

1. *In class II division 2 malocclusion with a congenitally missed lateral and a deep bite, which has best prognosis?*

- A. Fixed-fixed bridge.
- B. Maryland bridge.
- C. Cantilever bridge.
- D. Long span bridge.
- E. Implant supported.

Answer: A.

2. *Clasp distortion occurred because*

- A. ductility was too low.
- B. hardness was too great.
- C. ultimate tensile strength was too low.
- D. tension temperature was too high.
- E. elastic limit was exceeded.

Answer: E.

3. *The floor of an ulcer is not*

- A. smooth.
- B. keratinized.
- C. sloughed.
- D. fungated.
- E. epithelialised.

Answer: E.

An ulcer is a tissue defect which has penetrated the epithelial-connective tissue border, with its base at a deep level in the submucosa, or even within muscle or periosteum. An ulcer is a deeper breach of the epithelium than an erosion or an excoriation, and involves damage to both epithelium and lamina propria.

An erosion is a superficial breach of the epithelium, with little damage to the underlying lamina propria.[4] A mucosal erosion is an erosion which specifically occurs on a mucous membrane. Only the superficial epithelial cells of the epidermis or of the mucosa are lost, and the lesion can reach the depth of the basement membrane.[3] Erosions heal without scar formation.

Excoriation is a term sometimes used to describe a breach of the epithelium which is deeper than an erosion but shallower than an ulcer. This type of lesion is tangential to the rete pegs and shows punctiform (small pinhead spots) bleeding, caused by exposed capillary loops.

4. *Hepatitis B most communicable*

- A. before clinical symptoms.
- B. before and after clinical symptoms.
- C. before and during clinical symptoms.
- D. during and after clinical symptoms.
- E. before, during and after clinical symptom.

Answer: E.

Infected people can pass on the virus to others from two weeks before the development of symptoms until one week after the appearance of jaundice. A person is contagious during the hepatitis B incubation period. A person who is infected with hepatitis B begins to be contagious early in the incubation period. About one-half of people remain contagious for up to two months after hepatitis B symptoms begin. The remainder of people who do not develop chronic hepatitis B will remain contagious for up to 15 weeks after symptoms begin. If a person develops chronic hepatitis B, they will remain contagious indefinitely.

5. *A condition of the eye that dentists most commonly contact is from which of these?*

- A. Hepatitis B.
- B. Adenoviruses.
- C. Rhinovirus.
- D. Influenza virus.

Answer: B.

The most common eye infection is conjunctivitis caused by an adenovirus (a type of common cold virus). This type of infectious conjunctivitis is sometimes called pinkeye and is most common in children. Viral conjunctivitis is contagious because the virus can be spread from the eye to hands that then touch doorknobs and other surfaces that other people use.

6. *What is incorrect about herpes simplex virus: (from Cawson)*

- A. DNA virus.
- B. May cause serious eye infections.
- C. Common cause of sexually transmitted disease.
- D. In HIV may be troublesome and be life threatening.
- E. Can cause painful whitlows if a patient with cold sore plays with the lesion with his finger.

Answer: E.

Saliva type 1, Sexually type 2.

When he already has an active virus not necessarily he gets a whitlow. Whitlow are usually contacted by dentist on their fingers when patient has HSV. Heretic whitlow is a cross infection. Occurs mostly in dentists due to poor infection control.

7. *Which one is incorrect*

- A. Herpes Simplex causes severe eye infection.
- B. Hairy leukoplakia can secondarily infected by candida.
- C. Herpes Zoster can affect the eye.
- D. Herpes Simplex causes oral and genital ulcer
- E. None of the above.

Answer: E.

Herpes simplex eye infections are usually caused by the herpes simplex virus type 1 (HSV-1), which can also cause cold sores on your mouth or face.

Herpes zoster, also called shingles, is a disease caused by the varicella-zoster virus. This is the virus that causes chickenpox.

8. *True pocket is diagnosed when*

- A. Bone loss is evident on radiograph
- B. Bleeding on probing
- C. Base of pocket is apical to CEJ
- D. Probing depth is 4mm
- 1. A, b, c
- 2. C, d
- 3. C
- 4. All of the above

Answer: 3.

