Onset	Gradual/step-wise decline	Acute (h-d)	Subacute
Duration	Months-years	Days-weeks	Variable
Natural History	Progressive Usually irreversible	Fluctuating, reversible High morbidity/mortality in very old	Recurrent Usually reversible
Level of Consciousness	Normal	Fluctuating (over 24 h)	Normal
Attention	Not initially affected	Decreased (wandering, easy distraction)	Difficulty concentrating
Orientation	Intact initially	Impaired (usually to time and place), fluctuates	Intact
Behaviour	Disinhibition, impairment in ADL/IADL, personality change, loss of social graces	Severe agitation/retardation	Importuning, self-harm/suicide
Psychomotor	Normal	Fluctuates between extremes	Slowing
Sleep Wake Cycle	Fragmented sleep at night	Reversed sleep wake cycle	Early morning awakening
Mood and Affect	Labile but not usually anxious	Anxious, irritable, fluctuating	Depressed, stable
Cognition	Decreased executive functioning, paucity of thought	Fluctuating preceded by mood changes	Fluctuating
Memory Loss	Recent, eventually remote	Marked recent	Recent
Language	Agnosia, aphasia, decreased comprehension, repetition, speech (echolalia, palilalia)	Dysnomia, dysgraphia, speech rambling, irrelevant, incoherent, subject changes	Not affected
Delusions	Compensatory	Nightmarish and poorly formed	Nihilistic, somatic
Hallucinations	Variable	Visual common	Less common, auditory predominates
Quality of Hallucinations	Vacuous/bland	Frightening/bizarre	Self-deprecatory
Medical Status	Variable	Acute illness, drug toxicity	R/O systemic illness, medications

Reference: Toronto Notes

- Delirium managements:

- primary illness should be mainly focused (Treat the cause)
- nurse in well lit room
- make him comfortable
- less number of attendants
- less changes in staff
- lower doses of Risperidone 1-2 mg in two or three divided doses
- some sedative like zolpidem 10 mg at bed time

Reference: <http://emedicine.medscape.com/article/288890-treatment>

17- Clozapine is used in which disorder in children ?

- A. Bipolar
- B. Depression
- C. Substance abuse
- D. Psychosis (or schizophrenia)

Answer: D This the main treatment for clozapine. However, you can use it with Bipolar disorder or Impulsive/Aggressive behaviors (associated with psychotic disorders). In general we use clozapine in resistant psychiatric disorder because of the risk of Agranyocytosis in both adult and children.

Reference: [http://www.jaacap.com/article/S0890-8567\(09\)61687-7/fulltext](http://www.jaacap.com/article/S0890-8567(09)61687-7/fulltext)

Reference: http://keltymentalhealth.ca/sites/default/files/clozapine_medication_information_feb_2013.pdf

18- A patient presented with behavioral changes. His father died recently (3 days). He is walking around naked and saying that his father asked him to do that then returns to his normal state. What is the most likely diagnosis?

- a. Brief psychotic disorder
- b. Schizophrenia
- c. Schizophreniform
- d. Schizoaffective

Answer: A (Because it's psychosis and lasted less than 1 month.)

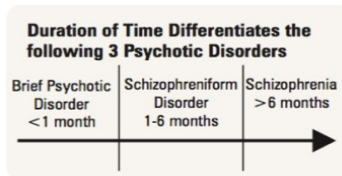


Figure 1. Differentiating psychotic disorders with duration

19- Patient turns to be erratic for 4 months, he said that people on TV know what he's thinking about and they are talking about him. In the last 2 months he started to claim that he has special power that no one has. What is the most likely diagnosis?

- a. Unipolar depression
- b. Bipolar... Mania
- c. Schizophrenia
- d. schizophreniform

Answer: C. (This clinical presentation with psychotic features and the absence of mood symptoms suggestive of psychotic disorder. However, if the duration of symptoms is just 4 months > it should be schizophreniform disorder.)

Reference: Toronto Notes

20- A man is behaving in a strange way after the death of his son. random people on the road and ask them irrelevant questions. He won't listen when asked not to do that. He had no such behavior before in life. Which of the following will be excluded from your differentials?

- a. Brief psychotic disorder
- b. Schizophrenia
- c. Schizophreniform
- d. Schizoaffective

Answer: A

(The Q is not complete; duration of the illness and absence of the mood symptoms will help differentiate between the choices)

21- A guy who is heroin addict. You want to start rehabilitation. What drug will you prescribe?

- A. Diazepam
- B. Methadone

Answer: B

- Withdrawal: long-acting oral opioids (methadone, buprenorphine), α -adrenergic agonists (clonidine)
- Treatment of Chronic Abuse:
 - psychosocial treatment (e.g. Narcotics Anonymous) usually emphasize total abstinence
 - naltrexone or naloxone (opioid antagonists) may also be used to extinguish drug-seeking behavior
 - long-term treatment may include withdrawal maintenance treatment with methadone or buprenorphine

Reference: Toronto Notes.

smle ,2016

22- Patient came to you for check up and tells you that he diagnosed two years ago with pancreatic cancer and asking you for the medication but he lost the prescriptions, when you have looked in the system there wasn't any data about him. When you face him with what you find, he runs away. What is the diagnosis?

- a. Malingering.
- b. Somatization.
- c. Schizophrenia
- d. Drug addict.

Answer: ? (It's either A or D. I would go more with Drug addiction. Malingering involves the intentional reporting of physical or psychological symptoms in order to achieve personal gain. **Here he did not complain of any symptom. Rather he lied about the diagnosis.** Common external motivations include avoiding the police, receiving room and board, obtaining narcotics, and receiving monetary compensation.

23- Old patient with Alzheimer's dementia, became agitated and have hallucinations and delusions. What is the appropriate drug in his case?

- a. Haloperidol.

Answer: A

Haloperidol: is a typical antipsychotic medication. It is used in the treatment of schizophrenia, tics in Tourette syndrome, nausea and vomiting, delirium, agitation, acute psychosis, and hallucinations .

24- Which one of the antipsychotic drugs is most likely to cause weight gain ?

- a. Ziprasidone.
- b. Olanzapine.
- c. Quetiapine.
- d. Aripiprazole.

Answer: B (however C,D causes also weight gain but Olanzapine more common reported (40%) to cause Wight gain)

- among second-generation antipsychotics, **clozapine and olanzapine** treatment are associated with the greatest potential weight gain, with consistent evidence for an increased risk of T2DM and dyslipidemia.

Reference: In Review: The Metabolic Effects of Antipsychotic Medications

25- Old man is walking on the street and asking random people the same question. When asked to stop he doesn't stop. What does he have?

- A. Loose of association
- B. Delusion of control

Answer: ? (If the Q stem is correct and complete. The answer is not write. The symptom in the stem is **perseveration** which is an involuntary excessive continuation or repetition of a single response, idea or activity (see the reference))

Reference: <https://quizlet.com/13733038/thought-processes-flash-cards/>

26- A patient was brought by his family with 3 months history of delusions, hallucination, ... that are gone by themselves now. No mood disorders. What is the diagnosis?

- A. Brief Psychotic disorder
- B. Schizophrenia
- C. schizophreniform disorder

Answer: C (See Q 17)

smle ,2016

27- Which of the following is a criteria of Somatization disorder?

- A. intentionally symptoms
- B. at least 2 GI symptoms must be present
- C. more than 40 years old
- D. loss of occupational / life function

Answer: D (it's one of the criteria of somatic symptoms disorder DSM 5)

Note: Individuals with somatic symptom disorder typically have multiple, current, somatic symptoms that are distressing or result in significant disruption of daily life (Criterion A)

Somatic Symptom Disorder

Diagnostic Criteria **300.82 (F45.1)**

- A. One or more somatic symptoms that are distressing or result in significant disruption of daily life.
- B. Excessive thoughts, feelings, or behaviors related to the somatic symptoms or associated health concerns as manifested by at least one of the following:
 - 1. Disproportionate and persistent thoughts about the seriousness of one's symptoms.
 - 2. Persistently high level of anxiety about health or symptoms.
 - 3. Excessive time and energy devoted to these symptoms or health concerns.
- C. Although any one somatic symptom may not be continuously present, the state of being symptomatic is persistent (typically more than 6 months).

Reference: [DSM 5]

However [in DSM4 : the criteria was different, and the name was Somatization disorder. And if we want to answer the Q paced on DSM4> the Answer could be B, However still

TABLE 2 DSM-IV Diagnostic Criteria for Somatization Disorder ¹	
A.	A history of many physical complaints beginning before age 30 years that occur over a period of several years and result in treatment being sought or significant impairment in social, occupational, or other important areas of functioning.
B.	Each of the following criteria must have been met, with individual symptoms occurring at any time during the course of the disturbance: <ul style="list-style-type: none">(1) <i>four pain symptoms</i>: a history of pain related to at least four different sites or functions (e.g., head, abdomen, back, extremities, chest, rectum, during menstruation, during sexual intercourse, or during urination)(2) <i>two gastrointestinal symptoms</i>: a history of at least two gastrointestinal symptoms other than pain (e.g., nausea, bloating, vomiting other than during pregnancy, diarrhea, or intolerance of several different foods)(3) <i>one sexual symptom</i>: a history of at least one sexual or reproductive symptom other than pain (e.g., sexual indifference, erectile or ejaculatory dysfunction, irregular menses, excessive menstrual bleeding, vomiting throughout pregnancy)(4) <i>one pseudoneurologic symptom</i>: a history of at least one symptom or deficit suggesting a neurological disorder not limited to pain (conversion symptoms such as impaired coordination or balance, paralysis or localized weakness, difficulty swallowing or lump in throat, aphonia, urinary retention, hallucination, loss of touch or pain sensation, double vision, blindness, deafness, seizures, dissociative symptoms such as amnesia; or loss of consciousness other than fainting)
C.	Either (1) or (2): <ul style="list-style-type: none">(1) after appropriate investigation, each of the symptoms in Criterion B cannot be fully explained by a general medical condition or the direct effects of a substance (e.g., a drug of abuse, a medication)(2) when there is a related general medical condition, the physical complaints or resulting social or occupational impairment are in excess of what would be expected from the history, physical examination, or laboratory findings
D.	The symptoms are not intentionally produced or feigned (as in Factitious Disorder or Malingering).