4mm probing can be present also in enlarged gingiva which would be a false pocket.

9. *Which needs to be evident in order to make diagnosis of periodontitis?*

- A. Bleeding.
- B. Pocket depth 5mm or more.
- C. Radiographic evidence if bone loss.
- D. Change in color and tone.

Answer: B.

Active pocket must be present for periodontists. Bone loss by itself is NOTHING as it could be

normal due to age and physiologic tooth movement or recently treated periodontist. If you have active true pocket more than 4mm you will have bone loss and then periodontitis. BUT, if you have bone loss (whatever the bone loss is 20% 30% or even 70% and NO TRUE POCKET that means you have not periodontitis and the diagnosis is STABLE periodontium due to successful treatment.

10. *The most significant clinical feature of periodontal disease is:*

- A. bleeding.
- B. true pocket formation and apical migration of attached gingiva.

Answer: B.

11. *In periodontics, the best prognosis for bone regeneration follows the surgical treatment is:*

- A. suprabony pockets.
- B. one-wall infrabony pockets.
- C. two-wall infrabony pockets.
- D. three-wall infrabony pockets.

Answer: D.

12. *You want to prepare shallow cavity in mandibular anterior incisors, which nerve block do you give?*

- A. Inferior alveolar nerve block.
- B. Buccal nerve block.
- C. Lingual nerve block.
- D. Incisal nerve block.
- E. Mental branch.

Answer: D.

The incisive branch of IAN continues forward in a bony canal or in a plexiform arrangement, giving off branches to the first premolar, canine and incisor teeth, and the associated labial gingiva. The lower central incisor teeth receive a bilateral innervation, fibers probably crossing the midline within the periosteum to re-enter the bone via numerous canals in the labial cortical plate. The mental nerve passes upward, backward and outward to emerge from the mandible via the mental foramen between and just below the apices of the premolar teeth supplying sensory branches to the chin and lower lip.

Indications of Incisive nerve block:

- 1- Dental procedures requiring pulpal anaesthesia on mandibular teeth anterior to the mental foramen.
- 2- When inferior alveolar nerve block isn't indicated.
- 3- When six or eight anterior teeth (canine to canine or premolar to premolar) are treated, the incisive nerve block is recommended in place of bilateral inferior alveolar nerve blocks.

Indications of mental nerve block:

When buccal soft tissue anesthesia is required for procedures on the mandible anterior to the mental foramen, such as

- 1- Soft tissue biopsies
- 2- Suturing of soft tissues

13. *Freeway space*

- A. can be measured accurately in dentulous patients.
- B. sets to 2-4mm in the edentulous patient.
- C. Occlusal vertical dimension minus vertical dimension at rest.

Answer: B.

14. *When all other removable partial denture considerations remain unchanged; clasps constructed of which material can engage the deepest undercut:*

- A. Chrome cobalt casts.
- B. Nickel chrome casts.
- C. Wrought stainless steel.
- D. Wrought gold.

Answer: D.

Gold engages 0.75 mm undercut, St.St. 0.5 mm undercut, CrCo 0.25 mm undercut.

15. *Zinc oxide eugenol impression paste*

- A. cannot be used to record undercut areas.
- B. is a thermoplastic impression material.
- C. has a setting time, the rate of which decreases as humidity increases.

Answer: A.

16. *Which impression material is contraindicated for final impression of maxillary arch of complete denture patient who is on hypertensive medications and diagnosed with xerostomia?*

- A. Impression waxes.
- B. Alginates.
- C. Zinc-oxide eugenol paste.
- D. Light bodied elastomers.

Answer: C.

Eugenol extremely irritates mucosal issues, particularly in dry mouth cases.

17. *High humidity in a room where zinc oxide and eugenol impression paste is being mixed will*

- A. increase the setting time.
- B. not affect the setting.
- C. prevent any setting.
- D. decrease the setting time.

Answer: D.

High temp and humidity shorten the initial setting time for all pastes.

18. *A partial denture that seats on the master cast but fails to seat in the mouth due to*

- A. contraction of the metal frame work during casting.
- B. insufficient expansion of the investment material.
- C. distortion of impression.
- D. failure to block unwanted undercuts.

Answer: C.

19. *Cavosurface beveling in composite resin restoration is for?*

- A. Esthetics.
- B. Open or increase enamel rods for acid attack.
- C. to smooth preparation.
- D. a, b.
- E. all of the above.

Answer: D.

Internal cavity form should be rounded to avoid incorporation of stress points. Beveling enamel margins to enhance the seal between composite resin and enamel where aesthetics is important enlarge and to provide a smooth transition of composite resin to tooth structure. Do not place a bevel on occlusal margins to avoid allowing thin sections of the restoration to come under occlusal load (Mount and Hume).

20. *For composite resin preparations, cavosurface enamel margins are bevelled because*

1. a bevelled margin produces a more favorable surface for etching.
 2. a bevelled margin improves the edge strength of the composite resin.
 3. after etching, the bonding agent reduces microleakage.
 4. the procedure eliminates the need to polish the restoration.
- A. (1), (2), (3).
 - B. (1) and (3).
 - C. (2) and (4).
 - D. (4) only.
 - E. All of the above.

Answer: B.

The adhesive resin is unfilled bis-GMA that binds with the composite, coupled with a hydrophilic compound that binds to collagen. Even though the primary function of it is to adhere composite to the tooth, it also closes the gaps between the tooth and the restoration to be placed, preparing for a better marginal seal. **Beveling isn't to increase edge strength**, but to increase surface area for bonding the restoration as a whole, and to blend the interface for appearance, **but it actually decreases composite's edge strength**, and that's why beveling is contraindicated on occlusal surfaces.

21. *White spot on boys' teeth?*

- A. hyperminirelisation
- B. hypominirelisaion
- C. hypoplasia
- D. amelogenesis imperfecta

Answer: B.

22. *9 year old boy has a small white spot discoloration on the labial surface of the maxillary permanent central incisor. It is most likely due to*

- A. Hypocalcification due to trauma of the primary predecessor.
- B. Hypoplasia due to systemic infection when the boy was 6-12 months.
- C. Defective lesion formed during the histo-differentiation stage of tooth development.
- D. Defective lesion formed during morpho-differentiation stage of tooth development.

Answer: A.

23. *Burnishing of amalgam after carving which is a continuation after condensation*

- A. It slightly wet the walls and neither contracts nor expands.
- B. Expands.
- C. Contracts.
- D. Mechanically interlocks with the cavity.

Answer: D.

24. *Why do you burnish the amalgam restoration after carving?*

- A. To continue condensation of margins.
- B. To bring excess mercury to the surface.

Answer: A.

Precarve: Remove excess mercury, initiate the carving process, and finalize the condensation.

Postcarve: continuation of condensation to the margins.

25. *Burnishing of amalgam before carving is for:*

- A. removing excess mercury.
- B. polishing.
- C. condensation.

Answer: A.

26. *How would you come to diagnosis of carious exposure in immature upper incisor?*

- A. Clinical appearance and thermal test.
- B. Radiograph and thermal test.
- C. Clinical appearance and radiograph.
- D. Patients history.

Answer: C.

27. *Most common reason for pain after RCT is:*

- A. entrapped bacteria.
- B. overfilled canal.
- C. underfilled canal.

Answer: A.

(BDJ) The most imp thing is debridement and preparation and then comes the obturation. Hence, most common reason for RCT failure is bacterial entrapment /improper debridement / improper canal preparation. Same will be the most imp reason for pain after RCT. then obturation problems.

28. *Symmetrically distributed lesions intraorally, thin epithelium lined, ruptured leave superficial ulcerated area, which soon become covered with yellowish fibrin.*

- A. Herpes zoster.
- B. Pemphigus.
- C. Erythema multiform.
- D. Acute herpetic gingiva stomatitis.
- E. Aphthous ulcer

Answer: C.

29. *Patient (80 years old) had undergone hip joint surgery recently. She had got most of her teeth extracted since the age of 20 she had been wearing denture for last 60 years, was comfortable with it. Now she got new denture done last 12months ago but not finding it comfortable as the upper denture becomes loose and falls off. She was suffering from Parkinson's disease which was diagnosed 12months ago. The only teeth present are lower anteriors and canines as shown in photo.*

1. Looking at the photo you can see a red elevated dot on the upper ridge in the midline region what is it?
 - A. Incisive papilla.
 - B. Abscess.
 - C. Root fragment.
 - D. Insertion of labial frenum.