28- *pt with paresthesia , abdominal pain nausea Vomiting . For 2 years

- A- somatization disorder
- B- conversion
- C- hypochondriasis

Answer: A

29- Patient think that he has cancer and did test to confirm he has no cancer and patient said it is significantly affect his life:

- A. Factitious disorder
- B. OCD
- C. Hypochondriasis now (In DSM5 they changed the name to illness anxiety disorder)

Answer: C

30- About male patient he covers the TV because he thinks that he got instruction from the TV and the government Watching him

- A. Mania
- B. Depression
- C. schizophrenia

Answer: C (there are psychotic features (delusion of reference & Paranoid delusion) and no mood symptoms)

31- 20 years old Female patient c/o Multiple GI symptoms such as Nausea,vomiting, diarrhoea, headache, fatigue, joint pain, urine retention. The all labresult is normal. These symptoms for 2 year unchanged:

- A. Somatisation disorder
- B. Conversion disorder
- C. GAD
- D. Dissociative disorder

Answer: A

- Somatisation disorder:

The essential feature of a somatization disorder is several symptoms that not lead to any medical sense, with a pattern of many physical complaints in persons younger than 30 years that occurs over several years and results in unnecessary medical treatment and/or causes significant impairment in functioning.

Reference: Medscape <http://emedicine.medscape.com/article/918628-over-view#a2>

32- The doctor asked the patient t: "do you think you are mentally ill?" he is evaluating:

- A. Insight
- B. Judgment

Answer: A

- **Judgment:** Test the patient's predicted response and behaviour in imaginary situation (e.g. what would you do if you smelled smoke in a crowded space).
- **Insight:** Assess the degree of awareness and understanding the patient has that he or she is mentally ill. Ask about the patient's awareness of the nature of his symptoms, and find out whether the patient believes himself to be ill: if so, whether he thinks that the illness is physical or psychological; and whether he sees himself as in need of psychiatric treatment. The patient's compliance with psychiatric treatment largely depends on his insight.

Reference: Basic Psychiatry book.

33- Which one is known to cause restlessness, insomnia and drowsiness ?

- A. SSRI
- B. MAOI
- C. Tetracycline antidepressants
- D. Tricyclic antidepressants

Answer: A (SSRI are the only group of drugs that can cause all the three side effects)

Reference: Toronto Notes

Table 18. Features of Commonly Used Antidepressant Classes

	TCA	SSRI	MAOI	SNRI
Considerations	OCD (clomipramine), melancholic depression	Anxiety states, OCD, eating disorders, seasonal depression, typical and atypical depression	For moderate/severe depression that does not respond to SSRI, atypical depression	Depression, anxiety disorders
Mode of Action	Block norepinephrine and serotonin reuptake	Block serotonin reuptake only	Irreversible inhibition of monoamine oxidase A and B Leads to ↑ norepinephrine and serotonin	Block norepinephrine and serotonin reuptake
Side Effects	Anticholinergic effects: (see Table 14) Noradrenergic effects: tremors, tachycardia, sweating, insomnia, erectile and ejaculation problems α-1 adrenergic effects: orthostatic hypotension Antihistamine effects: sedation, weight gain CNS: sedation, stimulation, ↓ seizure threshold CVS: ↑ HR, conduction delay	Fewer than TCA, therefore increased compliance CNS: restlessness, tremor, insomnia, headache, drowsiness GI: N/V, diarrhea, abdominal cramps, weight loss Sexual dysfunction: impotence, anorgasmia CVS: increased HR, conduction delay, serotonin syndrome, EPS, SIADH	Hypertensive crises with tyramine rich foods (e.g. wine, cheese), headache, flushes, palpitations, N/V, photophobia Dizziness, reflex tachycardia, postural hypotension, sedation, insomnia Weight gain Social dysfunction Energizing Minimal anticholinergic and antihistamine effects	Low dose side effects include insomnia (serotonergic) Higher dose side effects include: tremors, tachycardia, sweating, insomnia, dose-dependent increase in diastolic BP (noradrenergic)

34- Middle age male presented in the ER with irritability, suspiciousness, overactive, and poor hygiene what is the diagnosis:

- A. Schizophrenia
- B. Bipolar Disorder
- C. Psychoses
- D. Acute anxiety state

Answer: A

(this Q is not complete, However most likely it's Schizophrenia. The patient is suspiciousness which may be attributed to paranoid delusion. There is also negative symptom which is poor hygiene. No mood symptoms which exclude Bipolar Disorder. Psychosis is not a diagnosis by it's on. It's a psychiatric description which can happen in Schizophrenia, Bipolar disorder type 1 and drug induced psychosis)

35- Cardiac patient with depression on regular medications, started to have convulsion then coma , He took overdose of some pills which his relative does not know it, What is the cause of this seizure?

- A. SSRI
- B. Digoxin
- C. Quinine
- D. TCA

Answer: D (SSRI is generally safe in overdose, Digoxin rarely cause seizure in toxicity, Quinine can cause both seizure and coma in toxicity but it did not mention taking any or an indication for using the drug. TCA can cause both and it's relevant to question since he has depression)

Reference: <http://emedicine.medscape.com/article/819204-clinical>

Reference: [<http://emedicine.medscape.com/article/154336-clinical>]

Reference: [<http://malaria.emedtv.com/quinine/quinine-overdose.html>]

Reference: [Toronto Notes]

36- 72 y male disoriented and hallucinating and disorganized thinking had aortic popliteal graft (surgery) and symptom fluctuates in the 2 days what is the cause?

A. multi infarction dementia

B. mania

C. Dementia

D. Delirium

Answer: D

(Delirium has an acute onset and it fluctuates and it happens after a surgery. Dementia has a progressive course)

37- case of poor hygiene and hallucinating, what medication to give?

Answer : Antipsychotic

- Antipsychotic medications used to treat hallucinations include haloperidol, olanzapine and risperidone.

Reference: <http://www.news-medical.net/health/Hallucination-Treatments.aspx>

38- Patient has loss of interest, suicidal attempt?

A. Major depression

B. Minor depression

Answer : A (There is no such thing as minor depression in DSM 5. However some websites call Dysthymia (persistent depression disorder) as a minor depression. If we accept that, Dysthymia does not have suicidal ideation in its criteria.)

Reference: <https://www.healthyplace.com/other-info/psychiatric-disorder-definitions/dysthymia-minor-depression/>

39- Mania ?

A. Bipolar B. affective disorder

C. Schizophrenia

Answer : A

- It depends on the symptoms; the question is not complete. To be more specific it's Bipolar type I which includes at least 1 episode of Manic episode (DSM-5 Page 126). Affective disorder includes depression, bipolar disorder, and anxiety disorder.

40- case about addict person and ask which of the following questions is included in criteria of CAGE questionnaire?

Answer: (choices are not available)

- CAGE is a questionnaire indicated in alcoholism

Have you ever felt you needed to **C**ut down on your drinking? Have people **A**nnoyed you by criticizing your drinking?

Have you ever felt **G**uilty about drinking?

Have you ever felt you needed a drink first thing in the morning (**E**ye-opener) to steady your nerves or to get rid of a hangover?

41- psychotic Patient came to the clinic today. He is complaining that, people on TV are talking about him when he watch the TV. What type of delusion is this?

Answer : delusion of reference

Despite counterevidence, a belief that:	Delusion of:
One is a god, movie star, or other exalted person	Grandeur
One has committed a serious sin or mistake	Guilt
One has a terrible disease	Ill Health
One's partner has been unfaithful	Jealousy
One is being manipulated by an outside influence	Control
One is being tormented, followed, spied on, or tricked	Persecution
One is facing destitution	Poverty
One is being talked about	Reference
Ideas are being put into one's mind by others	Thought Control

42- delusional disorder, what is it and what is its treatment:

Answer:

Delusional disorder is an illness characterized by at least 1 month of delusions but no other psychotic symptoms

MANEGMENTS:

- Psychotherapy (Supportive therapy is often helpful, but group therapy should be avoided given the patient's suspiciousness.),
- Antipsychotics(A systematic review of the literature shows that olanzapine and risperidone are the most common atypical antipsychotics used.),
- Antidepressants.

Reference: <http://emedicine.medscape.com/article/292991-overview#a6>

43- Patient talk about false belief and against culture . What dx;

- A.Elusion-
- B.delusion
- C. schisoid
- D.Hallucinations

Answer: B

A delusion is a belief that is firmly held on inadequate grounds that is not affected by rational arguments or evidence to contrary and that is not a conventional belief that a person might be expected to hold given their educational, cultural and religious back ground.

44- Treatment of dementia?

- A.edrophonium
- B.revistagmine
- C.Neostigmine

Answer: B

- Rivastigmine is reversible acetylcholinesterase inhibitor that causes an increase in concentrations of acetylcholine, which in turn enhances cholinergic neurotransmission

Reference: <http://reference.medscape.com/drug/exelon-oral-solution-rivastigmine-343069 - 0>

smle ,2016

- Neostigmine is a cholinesterase inhibitor indicated in Symptomatic control of myasthenia gravis; antidote for nondepolarizing neuromuscular blocking agents after surgery; prevention and treatment of postoperative distention and urinary retention.
- Edrophonium is indicated in diagnosis of myasthenia gravis and respiratory depression.