Answer: A.

2. Patient said she had got many set of dentures but was never happy with them and now the last denture she got was 12 months back but she was again not happy and usually avoided wearing it. What would be the difficulty with this patient for new denture even though the denture were made of very high quality material?
 - A. Due Parkinsonism because of muscles hyperactivity.
 - B. Due to set of buccal frenum.
 - C. Super-eruption of lower anteriors.
 - D. Due to change in saliva quality.

Answer: A.

3. What do you think the upper ridge would cause problem for denture?
 - A. Severe undercut present.
 - B. Resorbed anterior ridge.
 - C. Difficulty due to presence of only lower anteriors.
 - D. Maxillary enlarged tuberosity.

Answer: B.

30. A lady in 70s, she is in early stage of Parkinson and had new denture few months back. It is ok when denture at rest or when she is talking but gets loose during chewing (function). There is a marked resorption of mandibular posterior region and super-erupted anterior teeth. Maxillary ridge has deep undercut.

1. Reason for denture to become loose.
 - A. Involuntary muscles due to Parkinson.
 - B. Canine interference during lateral movements.
 - C. Increase VDO.
 - D. Improper palatal anatomy.
 - E. Due to Decrease saliva.

Answer: B.

2. What is the difficulty during construction of lower RPD:
 - A. High occlusal level of lower ant teeth.
 - B. Inadequate space for the tongue.
 - C. Adjust occlusal plane according to retromolar area and new vdo.
 - D. Deep buccal notch / frenum.

Answer: A.

3. What is the problem that wasn't dealt properly during preparin previous denture?
 - A. Anterior undercut.
 - B. Buccal frenum.
 - C. Resorbed anterior ridge.
 - D. Difficulty in recording jaw relation

Answer: D.

4. What will be the difficulty in making upper denture?

Answer: Recording vertical relationship (as in parkinsons patients, due to the nueromuscular incoordination it is difficult to record CO as they can't maintain the mandible in that position).

31. Teenager has swelling involving his upper lip, the corner of his nose and aregion under his left eye. The swollen area is soft, fluctuant and pointed on the labial plate under his lips on the left side. His body temperature is 39°. What is the first thing you would do after taking history and temperature?

- A. Refer him to physician.
- B. Anaesthetise all of the maxillary left anterior teeth to provide instant relief.
- C. Give him an ice pack to be placed on the area to control the swelling.
- D. Take radiograph and test vitality of his teeth.
- E. Write prescription for antibiotics and delay treatment until swelling is reduced.w

Answer: D.

32. Mother comes with 14yr old tells u that he is a child model and has an assignment in two weeks and wants you to fix white spots on 11,21:

1. White spot on boys teeth are
 - A. Hypomineralization.
 - B. Hypoplyasia.
 - C. Hypermineralisation.
 - D. Fluorosis.

Answer: A.

2. How will you treat?
 - A. GIC.
 - B. Composite veneer.
 - C. Porcelain veneer.
 - D. Microabrasion.

Answer: B.

3. The boy is anxious. How do you proceed?
 - A. Intravenous sedation.

- B. Inhalation anesthesia.
- C. GA.
- D. Inhalation sedation.

Answer: D.

4. Whom should consent be taken from?

- A. Parent and child.
- B. Only parent.
- C. Only child.

Answer: A.

5. While carrying out a procedure under nitrous oxide sedation in a child you notice the child has fallen asleep. What is your immediate reaction?.

- A. Stop the treatment and call emergency.
- B. Reduce the dose of nitrous oxide give 100% oxygen.
- C. Try waking patient by shaking his shoulder and calling his name.
- D. Stop treatment and reschedule the appointment.
- E. Continue the treatment, as sleep after nitrous oxide is normal.

Answer: C.

33. A patient has full upper denture. In the lower arch only incisors, canines and premolars. Lower incisors are very mobile and you agreed on extraction with placement of immediate denture. Which impression material will you use?

- A. ZnO eugenol
- B. alginate
- C. polyvinylsiloxane

Answer: B.