45- Pt came with depression what is your assessment:(incomplete Q)

Answer: suicide

Referenece:<http://www.nimh.nih.gov/health/topics/depression/index.shtml>

46- A 24 year old female athlete with body mass index (BMI) of 25 presented with c/o self-induced vomiting after episodes of heavy eating. Physical examination reveals bilateral parotid enlargement and dental erosion. Which of the following is the most likely diagnosis?

- A. Anorexia Nervosa
- B. Depression
- C. Body dysmorphic disorder
- D. Bulimia Nervosa

Answer: D (Both anorexia and bulimia are characterized by a desire for thinness. Both may binge and purge. Anorexia nervosa involves low body weight and restriction of calorie intake, and this distinguishes it from bulimia.)

Reference: First aid to psychiatry clerkships

	Anorexia nervosa	Bulimia nervosa
Weight	<ul style="list-style-type: none"> Significantly underweight 	<ul style="list-style-type: none"> Normal weight or overweight
Eating habit	<ul style="list-style-type: none"> Eat little food/few calories 	<ul style="list-style-type: none"> Eat large amount of food, then purges by vomiting and/or using laxatives.
Body image	<ul style="list-style-type: none"> Too concern on weight & appearance. Dangerously thin but has false image that the body is still fat 	<ul style="list-style-type: none"> Too concern on weight & appearance.
Medical symptoms	<ul style="list-style-type: none"> Weakness, fatigue Nutritional deficiencies Low blood pressure 	<ul style="list-style-type: none"> Weakness, fatigue Dehydration Mouth and throat problems such

47- Girl with BMI=16 says "I'm fat".

- a. Depression
- b. Anorexia bulimia
- c. Anorexia nervosa

Answer: C

(see previous Q)

48- Pt with manifestation of anorexia nervosa what's the might the lab test results show?!!

- Laboratory/imaging abnormalities:
Hyponatremia, hypochloremic hypokalemic alkalosis (if vomiting), arrhythmia (especially QTc prolongation), hypercholesterolemia, transaminitis, leukopenia, anemia (normocytic normochromic), elevated blood urea nitrogen (BUN), ↑ growth hormone (GH), ↑ cortisol, reduced gonadotropins (luteinizing hormone [LH], follicle-stimulating hormone [FSH]), reduced sex steroid hormones (estrogen, testosterone), hypothyroidism, hypoglycemia, osteopenia. Acidosis: Observed in cases of laxative abuse

Reference: FIRST AID FOR PSYCHIATRY CLERKSHIP
smle ,2016

49- What is the approach to a 40 year old lady with anxiety in work place because of conflicting with colleagues?

Educate about how to deal with ppl?

Empathy? Answer: Check if she is psychotic or not first.

No choices available and Q is not complete. firstly, you should check if she fulfill the anxiety criteria. Since this q is about work place so you might check if her fulfill the social phobia criteria or not.

Box 7-4. DSM-5 Diagnostic Criteria for **Social Anxiety Disorder** (Social Phobia)

A. Marked fear or anxiety about one or more social situations in which the individual is exposed to possible scrutiny by others. Examples include social interactions (e.g., having a conversation, meeting unfamiliar people), being observed (e.g., eating or drinking), and performing in front of others (e.g., giving a speech).

Note: In children, the anxiety must occur in peer settings and not just during interactions with adults.

B. The individual fears that he or she will act in a way or show anxiety symptoms that will be negatively evaluated (i.e., will be humiliating or embarrassing; will lead to rejection or offend others).

C. The social situations almost always provoke fear or anxiety.

Note: In children, the fear or anxiety may be expressed by crying, tantrums, freezing, clinging, shrinking, or failing to speak in social situations.

D. The social situations are avoided or endured with intense fear or anxiety.

E. The fear or anxiety is out of proportion to the actual threat posed by the social situation and to the sociocultural context.

F. The fear, anxiety, or avoidance is persistent, typically lasting for 6 months or more.

G. The fear, anxiety, or avoidance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

H. The fear, anxiety, or avoidance is not attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication) or another medical condition.

I. The fear, anxiety, or avoidance is not better explained by the symptoms of another mental disorder, such as panic disorder, body dysmorphic disorder, or autism spectrum disorder.

J. If another medical condition (e.g., Parkinson's disease, obesity, disfigurement from burns or injury) is present, the fear, anxiety, or avoidance is clearly unrelated or is excessive.

50- Guy treated with haloperidol comes with generalized rigidity with up rolling of eyes.

A. Acute dystonia

Answer: Acute dystonia (dystonic reaction of the eye is called **Oculogyric crisis**)

- Dystonic reactions are reversible extrapyramidal effects that can occur after administration of a neuroleptic drug. Symptoms may begin immediately or can be delayed hours to days. Although a wide variety of medications can elicit symptoms, the typical antipsychotics are most often responsible. They reportedly arise from a drug induced alteration of dopaminergic-cholinergic balance in the nigro-striatum (ie, basal ganglia).

- Treatment: Anticholinergics IV route.

I. Benztropine (Cogentin)

II. Diphenhydramine (Benadryl)

Reference: <http://emedicine.medscape.com/article/814632-overview#a4>

51- Which one of the following is a Poor schizophrenic feature?

- A. family history schizophrenia.
- B. Acute onset
- C. adolescence
- D. mood included in his symptoms

Answer: A & C are both correct.



**Table 7.1-4
Features Weighting Toward Good to Poor
Prognosis in Schizophrenia**

Good Prognosis	Poor Prognosis
Late onset	Young onset
Obvious precipitating factors	No precipitating factors
Acute onset	Insidious onset
Good premorbid social, sexual, and work histories	Poor premorbid social, sexual, and work histories
Mood disorder symptoms (especially depressive disorders)	Withdrawn, autistic behavior
Married	Single, divorced, or widowed
Family history of mood disorders	Family history of schizophrenia
Good support systems	Poor support systems
Positive symptoms	Negative symptoms
	Neurological signs and symptoms
	History of perinatal trauma
	No remissions in 3 years
	Many relapses
	History of assaultiveness

52- A patient had weight gain, because she cant taste the food or smell. Examination is normal, she was seen by neuro and psychiatry with no diagnosis.

What's her diagnosis?

- A. Meningioma
- B. Aneurysm
- C. Malingering

Answer : C

- **Malingering** involves the feigning of physical or psychological symptoms to achieve personal gain. Common external motivations include avoiding the police, receiving room and board, obtaining narcotics, and receiving monetary compensation.
- **Factitious disorders:** Patients intentionally produce symptoms of real illness because of a desire to assume the *sick role*, not for external rewards. **WHILE** Malingering: Patients intentionally produce or feign symptoms for *external rewards*.

(Reference First Aid for psychiatry clerkship, Chapter page 131)

53- Patient with irritably, has delusion and auditory hallucination, now he have flights of ideas:

smle ,2016

- a- neurosis
- b- psychosis
- c- dissociative disorder

Answer: B (Psychosis is a general term used to describe a distorted perception of reality. Poor reality testing may be accompanied by delusions, perceptual disturbances (illusions or hallucinations), and/or disorganized thinking/ behavior. Psychosis can be a symptom of schizophrenia, mania,

DIAGNOSIS OF SCHIZOPHRENIA

DSM-5 Criteria

- *Two or more* of the following must be present for at least *1 month*:
 1. Delusions
 2. Hallucinations
 3. Disorganized speech
 4. Grossly disorganized or catatonic behavior
 5. Negative symptoms

Note: At least one must be 1, 2, or 3.
- Must cause significant social, occupational, or self-care functional deterioration.
- Duration of illness for at least 6 months (including prodromal or residual periods in which the above full criteria may not be met).
- Symptoms not due to effects of a substance or another medical condition.

(depression, delirium, and dementia, and it can be substance or medication-induced.)

(Reference: [First Aid for psychiatry clerkship](#))

54- Man feeling depressed for 3 months, he is fighting with 2 of employee in job, 4 months ago he became the manager in his job:

A- Depression B- adjustment

Answer: B

Adjustment disorder is a stress-related, short-term, nonpsychotic disturbance. The discomfort, distress, turmoil, and anguish to the patient are significant Adjustment disorder. Diagnosis

The specific *DSM-5* diagnostic criteria for adjustment disorder are as follows :

- Emotional or behavioral symptoms develop in response to an identifiable stressor or stressors within 3 months of the onset of the stressor(s) plus either or both of (1) marked distress that is out of proportion to the severity or intensity of the stressor, even when external context and cultural factors that might influence symptom severity and presentation are taken into account and/or (2) significant impairment in social, occupational, or other areas of functioning The stress related disturbance does not meet criteria for another mental disorder and is not merely an exacerbation of a preexisting mental disorder
- The stress related disturbance does not meet criteria for another mental disorder and is not merely an exacerbation of a preexisting mental disorder
- The symptoms do not represent normal bereavement

- After the termination of the stressor (or its consequences), the symptoms persist for no longer than an additional 6 months

Reference: <http://emedicine.medscape.com/article/2192631-overview>

55- Patient turns to be erratic for 4 months, he said that people on TV know what he's thinking about and they are talking about him. In the last 2 months he started to claim that he has special power that no one has. What

is the most likely diagnosis?

A-Unipolar depression

B-Bipolar Mania

C-Schizophrenia

Answer: Schizophreniform disorder

Schizophreniform disorder is characterized by the presence of the symptoms of schizophrenia, but it is distinguished from that condition by its shorter duration, which is at least 1 month but less than 6 months.