34. A patient develops unilateral facial paralysis within ten minutes after an attempted inferior alveolar nerve block on the same side. The most logical explanation is that the injection was made into the

- A. parotid gland.
- B. masseter muscle.
- C. maxillary artery.
- D. pterygomandibular ligament.
- E. buccinator muscle.

Answer: A.

35. The MOST COMMON problem arising from premature extraction of deciduous molars is the loss of

- A. arch length.
- B. facial contour.
- C. vertical height.
- D. sibilant speech sounds.
- E. freeway space.

Answer: A.

36. Which of the following would most clearly differentiate an acute periodontal abscess from an acute periapical abscess?

- A. pigmentation of the gingivae.
- B. nature of the swelling.
- C. degree of tooth mobility.
- D. response to a test for vitality.
- E. tenderness to percussion.

Answer: D.

37. A 25 years-old male complained of many minute vesicles on the vermillion border of the upper lip. The vesicles were preceded by an itching sensation. The patient stated the vesicles develop two or three times a year. The MOST LIKELY diagnosis is

- A. Impetigo.
- B. herpes zoster.
- C. recurrent herpes simplex infection.
- D. primary herpetic stomatitis.
- E. recurrent aphthous ulceration.

Answer: C.

38. A patient presents with painless, bluish lump (10 mm in diameter) just inside the vermillion border of the lower lip. The MOST LIKELY diagnosis is:

- A. smokers' keratosis.
- B. squamous cell carcinoma.
- C. Mucocoele.
- D. Fibroma.
- E. fibro-epithelial polyp.

Answer: C.

39. The EARLIEST apical radiographic change seen in a pulpally involved tooth is

- A. resorption of bone.
- B. loss of lamina dura.
- C. external root resorption.
- D. hyper-cementosis.
- E. widening of the periodontal ligament space.

Answer: E.

40. The drug most commonly used to treat trigeminal neuralgia is

- A. diazepam (Valium).
- B. carbamazepine (Tegretol).
- C. Ergotamine.
- D. phenytoin (Dilantin).
- E. metronidazole (Flagyl).

Answer: B.

41. An injection at the anterior border of the ramus of the mandible, a centimetre above the lower occlusal plane, will anaesthetise the

- A. lingual nerve.
- B. long buccal nerve.
- C. facial nerve.
- D. posterior superior alveolar nerve.
- E. mylo-hyoid nerve.

Answer: B.

42. A substance used as a non-cariogenic substitute for sugar is

- A. Fructose.
- B. Glucose.
- C. Lactose.
- D. Maltose.
- E. Sorbitol.

Answer: E.

43. A 64-year-old patient who is receiving warfarin as part of the management of his atrial fibrillation tells you that one of his lower right back teeth was restored three years ago by a dentist who has since retired from your practice. The tooth is now occasionally sensitive to hot and cold. The clinical notes confirm the history and indicate that the tooth was restored using a resin composite material. You obtain the attached periapical radiograph.

1. In addition to testing the pulp vitality with either cold or an electric pulp tester, which of the following clinical tests or procedures would be the most appropriate to assist in making a diagnosis?
 - A. Orthopantomogram.
 - B. Bite-wing radiograph.
 - C. Percussion.
 - D. Crack testing.
 - E. INR.

Answer: C.

2. In case like this Class II composite restorations of posterior teeth are more likely to fail due to recurrent caries if
 - A. the material is placed in increments because of the risk of leakage between the increments.
 - B. a glass-ionomer lining is used because of the risk that the lining will leach out over time.
 - C. Occlusal loads are applied to the marginal ridge due to flexure of the material.
 - D. the curing time is extended due to greater shrinkage of the material.
 - E. the gingival margin is on dentine because bonding under these conditions is unpredictable.

Answer: E.

3. Given the history and the radiographic evidence, would you expect the “sensitivity” to hot and cold that the patient reports to be:
 - A. sharp, occurring once or twice per week and only with ice-cream and hot coffee?.
 - B. sharp and relieved on removal of the hot or cold stimulus?.
 - C. dull and lingering for 1-2 minutes?.
 - D. always present but worse after a hot or cold stimulus?.
 - E. worse in the morning.

Answer: C.