Reference: <http://emedicine.medscape.com/article/2008351-overview>

another possible answer BUT it's not in choices: Delusion disorder.

to be diagnosed with delusional disorder, the following criteria must be met:

- One or more delusions for at least 1 month.
- Does not meet criteria for schizophrenia.
- Functioning in life not significantly impaired, and behavior not obviously bizarre.
- While delusions may be present in both delusional disorder and schizophrenia, there are important differences

56- Withdrawal symptoms of smoking cessation start after ?

A. 3 – 5 days.

B. 2 – 3 hours.

C. 2 days.

Answer: (B)

- I reviewed multiple references and they said it start after few hours. One book said it start within 2 hours from the last cigarette.
- "Withdrawal symptoms can develop within 2 hours of smoking the last cigarette; they generally peak in the first 24 to 48 hours and can last for weeks or months"

Reference: (Kaplan & Sadock's Synopsis Of Psychiatry, 11th. Page 682)

- The 2-3 Pattern of Smoking Cessation
- Onset of withdrawal is **2-3 h after last cigarette**
- Peak withdrawal is at 2-3 d
- Expect improvement of withdrawal symptoms at 2-3 wk
- Resolution of withdrawal at 2-3 mo
- Highest relapse rate within 2-3 mo

Reference: Toronto notes FM 11

57- definition of insomnia?

Answer: Insomnia disorder is characterized by difficulty initiating or maintaining sleep, or early morning awakening with an inability to return to sleep; the sleep difficulty occurs at least 3 nights a week for 3 months and is not due to another sleep disorder or the effects of a substance. It is not

smle ,2016

adequately explained by coexisting mental disorders or medical conditions

Reference: (Introductory Textbook of Psychiatry)

58- Pt saying that she had a protruded jaw and she wants a cosmetic surgery, when you examine her her jaw is normal with no protrusion and you say that she doesn't need the surgery She went already to 2 doctors who also refused to do the surgery. She is done blepharoplasty & other cosmetic surgery before. What does she have?

Answer : Body dysmorphic disorder

Diagnosis and DSM-5 Criteria

- Preoccupation with one or more perceived defects or flaws in physical appearance that are not observable by or appear slight to others
- Repetitive behaviors (e.g., skin picking, excessive grooming) or mental acts (e.g., comparing appearance to others) are performed in response to the appearance concerns
- Preoccupation causes significant distress or impairment in functioning
- Appearance preoccupation is not better accounted for by concerns with body fat/weight in an eating disorder

59- ADHD case what is the treatment?

Multimodal treatment plan: medications are the most effective treatment for decreasing core symptoms, but should be used in conjunction with educational and behavioral interventions.

- Pharmacological treatments: **(Stimulants are first-line therapy in ADHD)**
- **First-line: Stimulants—methylphenidate compounds, dextroamphetamine, and mixed amphetamine salts**
- Second-line choice: atomoxetine, a norepinephrine reuptake inhibitor
- Alpha-2 agonists (e.g., clonidine, guanfacine) can be used instead of or

as adjunctive therapy to stimulants

- Nonpharmacological treatments:
- Behavior modification techniques and social skills training
- Educational interventions (i.e., classroom modifications)
- Parent psychoeducation

Reference: (First Aid Psychiatry)

Indications for imaging in dementia:

Age < 60, rapid onset, short duration (<2 y), head trauma, unexplained neurological symptoms

Reference: Toronto N

60- Indication for CT brain for dementia, all true except:

- a) Younger than 60 years old
- b) After head trauma
- c) Progressive dementia over 3 years

Answer: C. (we can answer this Q by exclusion. Answer A, you should do CT because , the biggest risk factor for dementia is age: dementia is very rare in people younger than 60 years old and becomes very common in people older than 80 years old. Answer B, you have to CT to exclude secondary causes like brain hemorrhage or hematoma)

61- Maintenance treatment for bipolar disorder?

A. Valsartan (ACE R blocker)

B- Lithium

C- olzapin

answer : B

- Lithium is the drug of choice in acute mania and as prophylaxis for both manic and depressive episodes in bipolar and schizoaffective disorders

smle ,2016

- Mood stabilizers are used to treat acute mania and to help prevent relapses of manic episodes (maintenance treatment) in bipolar disorder and schizoaffective disorder)

Reference: First Aid psychiatry clerkship

62- patient was constantly seeking physicians believing that he has esophageal carcinoma (or another type of cancer forgot) all of his workup were negative and all doctors reassured him? (مكرر)

A-Conversion disorder

B-somatization disorder

C-hypochondriasis

Answer: C (Because the patient is preoccupation with having or acquiring a serious illness. Not B because his main concern is the disease and he did not have any symptoms concerning him)

Illness anxiety Disorder (old name is hypochondriasis)

DIAGNOSIS AND DSM-5 CRITERIA

- Preoccupation with having or acquiring a serious illness
- Somatic symptoms are not present or, if present, are mild in intensity
- High level of anxiety about health
- Performs excessive health-related behaviors or exhibits maladaptive behaviors
- Persists for at least 6 months
- Not better explained by another mental disorder (such as somatic symptom disorder)

63- Woman feels abandoned by everyone and been hospitalized for trying to commit suicide many times.

What is the type of her personality disorder?

a- Borderline

b- Obsessive

answer : A

- Patients with BPD have unstable moods, behaviors, and interpersonal relationships. They fear abandonment and have poorly formed identity. Relationships begin with intense attachments and end with the slightest conflict. Aggression is common. They are impulsive and may have a history of repeated suicide attempts/gestures or episodes of self-mutilation. They have higher rates of childhood physical, emotional, and sexual abuse than the general population.

Reference: First Aid to Psychiatry clerkship

64- alzheimer brain pathology feature

Answer:

Pathology involves neurofibrillary tangles, neurotics plaques with amyloid deposition, amyloid angiopathy, and neuronal loss.

MRI or CT may show atrophy

Reference: USMLE step 2 CK

65- Teenage girl had fight with her friend and now she didn't want to see or meet her, and if the friend come place the girl get out of it ?! What is the diagnosis

A-avoidance

smle ,2016

ANSWER: A

<http://emedicine.medscape.com/article/294307-overview#a4>

no choices other than : A. Avoidance personality disorder... BUT it's not clear. (Sorry)

Diagnosis and DSM-5 Criteria

A pattern of social inhibition, hypersensitivity, and feelings of inadequacy since early adulthood.

At least four of the following must be present:

1. Avoids occupation that involves interpersonal contact due to a fear of criticism and rejection
2. Unwilling to interact unless certain of being liked
3. Cautious of interpersonal relationships
4. Preoccupied with being criticized or rejected in social situations
5. Inhibited in new social situations because he or she feels inadequate
6. Believes he or she is socially inept and inferior
7. Reluctant to engage in new activities for fear of embarrassment

Reference: First Aid to Psychiatry clerkship

66- Patient has diarrhea , abd pain , gait abn but oter lab normal :((smle made easy)

A. Somatization

B. hypochondial

C. conversion disorder

answer :A (This Q was answered based on DSM4,)

This q is deficient, cuz it's not fulfill the criteria (e.g: age) of the following diagnosis. A.

Somatization disorder... DSM-IV criteria: • Onset before age 30.

- At least four pain symptoms.
- At least two gastrointestinal (GI) symptoms.
- At least one sexual or reproductive symptom.
- At least one pseudoneurological symptom, not limited to pain.
- Cannot be explained by a general medical condition or substance use.
- When a general medical condition is present, physical complaints are in excess of what would be expected.
- Symptoms must not be intentionally produced...
- (FirstAid 133)

67- Patient who eats a lot what is appropriate approach: (Incomplete Q)

A- cognitive behavioral therapy

b- interpersonal therapy

If these are choices: Both are correct (most likely he has Binge-eating disorder)

- Criteria:
 - Recurrent episodes of binge eating (eating an excessive amount of food in a 2-hour period associated with a lack of control), with at least three of the following: eating very rapidly, eating until uncomfortably full, eating large amounts when not hungry, eating alone due to embarrassment, and feeling disgusted/depressed/guilty after eating.

smle ,2016

- Severe distress over binge eating.
- Binge eating occurs at least once a week for 3 months.
- Binge eating is not associated with compensatory behaviors (such as vomit-ing, laxative use, etc.), and doesn't occur exclusively during the course of anorexia or bulimia.
- Treatment :
 - involves individual (**cognitive-behavioral or interpersonal**) psychotherapy with a strict diet and exercise program. Comorbid mood disorders or anxiety disorders should be treated as necessary.
 - Although their utility is limited by significant side effects and limited evi-dence, pharmacotherapy may be used adjunctively to promote weight loss:Stimulants (such as phentermine and amphetamine)— suppress appetite.
 - Topiramate and zonisimide—antiepileptics associated with weight loss.
 - Orlistat (Xenical)—inhibits pancreatic lipase, thus decreasing amount of fat absorbed from gastrointestinal tract.
 - **Reference: First Aid to Psychiatry clerkship**

68- Haloperidol toxicity, uprolling of eyes and dyskinesia, what is this?

A- Tardive dyskinesia

B- Neuroleptic malignant syndrome

Answer: A

- **TD features:**
 - Choreoathetoid (writhing) movements of mouth and tongue (or other body parts) that may occur in patients who have used neuroleptics for > 6 months.
 - Older age is a risk factor.
 - Women and patients with affective disorders may be at an increased risk.
 - Although 50% of cases will spontaneously remit (without further anti-psychotic use), most cases are permanent.
 - Treatment involves discontinuation of current antipsychotic if clinically possible and changing to a medication with less potential to cause TD.
- **Neuroleptic malignant syndrome Cardinal features are as follows:**
 - Severe muscular rigidity
 - Hyperthermia (temperature >38°C)
 - Autonomic instability
 - Changes in the level of consciousness.