4. If you decided to extract the tooth and in planning for the procedure you find that the patient’s INR is 2.4, would you:
 - A. Proceed with the extraction and provide appropriate post-operative instructions.
 - B. Proceed with the extraction and suggest that the patient stop their warfarin for 3 days.
 - C. Suggest that the patient stop their warfarin and commence taking 125mg aspirin before returning in 3 days to have the tooth removed.
 - D. Consult the patient’s cardiologist to discuss stopping their warfarin treatment.
 - E. Refer to patient to a consultant Oral and Maxillofacial Surgeon who is best placed to manage complex surgical problems such as this.

Answer: A.

5. After removal of the 46, which of the following prosthodontic options would be most appropriate?
 - A. Immediate placement and immediate restoration with a dental implant.
 - B. Replacement with an immediate removable partial denture.
 - C. Replacement with a removable partial denture after the extraction site has healed.
 - D. Replacement with a fixed bridge.

- E. No replacement until the patient has had an opportunity to assess their functional and aesthetic concerns.

Answer: E.

44. In determining the replacement of missing maxillary anteriors with ridge lap design or with incorporation of labial flange, what factor is most important:

- A. high lip line.
- B. Patient wishes.
- C. need for anterior retention.
- D. the degree of ridge resorption.

Answer: D.

45. Disinfection of impressions.

- A. Sodium hypochlorite.
- B. Glutaldehyde.
- C. Chlorohexidine.

Answer: A.

1% sodium hypochlorite for 10 min from BDJ is recommended by the Environmental Protection Agency (EPA).

46. Disinfection of an acrylic denture can be done by

- A. Sodium Hypochloride.
- B. Chlorohexidine.
- C. Water + detergent.
- D. Alcohol.

Answer: A.

Sodium hypochlorite has been shown to be very effective to remove the plaque while chlorohexidine will prevent its formation. TG recommend to leave the denture dry overnight, it is most effective to control the yeast colonization and plaques reformation although the frequent cycle of dehydration and dryness might affect the denture but very little effect. It is recommended to mechanical removal of plaque by soft brush and soap and twice weekly to immerse the denture for 15-30 minutes in 1:20 diluted white vinegar 0.1% hypochlorite, or chlorohexidine (long term of chlorohexidine use cause discoloration).

47. Disinfection of an Cr-Cb denture can be done by

- A. Sodium Hypochloride.
- B. chlorhexidine.
- C. Water + detergent.
- D. Alcohol.

Answer B.

Sodium hypochlorite for acrylic and peroxide for metal.

48. Better retention of resin-bonded bridge:

- A. nickel-chromium.
- B. Beryllium.

Answer: B.

49. How often lingual nerve injury occurs during the removal of lower 1st molar's?

- A. 1:100.
- B. 1:500.
- C. 1:1000.
- D. 1:10.

Answer: C.

For 3rd molar, it's 2% for temporary injury and 0.5% for permanent injury. Comes out to be 1:50 and 1:200 respectively. So for 1st molar should be less. The incidence of paresthesia in 3rd molar extraction, for IAN is 1.5% and 1.8% for LN.

50. When using Articaine (versus Lignocaine) risk of parasthesia during IAN block:

- A. is increased by 5%.
- B. is increased by 100%.
- C. is increased by 200%.
- D. same.

Answer: C.

Articaine and lignocaine have same toxicity. Articaine used as 4% and lignocaine 2% so in effect higher concentration of articaine increase neurotoxicity presenting as paresthesia. (TG)

51. In case of injecting with lignocaine and procaine, what are the chances of nerve damage with procaine?

- A. Same
- B. Less
- C. Twice.

Answer: A.

52. **Angioneurotic edema** is mostly occurs with, which of the following local anesthetics?

- A. Articaine.
- B. Lignocaine.
- C. Prilocaine.
- D. Mepivacaine.
- E. Bupivacaine.

Answer: A.

53. What is not a definite known finding in HIV patients?

- A. Osteosarcoma.
- B. squamous cell carcinoma.
- C. hairy tongue.
- D. chronic periodontitis

Answer: A.

54. Displacement of fragments in mandibular angle fracture due to (what is INCORRECT)?

- A. direction or impact of the blow.
- B. medial pterygoid.
- C. lateral pterygoid.
- D. Temporalis.
- E. Masseter.