69- Psychiatric patient swallowed 2 safety pins, found on duodenum what to do?

A- Immediate laparotomy

B- Admit and observe

C- Charcoal

Answer:B

Admit and observe. The patient is stable and the ingested foreign body is not battery or sharp objects so that it need immediate handling.

We use charcoal as an antidote to poisoning which is not the case here.

- Note:" in the overwhelming majority of patients the ingested body passes without any problems; endoscopic intervention is required in 20% of cases and surgical intervention in less than 1% of cases.
- The range of indications for endoscopy should be extensive; bolus impaction with complete occlusion of the esophagus, sharp/pointed foreign bodies, and batteries constitute indications

smle ,2016

for emergency esophagogastroduodenoscopy, magnets and long (>6 cm) foreign bodies should be removed within 24 hours

Reference: <http://www.ncemi.org/cse/cse0603.htm>

Referenc: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3536040/>

For patient safety you should admit him. The following pic is a safety pin:



70- cases of obsessive compulsive disorder one of them was excessive washing of hand around 40 time , the other about wife complain that her husband is checking the door locked or not alot of times 10

71- secondary phenomena in panic attack not in presenting complaint?

- a) Phobia
- b) Chest pain
- c) Epigastric pain
- d) Palpitation

Answer: A

Palpitation... (Besides, a tachycardia may still be present and even be documented but interpreted as a phenomenon secondary to the panic attack)...(Reference: (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3547429/>))

72- Male patient, who is otherwise healthy, has depression for 4 months. He retired 6 months ago.

Examination was unremarkable except for jaundice. What's your diagnosis?

- a) Major depressive disorder
- b) Mood disorder due to medical illness
- c) Adjstment disorder, depressed type

Answer: C

.A. the development of emotional or behavioural symptoms in response to an identi fable stressor(s)

occurring within 3 mo of the onset of the stressor(s)

B. these symptoms or behaviours are clinically signi fcant as evidenced by either of the following:

■ marked distress that is in excess of what would be expected from exposure to the stressor

■ signi fcant impairment in social or occupational (academic) functioning

C. the stress-related disturbance does not meet criteria for another mental disorder and is not merely an

smle ,2016

exacerbation of a pre-existing mental disorder
D. the symptoms do not represent normal bereavement
E. once the stressor (or its consequences) has terminated, the symptoms do not persist for more than an additional 6 mo
■ speci fers: with depressed mood, with anxiety, with mixed anxiety/depression, with conduct disturbance, with mixed disturbance of conduct/emotions, unspecified...
(Toronto note ps17)

73- A 34 yo man begins to sweat profusely every time he has to give a presentation @ the office. The sweating causes such marked anxiety @ each presentation that he soon develops palpitation, dizziness, & difficult breathing. He finds that if he has several alcoholic drinks before the presentation, he feels "calmer" & can complete the talk. What is your likely diagnosis?

- A. Schizophrenia
- B. Social phobia
- C. Generalized anxiety disorder
- D. Delirium

Answer: B

definition: marked and persistent (> 6 mo) fear of social or performance situations in which one is exposed to unfamiliar people or to possible scrutiny by others; fearing he/she will act in a way that may be humiliating or embarrassing (e.g. public speaking, initiating or maintaining conversation, dating, eating in public)

(Toronto note ps16)

74- 70 year old man wife died due to chronic disease two months ago. He is feeling sad, fatigue and sleep disturbances. Diagnosis?

- A. Major depression
- B. Minor depression
- C. Bereavement

Answer: C

BEREAVEMENT: Normal Grief Versus Depression: In normal grief, illusions are common but suicidal thoughts are rare and symptoms usually last < 2 months. Mild cognitive disorder typically lasts < 1 year and patients can be treated with mild benzodiazepines for sleep.

In depression, however, hallucinations and delusions are common, suicidal thoughts may be present, and symptoms generally persist > 2 months. Mild cognitive disorder usually lasts for > 1 year and patients can be treated with antidepressants, mood stabilizers, or ECT. (First Aid 42)

75- Attention Deficit Hyperactivity Disorder (they give me the symptom not the diagnosis) child what is the management?

- a) Ecitalpram
- b) Atomoxetine
- c) Olanzapine
- d) Clonazepam

Answer: B

Atomoxetine... (Central nervous system (CNS) stimulants are first line: methylphenidate compounds (Ritalin, Concerta, Metadate, Focalin), dextroam- phetamine

(Dexedrine, DextroStat), and amphetamine salts (Adderall).

- Atomoxetine is a nonstimulant that has also been given FDA approval for ADHD.

- Alpha-2 agonists (clonidine, guanfacine) are used if first-line treatment cannot be used (due to intolerable side effects or ineffectiveness)

or as adjunctive therapy to stimulants.

- If there is an underlying mood or anxiety disorder, that should be treated first.

- N onpharm.acological)... (First Aid 116)

76- Patient see in cars and people in his plate food, What is the dx?

Answer:

(if there is no food in his plate)à visual hallucinations (cuz no real stimulus) If there's food then it's illusion (cuz misperception)

77- patient in clinic suddenly he said he looks to left and said he saw his mother and no one can saw her except me his mother died when he was child ?

A.audible hallucination

B.visual hallucination

C.delirium

Answer : B

Hallucinations: perceptual experiences without an external stimulus

(Toronto note ps6)

78- Pt came with 3 hours hx of anxiety , diaphoretic , tachypneic , what is the cause ?

A- Sympathomemetics

B- organophosphate

C- anticholinergics

Answer A

In First Aid (page 48) they mention Sympathomimetics as a possible cause of panic attacks BUT in United States National Library of Medicine they mention that one of the side effects of Anticholinergics is anxiety

(References: https://livertox.nlm.nih.gov/Anticholinergic_Agents.htm)

79- A lady had progressive sadness over the past 2 years. She has hopelessness, insomnia, decreased appetite, low self-esteem and suicidal ideation.

Diagnosis?

- A. Minor depression
- B. Depressive disorder
- C. Dysthymia

answer: C

Dysthymic disorder DSM-IV criteria: 1. Depressed mood for the majority of time most days for at least 2 years

(in children or adolescents for at least 1 year)

2. At least two of the following:

- Poor concentration or difficulty making decisions
- Feelings of hopelessness
- Poor appetite or overeating
- Insomnia or hypersomnia
- Low energy or fatigue
- Low self-esteem

3. During the 2-year period:

- The person has not been without the above symptoms for > 2 months at a time.
- No major depressive episode.
- The patient must never have had a manic or hypomanic episode (this would make the diagnosis bipolar disorder or cyclothymic disorder, respectively).... (First Aid 44)

80- which of SSRIs drugs suitable for young age and children?

A- fluoxetine.

Answer is A

<http://www.webmd.com/depression/selective-serotonin-reuptake-inhibitors-ssris-for-childhood-and-adolescent-depression>

(First Aid 185)

81- Pt e erectile dysfunction , what's the med to avoid?!

- SSRIs

(First Aid 185)

82- Bipolar patient type 1, started on lithium 6 weeks ago, c/o excessive thirst and urination. Serum lithium within the optimal therapeutic range. What's the underlying cause of his symptoms?

A- Psychogenic polyuria

B- Central DI

C- Nephrogenic DI

Answer: C

because lithium is a common cause of NDI and even if it's in therapeutic range we should suspect as cause.

Nephrogenic diabetes insipidus... (First Aid 194)

83- pt with hx of chronic schizophrenia, But he is not compliance Wt u will give him ?

- A. IV Lorazepam + IV haloperidol
- B. injection of haloperidol deconat
- C. oral haloperidol

Answer: B

Haloperidol and fluphenazine are available in long-acting, intramuscular forms (decanoate) that are useful if patients don't like taking oral medications....(First Aid 190)

84- Stress induced cortisol release , and decrease the immunity, what type of therapy?

Psychoimmunology?!

I'm NOT SURE

85- Generalized anxiety disorder, doctor want to give medication that is very effective but has minimal abuse ability:

azatilopram?

I'm NOT SURE

86- amitriptan " TCA" side effect

a-weight gain

answer :postural hypotension

(First Aid 188)

87- antidepressants cause insomnia ...

TCA

Answer: SSRI (First Aid 185)

SE of TCA .

Dry mouth

Blurred vision

Constipation

Urinary

retention

Drowsiness

Increased appetite leading to weight gain

Drop in blood pressure when moving from sitting to standing, which can cause lightheadedness

Increased sweating

Ref: mayoclinic

Antihistaminic properties: Sedation,, Antiadrenergic properties (cardiovascular side effects): Orthostatic hypotension, dizziness, reflex tachycardia, arrhythmias, and electrocardiographic (ECG) changes (widening QRS, QT, and PR intervals),, anticholinergic effects: Dry mouth, constipation, urinary retention, blurred vision, tachycardia, exacerbation of narrow angle glaucoma ,, Weight gain ,, Serotonergic effects: Erectile/ejaculatory dysfunction in males, anorgasmia in females,, (First Aid 188)

88- Effective half life of fluoxetine ?

- A. 18 hu

smle ,2016

- B. 2 day
- C. 4 day
- D. 9 day

Answer: 4 -6 days (chronic administration), 1-3 day (Acute), 6-7 days (Cirrhosis)
 ,,,(Med- scape)

89- best management of trichotillomania?

Treatment includes medications such as SSRIs, antipsychotics, or lithium., Behavioral interventions such as hypnosis, relaxation techniques, substituting another behavior, or positive reinforcement may have some therapeutic benefit ...
 (First Aid 143)

90- Scenario about pt after the death of his father went out and do things , then he return normal but he is confused about what happen to him in the prevoius days, Dx

- A. -Schizophrenia
- B. -Schizoaffective
- C. -Brief psychotic disorder

Answer: C.

Treatment includes medications such as SSRIs, antipsychotics, or lithium., Behavioral interventions such as hypnosis, relaxation techniques, substituting another behavior, or positive reinforcement may have some therapeutic benefit ...
 (First Aid 143)

91- pt speaks rapidly , before he demonstrate his idea he goes to talk about other idea..

- A- Loose of association
- B- Preservation
- C- Flight if idea

Answer C

Thoughts change abruptly from one idea to another, usually accompanied by rapid/pressured speech... (First Aid 16)

92- a man walk in the street and and asks people and repeat even when he was asked to stop

- A.preservation
- b-flight of idea
- c-poor insight

answer: A

<https://en.wikipedia.org/wiki/Perseveration>

93- Q- female pt around 50 , complaining of palpitations weight loss insomnia , without reason

- A - Generalized anxiety disorder
- C - Panic disorder

Answer: If you find pheochromocytoma (choose it) Could be hyperthyroidism, Pheochromocytoma

94- Treatment of OCD ; CBT: exposure with response smle ,2016

prevention (ERP) – involves exposure to feared situations with the addition of preventing the compulsive behaviours; cognitive strategies include challenging underlying beliefs

- pharmacotherapy: SSRIs/SNRIs (12-16 week trials, higher doses vs. depression), clomipramine; adjunctive antipsychotics (risperidone)

(Toronto note ps16)

95- Case of Adjustment disorder and asking about the best treatment

A) supportive psychotherapy

Most studies acknowledge that brief, rather than long-term, psychotherapy is most appropriate for persons with adjustment disorder because this disorder tends to be time-limited.

<http://emedicine.medscape.com/article/2192631-treatment#showall>

96- feeling Hopelessness might mean:

suicidal attempt

SUICIDE Scale:

SAD PERSON

S: Male sex

A: Age

D: Depression

P: Previous attempt

E: Excess alcohol or substance use

R: Rational thinking loss

S: Social supports lacking

O: Organized plan

N: No spouse

S: Sickness

(Toronto note ps5)

97- Patient with Premature ejaculation + libido + Erectile dysfunction he is thin and looks sad, he is married for 26 years to obese and annoying wife, he came for treatment:

a) Testosterone Injection every one week

b) Sublingual Nitroglycerin 6h before intercourse

c) SSRI

Answer: C??

SSRI can be used for premature ejaculation . (MTB)

Not Sure

98- A 72 yo man is brought to the ED due to altered mental status & combative behaviour. He was admitted 2 weeks ago for hip fracture. Patient also has history of hypertension & recent UTIs. Though normally "calm & loving" per her family's report, the patient has grown restless & combative with staff

smle ,2016

& residents in past days. What is the most likely diagnosis?

- A. Psychotic disorder resulting from a general medical condition
- B. Delirium due to a general medical condition
- C. Brief psychotic disorder
- D. Depression

Answer: B

Terminology The phrase “general medical condition” is replaced in DSM-5 with “another medical condition” where relevant across all disorders.

<http://www.dsm5.org/documents/changes%20from%20dsm-iv-tr%20to%20dsm-5.pdf>

Delirium:

A sudden and significant decline in mental functioning not better accounted for by a preexisting or evolving dementia

Causes generally include: Underlying medical condition, Substance intoxication, Substance withdrawal, or a combination.

Psychotic disorder resulting from a general medical condition: Diagnostic Criteria

- A. Prominent hallucinations or delusions.
- B. There is evidence from the history, physical examination, or laboratory findings that the disturbance is the direct pathophysiological consequence of another medical condition.
- C. The disturbance is not better explained by another mental disorder.
- D. The disturbance does not occur exclusively during the course of a delirium.
- E. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Reference: DSM V, Page155

Brief psychotic disorder is characterized by the abrupt onset of 1 or more of the following symptoms:

- Delusions.
- Hallucinations.
- Bizarre behavior and posture.
- Disorganized speech.

It is differentiated from other related disorders by its sudden onset, its relatively short duration (< 1 month), and the full return of functioning.

F. <http://emedicine.medscape.com/article/294416-overview>

99- An elderly male told you that he's always occupied by the idea that his backyard is invaded by aliens, although he knows that aliens don't exist and no one is invading his back yard. He's afraid that he's "going insane". He has:

- A. Delusions
- B. Obsessions
- C. Compulsions
- D. Hallucinations

Answer: B

Delusion:

A belief that is firmly held on inadequate grounds that is not affected by rational arguments or evidence to contrary and that is not a conventional belief that a person might be expected to hold given their educational, cultural and religious back ground

Obsessions:

Recurrent and persistent intrusive thoughts or impulses that cause marked anxiety and are not simply excessive worries about real problems

Person attempts to suppress the thoughts

Person realizes thoughts are product of his or her own mind.

Compulsions:

Repetitive behaviors that the person feels driven to perform in response to an obsession

The behaviors are aimed at reducing distress, but there is no realistic link between the behavior and the distress

Hallucination:

A profound distortion in a person's perception of reality, typically accompanied by a powerful sense of reality. A hallucination may be a sensory experience in which a person can see, hear, smell, taste, or feel something that is not there.

<http://www.medicinenet.com/script/main/art.asp?articlekey=24171>

100- Posrpartum mother complain of anxiety fear fatighe lasting few days then subside ??

- A-maternal blues
- B-postpartum depression
- C- Postpartum psychosis
- D anxiety disorder

Answer: A.

Postpartum "Blues"

smle ,2016

- transient period of mild depression, mood instability, anxiety, decreased concentration; considered to be normal changes in response to fluctuating hormonal levels, the stress of childbirth, and the increased responsibilities of motherhood
- occurs in 50-80% of mothers; begins 2-4 d postpartum, usually lasts 48 h, can last up to 10 d
- does not require psychotropic medication
- usually mild or absent: feelings of inadequacy, anhedonia, thoughts of harming baby, suicidal thoughts

(Toronto note ps12)

101- pt come clinic the result of investigation is lung cancer the pt say with anxiety (it's a mistake) Which of the following explain the reaction of pt:

A- denial

B- anger

C- bargainer

Answer: A

The 5 Stages of Grief

1. Denial & Isolation
2. Anger
3. Bargaining
4. Depression
5. Acceptance

<http://psychcentral.com/lib/the-5-stages-of-loss-and-grief/>

102- A 54 yo man on an antidepressant medication presents to the ED with hypertensive crisis after eating an aged cheese with his antidepressant medication. Which of the following antidepressant is he on?

A. Amitriptyline

B. Fluoxetine

C. Phenyelzine

D. Venlafaxine

Answer: C

Since MAOIs inhibit monoamine oxidase they decrease the breakdown of tyramine from ingested food, increasing the level of tyramine in the body. Excessive tyramine can elevate blood pressure and cause a hypertensive crisis.

www.medicinenet.com/antidepressants/page2.htm

103- Causes of eating disorder

- multifactorial: psychological, sociological, and biological associations
 - individual: perfectionism, lack of control in other life areas, history of sexual abuse
- smle ,2016

- personality: obsessive-compulsive, histrionic, borderline
- familial: maintenance of weight equilibrium and control in dysfunctional family
- cultural factors: prevalent in industrialized societies, idealization of thinness in the media
- genetic factors

(Toronto note ps30)

104- A man hears sounds from the refrigerator, he has:

Auditory hallucinations

107 -Pt elderly with symptoms of infections and delirium what to give:

haloperadol

low dose, high potency antipsychotics: haloperidol has the most evidence; reasonable alternatives

include risperidone, olanzapine (more sedating, less QT prolongation), quetiapine (if EPS), aripiprazole

■ benzodiazepines only to be used in alcohol withdrawal delirium; otherwise, can worsen delirium (Toronto note ps19)

108- p.t taking a medication , came to the ER suspecting she has Overdose of her medication, her symptoms (convulsion, dilated pupil,hyperreflexia and strabismus) the medication is:

-TCA

-SSRI

-Ephedrine

-Hypervitaminosis

Answer: A

Not Sure

109- A 10 yo boy, Akeem, was diagnosed with nocturnal enuresis. After a thorough evaluation, his doctor diagnosed him with 'depression' and which to prescribe a medication for him. Which of the following medications is the most appropriate for him?

A. Haloperidol

B. Imipramine

C. Venlafaxine

D. Fluoxetine

Answer: B

Imipramine is used for:

Treating depression. It is also used in some children to help reduce bedwetting.

It may also be used for other conditions as determined by your doctor.

Imipramine is a tricyclic antidepressant. It works by increasing the activity of serotonin, 2016

tain chemicals in the brain that help elevate mood.

<https://www.drugs.com/cdi/imipramine.html>

110- Stress cause increase in catecholamine and something what types of stress?

A) Psychoneural stress

Answer: A

111- SE of bupropion

Answer: Nausea, vomiting, dry mouth, headache, constipation, increased sweating, joint aches, sore throat, blurred vision, strange taste in the mouth, diarrhea, or dizziness may occur

Ref.: webmed

112- A pt cannot sleep, goes to work exhausted because she check gas, door and kids stuff for school several times. What this condition called is in psychiatry?

Answer: OCD

113- Panic disorders treatment:

Answer : SSRI 1st line and Benzodiazepines 2nd line

114- Diazepam used to treat which psychotics disorder in children

Answer: diazepam doesn't treat psychosis!

115- A 23 YO patient who sees her nose very big, but all doctors see it's normal, already done two plastic surgeries before for lips and eyelids. What this condition is called in psychiatry?

Answer: body dysmorphic disorder

Diagnostic criteria for Body Dysmorphic Disorder:

- A. Preoccupation with an imagined defect in appearance. If a slight physical anomaly is present, the person's concern is markedly excessive.
- B. The preoccupation causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- C. The preoccupation is not better accounted for by another mental disorder (e.g., dissatisfaction with body shape and size in Anorexia Nervosa). <http://www.ocduk.org/clinical-classification-bdd>

116- A male patient presented with depression. What is the first drug to be given in depression?

a. TCA

b. lithium

smle ,2016

- c. CBT
- d. SSRI

Answer: D

117- Case of Adjustment disorder and asking about the best treatment.

A) supportive psychotherapy

Answer: A

118- Patient with depression on antidepressant medication, how long it will take to exert its effect?

3-4

weeks 4-

6weeks

Answer: 3-4weeks

<http://www.webmd.com/depression/features/antidepressants-take-time-to-work-time-to-quit>

119- Patient afraid of diseases and germs, what dx?

A- Obsessive compulsive

B-Anxiety disorder

C-Specific phobia

Answer: C

<http://www.apa.org/monitor/julaug05/fears.aspx>

120- pt with fear of automobiles?

A- specific phobia.

B- GAD.

Answer A.

121- Pt came with his wife. she said that he walk around the house 8 times to make sure it is locked and wash his hand many times before eating. The pt said this not affecting his life. Past hx: he likes to stay alone all the time What is the diagnosis ?

A. OCD

B. Generalized anxiety disorder

Answer: A

If there is other answer Obsessive compulsive personality disorder is better because the patient here has no insight which is a sign of OCPD not OCD

122- A 67 yo man presents to the ED with hypertension, diaphoresis, tachycardia, & tremor. He is agitated & confused stating that he can feel rats crawling all over him. Physical examination reveals that he has ascities & a smle ,2016

liver edge that is palpable 6 cm below the costal margin. What is the mainstay therapy for this man?

- A. Benzodiazepine
- B. Flumazenil
- C. Glucagon
- D. N-acetylcysteine

Answer: A

HINT: Delirium tremens

low dose, high potency antipsychotics: haloperidol has the most evidence; reasonable alternatives

include risperidone, olanzapine (more sedating, less QT prolongation), quetiapine (if EPS), aripiprazole

■ benzodiazepines only to be used in alcohol withdrawal delirium; otherwise, can worsen delirium ([Toronto note 2017ed](#))

123- A 31 yo woman presented 3 weeks after her baby was born with feeling that her neighbors were poisoning her water & planning to steal her 2 older children from school. She heard the neighbors talking through the walls of her house. She was feeling that there was no choice but to kill herself & her children & made plans to drive them into a tree. What is the most likely diagnosis?

- A. Postpartum depression
- B. Postpartum blues
- C. Postpartum psychosis
- D. Generalised anxiety disorder

Answer: C.

The mother may have delusional beliefs that relate to the infant (eg, the baby is defective or dying, the infant is Satan or God), or she may have auditory hallucinations that instruct her to harm herself or her infant.

(<http://reference.medscape.com/article/271662-overview#a6>)

124- patient with history of 2 years depression, decreased appetite, low self-esteem...

- A. Major depression
- B. Depression something
- C. Dysthymia

Answer: C

The specific DSM-5 criteria for persistent depressive disorder (dysthymia) are as follows:[1]

Depressed mood for most of the day, for more days than not, as indicated by either subjective account or observation by others, for at least 2 years. In children and adolescents, mood may be irritable and duration must be at least 1 year.

- Presence, while depressed, of two (or more) of the following:
- Poor appetite or overeating
- Insomnia or hypersomnia
- Low energy or fatigue
- Low self-esteem
- Poor concentration and/or difficulty making decisions
- Feelings of hopelessness

During the 2-year period (1 year for children and adolescents) of the disturbance, the individual has never been without symptoms in Criteria A and B for more than 2 months at a time.

<http://emedicine.medscape.com/article/290686-overview>

125- Patient with fear of motor vehicle, increasing in intensity, what is the dx?

A- Specific phobia

126- 40 yrs old woman c/o thinking a lot about her children future. She is alert, anxious & cannot sleep. She has poor appetite. Provisional diagnosis?

- A. GAD
- B. OCD
- C. Schizophrenia
- D. Phobic disorder

Answer: A

A. excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 mo, about a number of events or activities (such as work or school performance)

Criteria for GAD (*3)

C-FIRST

Concentration issues

Fatigue

Irritability

Restlessness

smle ,2016

Sleep disturbance

Tension (muscle)

Toronto note PS15

127- anxiety definition and gave me some disorders , which one included in this definition

a- obsessive compulsive

b- dissociative

c-bipolar

Answer: A

128- A patient presented with history of panic attack of job meeting and she became anxious. What is the most likely diagnosis?

A-specific anxiety disorder

B-panic attack

Answer:?

it may be social anxiety disorder .

panic attacks must be associated with longer than 1 month of subsequent persistent worry about:

(1) having another attack or consequences of the attack, or

(2) significant maladaptive behavioral changes related to the attack.

To make the diagnosis of panic disorder, panic attacks cannot directly or physiologically result from substance use (intoxication or withdrawal), medical conditions, or another psychiatric disorder. Other symptoms or signs may include headache, cold hands, diarrhea, insomnia, fatigue, intrusive thoughts, and ruminations.

<http://emedicine.medscape.com/article/287913-overview>

129- Male patient is concerned about his sexual performance. During intercourse he develops palpitations & diaphoresis. Physical exam: normal. lab: within normal range. What is the diagnosis?

Answer: PANIC?

130- A patient presented with history of washing his hand a lot. What is the most likely diagnosis?

a. obsessive compulsive disorder

Answer: A

131- A 35 y/o woman presents to her psychiatrist c/o inability to sleep properly and goes to work exhausted because she checks cooking gas, doors, and Kids stuff for school several times at night. What is the most likely smle ,2016

diagnosis?

- A. Obsessive-compulsive disorder
- B. Generalized anxiety disorder
- C. Hypochondriasis
- D. Social phobia

Answer: A

132- Most common affect symptom in premenstrual dysphoric disorder:

- A. Irritability
- B. Mood swings
- C. Depression
- D. Anxiety

Answer: b

Explanation: The most common behavioral symptom of is labile mood, occurring in more than 80 percent. Other frequent

behavioral complaints include irritability, tension, depressed mood, increased appetite (70 percent), and forgetfulness and difficulty concentrating (more than 50 percent).

Reference:<http://cursoenarm.net/UPTODATE/contents/mobipreview.htm?31/5/31838#H2>

<http://emedicine.medscape.com/article/293257-clinical>

133- Girl feel irritable, palpitations, and nervous every time the ask her to speak in the class, What's the management?

- A. Small dose of lorazepam
- B. Behavioural therapy
- C. Relaxing techniques

Answer: B

- psychological
 - cognitive behaviour therapy (focusing on both in vivo and virtual exposure therapy, gradually facing feared situations)
 - behavioural therapy is more e fcaacious than medication
 - biological
 - SSRIs/SNRIs (e.g. fuoxetine, paroxetine, sertraline, venlafaxine), MAOIs
 - β -blockers or benzodiazepines in acute situations (e.g. public speaking)
- (Tornto note ps16)

134- long scenario when you read it you think it about psychiatry but I think it about premenstrual syndrome What is the treatment

- A. ssri
 - B. other psych medication
- smle ,2016

- C. combined oral contraceptive
- D. psych medication

Answer: A

135-Parents admitted to your clinic with their adolescent son ,they are seeking help of bad behaviors of their son (I can not remember what was is)During assessment of adolescent by(H.E.A.D.S.S) Home t Environment E ducation Employment Activities Drugs Sexuality Suicide/Depression what is the best one of communication to the adolescent ?

- A. Group therapy
- B. Individual therapy*
- C. Communicate to the adolescent with presence of hisparents

Answer : B

<http://www.bcchildrens.ca/Youth-Health-Clinic-site/Documents/headss20assessment20guide1.pdf>

136- Management of somatization?

- a) Multiple phone call
- b) Multiple clinic appointments
- c) Refer to pain clinic
- d) Antidepressant

Answer: B.

- brief, regular scheduled visits with GP to facilitate therapeutic relationship and help patient feel cared for
- limit number of physicians involved in care, minimize medical investigations; coordinate necessary investigations.

(Toronto note ps27)

137- pt continues to do something, if he try to stop he becomes irritable:

- A- Obsession
- B- Compulsion

Answer: B

Explanation: Same Q #29

138- Pt counts floor lines, he knows it is wrong, but he can't prohibit it:

- A- compulsion
- B- obsession
- C- psychosis

Answer : A

Explanation: Same Q #29

139- Which of the following medications is associated with QTprolongation?

- a) chlorpromazine
- b) clozapine
- c) haloperidol
- d) ziprasidone

Answer: b

smle ,2016

All 4 choices might cause QT prolongation, yet very rare according to drugs.com !!

The first-generation antipsychotics thioridazine, mesoridazine, chlorpromazine and haloperidol warrant cardiac monitoring. The QTc prolongation effects of thioridazine and its active metabolite mesoridazine are well-documented and thioridazine-mediated QTc prolongation increases are dose-dependent ECG monitoring is recommended with IV haloperidol, which is used for delirium in adults. QTc prolongation has been associated with long-term ziprasidone use more often than with risperidone, olanzapine, or quetiapine. Ziprasidone prolongs the QTc interval an average of 20 milliseconds, which could represent a clinically significant change.

(<http://www.mdedge.com/currentpsychiatry/article/64870/anxiety-disorders/which-psychotropics-carry-greatest-risk-qtc>)

140- 52 y/o male complaining of impotence, he has anxiety and stressful things in his work?

- A. give him sildenafil
- B. relaxation exercise
- C. refer him to urology

Answer : B

Explanation: management of anxiety:

lifestyle: caffeine and EtOH avoidance, sleep hygiene

- psychological: CBT including relaxation techniques, mindfulness
- biological
 - SSRIs and SNRIs are 1st line (paroxetine, escitalopram, sertraline, venlafaxine XL)
 - 2nd line: buspirone (tid dosing), bupropion (caution due to stimulating effects),
 - add-on benzodiazepines (short-term, low dose, regular schedule, long half-life, avoid prn usage)
 - β -blockers not recommended

141- women brought her father had dementia of recent events what u will do ?

- A. refer to geriatric
- B. give him antipsychotic
- C. measure IQ

Answer :A
smle ,2016

142- 20 yo female came with her Dad with complain of tachycardia, abdominal pain & peripheral tingling after she failed her Math exam. Diagnosis?

- A. Anxiety
- B. Depression
- C. Hyperventilation syndrome?
- D. Oppositional defiant disorder

Answer: C

Explanation: As typically defined, HVS is a condition in which minute ventilation exceeds metabolic demands, resulting in hemodynamic and chemical changes that produce characteristic dysphoric symptoms. Inducing a decrease in arterial partial pressure of carbon dioxide (PaCO₂) through voluntary hyperventilation reproduces these symptoms.

(<http://emedicine.medscape.com/article/807277-overview>)

Psychiatry:

Starting with delirium and dementia as it's very common in our society

Cognitive disorders

🔴 Acute organic disorder (delirium): haloperidol or risperidone, and in case of alcohol withdrawal; Benzodiazepine

🔴 Chronic organic disorder (Dementia):

1. vascular dementia: stepwise cognitive decline, with uncontrolled risk factors patients
2. lewy body dementia: fluctuating dementia with period of parkinsonism or visual hallucination
3. frontotemporal dementia: loss of executive function, relative good memory.. In young adult odd behaviors, especially socially inappropriate (IE: disinhibition, hyper- orality, perseveration...) progressive aphasia
4. prion disease (infectious): Rapidly progressive cognitive, with myoclonus
5. normal pressure hydrocephalus: Wobbly, Wacky & Wet --> gait disturbance, urinary incontinence, and mental decline.
6. Alzheimer disease (the commonest) Rx --> all 4 cognitive domains are affected

* Important
Criteria

Major depressive disorders MDD:

- either (a) or (b) then any other four symptoms: (FOR MORE THAN 2 WEEKS)
- A. Depressed mood or irritable most of the day
- B. Decreased interest or pleasure (anhedonia)
 - Significant undesired weight change (5%) or change in appetite
 - Sleep disturbance - either loss of or excessive sleep
 - Change in activity: Psychomotor agitation or retardation
 - Fatigue or loss of energy
 - Feelings of worthlessness or guilt
 - Cognitive dysfunction (↓ ability to think or concentrate)
 - Suicidality – either ideas, plan, or attempt
- affecting quality of life

☹️ generalized anxiety disorder criteria:

- excessive Worrying out of proportion, for at least six months' + 3/6 core symptoms + affect quality of life
- The 6 core symptoms: restlessness, fatiguability, difficulty concentrating, irritability, muscle tension, and/ or insomnia)
- Other physical and emotional symptoms

☹️ panic attack:

- period of intense fear or discomfort
- 4 or more sx develop abruptly + peak within 10 min
- At least 1 of the attacks followed by 1 month or more of at least 1 of : persistent fear of more attacks, or sig change in behavior due to attacks
- the basic 4

☹️ post traumatic:

- life-threatening or severe injury-threatening event —> This elicits a re- sponse of intense horror, hopelessness, and fear
- all of the following must be present: avoidance, re-experiencing, arousal,

- symptoms must be present for more than 1 month and lead to impairment

OCD:



- presence of obsession or compulsion
- patient know its extensive
- interfere with daily living, cause anguish, or are significantly time-consuming (> 1 hour in one day)

General speaking of all medications used in psychiatry



Antipsychotic medications: block dopamine

receptors

- types:

1. Old generation (typical): haloperidol, chlorpromazine and thioridazine --> more side effects, less cost

3. New generation (atypical): Risperidone, clozapine and olanzapine --> less side effects, more cost

- Side effects:

1. Extra Pyramidal side effect: dystonia, akathisia and parkinsonian syndrome "brady kinesia, tremor and rigidity". Note: dystonia --> Rx: antimuscarinic IV

2. Antimuscarinic SE

3. Antiadrenergic SE

4. Weight gain

5. CVS SE

6. Neuroleptic malignant syndrome (hyperthermia, muscular rigidity, confusion and autonomic changes), so high CPK --> Rx: Dantrolene

7. Hyper prolactinemia: galactorrhea, amenorrhea, gynecomastia

8. Seizure

9. Sexual dysfunction

^ note: don't give antipsychotic with alcohol withdrawal patient --> treat him with benzodiazepine



Antidepressant: increases serotonin in brain

- types:

1. Old generation (TCA): amitriptyline, clomipramine and imipramine

2. New generation (SSRI): fluoxetine, paroxetine, citalopram and sertraline

- Side effect:

1. SSRI: Nausea and GI upset, sexual dysfunction and insomnia

2. TCA: antimuscarinic, weight gain, sexual dysfunction, Antiadrenergic, drowsiness and tiredness

3. Note: in both don't give them with MAOIs --> (serotonin syndrome)



Anxiolytic and sedative: (tranquilizers, neuroleptic)

1. Benzodiazepines: diazepam, alprazolam, lorazepam, oxazepam

2. Barbiturate: not used anymore

3. Buspirone: non sedative, non addictive, no benzodiazepine anxiolytic --> more expensive

4. Zopiclone and zolpidem: for early insomnia

5. Others

- ^ note: for anxiety, you will start with antidepressant, in severe cases or unresponsiveness to treatment --> then you can use benzodiazepines and other Anxiolytic drugs

1. Back to benzo --> Other uses of benzo: status epilepticus, alcohol withdrawal (delirium terminus), psychosis and rarely insomnia

- Used orally, except in status epilepticus IV

- Side effect: respiratory depression, sedation, hangover, tolerance --> addiction, physiological and psychological dependence, withdrawal symptoms



mood stabilizer: for bipolar disorder, aggressive and self injurious behavior

1. Lithium: lots of side effects, and low self margin dose --> it's nephrotoxic, causing Na and water retention, hypothyroidism, weight gain.. And serious neurological symptoms at the level over 2 mmol/L

2. Carbamazepine

3. Sodium valproate "depakin"

4. All other New anti-epileptic, except benzo and barbi (as they're anxi-olytic)

Electroconvulsive therapy (ECT):

- for severe depression, or severe mania

- Initial ttt in catatonic schizophrenia, until medication start taking over

Different treatment for different diseases: the order of medications follows the most described one to the least, in general circumstances of that dis- ease



Major depressive disorders:

1. SSRI

2. TCA

3. newer antidepressant

4. ECT

5. You can add cognitive behavioral therapy (CBT) with any medication



Bipolar disorder

1. Mood stabilizer --> see different types of them above

2. Psychotropic drugs

3. Benzodiazepine

4. ECT



Anxiety disorders: --> generally same medication of depression



Major anxiety disorder

1. SSRI

2. Effexor

3. Benzodiazepine (clona and dia)

smle ,2016

Panic disorder

1. Acute case: Benzodiazepine for maximum four weeks
2. Then: SSRI (drug of choice) --> continue treatment for 1 year

🙄 Social anxiety disorder

1. SSRI and beta blocker to control symptoms of social anxiety

🙄 OCD


1. SSRI (drug of choice) --> higher doses are required and might take two months for the result to be seen


2. Clomipramine "TCA"

3. Antipsychotic "risperidal,


🙄 aripiprazole" Phobia

🙄 Post traumatic stress disorder


 Somatoform disorders (false sensation of being diseased)

 Somatization --> many symptoms like headache, pain, N&V, without organic diseases

1. Reassurance with CBT




 Conversion disorder --> neurological signs like loss of sensation or seizure (patient is not controlling it, it's hysteria)

1. Reassurance with CBT

 Hypochondriasis --> patient feels he has serious disease like cancer or peptic ulcer.. Etc

1. Reassurance with CBT

2. SSRI

   Eating disorders:






 Anorexia


Difficult to be managed, patient might need hospital admission if they were severely ill with psychotherapy and nutritional therapy


 Bulimia

1. CBT and nutritional treatment is essential


2. SSRI and other antidepressant

     Psychosis: hallucination, delusion, thought alienation, agitation, aggression: --> all treated with above mentioned antipsychotic medications

 Schizophrenia

 Schizo- affective disorder --> same as schizophrenia symptoms but less than 6 months

 delusional disorder

 Other disorder that could present with psychotic symptoms: any mood disorder, Alzheimer, delirium, substance induced, medical condition, brief psychotic disorder

Cognitive disorder

👹 Delirium (psychiatric emergency)

1. Haldol
2. Ativan

👹 Dementia

--> There are many types for dementia as mentioned above, we will cover the treatment of Alzheimer disease only

1. Cholinesterase inhibitors: Donepezil, rivastigmine, galantamine
2. Memantine
3. You can add SSRI to control depressive symptoms or anti psychotic to control psychotic symptoms

Other topics (uncovered p)

🚬🍷🍺 substance abuse

Personality disorders

🚑🔪🔫 Psychiatric emergency, including suicide