Answer: A.

But if the question asking about the least effective will be C.

Almost all fractures of the angle are horizontally unfavorable; the masseter, medial pterygoid, and temporalis muscles contribute to the superior and medial displacement of the proximal segment. Vertically unfavorable angle fractures result in medial displacement of the proximal segment by the medial and less by lateral pterygoids (usually has more effect on condylar fracture). Vertically

unfavorable fractures often involve the body and are distracted by the mylohyoid and suprahyoid musculature.

55. SCC of lateral border of the tongue. In which lymph nodes does it metastasize?

- A. submandibular unilateral.
- B. submandibular bilateral.
- C. submental unilateral.
- D. submental bilateral.

Answer: A.

Carcinoma of the lateral border of the tongue generally metastasizes ipsilaterally, but SCC of the tip or body of the tongue may exhibit bilateral metastases. Approximately 40% of patients have evidence of clinical node metastasis at the time of diagnosis.

56. SCC metastasize

- A. locally and through lymphatic system.
- B. only through blood.
- C. only through lymphatic.
- D. Locally and through blood.

Answer: C.

In fact there is **no medical term like "Local Metastasis"**, though it is locally invasive, infiltration into adjacent tissues is not termed metastasis. **Local spread is termed as invasion when** it affects surrounding adjacent structures. Once cancer cells enters lymphatic or blood metastasis occurs with deposits away from site of origin and metastasis occur. **Carcinoma spreads through lymph firstly while sarcoma through blood.**

57. SCC of lip of left side where would it metastasize first:

- A. left submental LN.
- B. Right submental LN.
- C. Left Sub mandibular LN.
- D. Right Submandibular LN.

Answer: A.

But there is something missing, they have to mention the **exact position** as the lymphatic drainage of the middle portion of the lip into submental lymphnode and lateralsides into submandibular lymphnode.

58. Which of the following conditions not require antibiotic prophylaxis?

- A. recent valve replacement.
- B. rheumatic fever in Indigenous Australians .
- C. tetrolgy of Fallot.
- D. repaired septal defect.
- E. previous history of bacterial endocarditis.

Answer: D.

59. Maxillary sinus malignancy. What is INCORRECT?

- A. higher in Wood workers.
- B. may follow an acute sinusitis.

Answer: B.

60. Anesthesia of lower incisors is by:

- A. incisive branch of IAN.
- B. mental branch of IAN.

Answer A.

61. *What of the following is correct about Nitrous Oxide (438, but options were a bit different)*

- A. low analgesic and low MAC.
- B. low anesthetic and low MAC.
- C. has low blood solubility and can produce hypoxia at the end

Answer: C.

62. *What about lingual split technique is INCORRECT?*

- A. thin lingual bone.
- B. lingually positioned tooth.
- C. risk of temporary lingual injury.
- D. risk of permanent lingual injury.
- E. preserve buccal bone.

Answer: D.

63. *Osteointegration means*

- A. direct contact of bone and implant only radiographically.
- B. direct contact of bone and implant radiographically and microscopically .
- C. fibrous connection.

Answer: B.

64. *The patient who is a doctor disagreed with your diagnosis and insisted on extraction of 37. He tells you, that if you don't do it, he will do it himself as he had an experience from the army. What will you do?*

- A. extract 37 as he insists, and he will do it anyway, make him sign a consent form
- B. give him instruments to do extraction
- C. refer to the maxillo-facial surgeon for second opinion and extraction if decided.
- D. refuse to extract and make sure the patient understood your diagnosis.
- E. insist on an opg to explain it to him better.
- F. make sure he understood the diagnosis and give him different plan.

Answer: C.

Dental Ethics and Law in Practice' book UK: A Dental professionals should not carry out treatment which they believe not to be in the patient's best interests, the patient is always at liberty to seek a second opinion, and the dental professional may help them to do so if requested.

65. *Periodontal state prognosis is based on assessment of*

- A. periodontal pockets.
- B. attachment loss.

Answer: B.

66. *Best storage for an avulsed tooth is:*

- A. Milk.
- B. Saliva.
- C. Normal saline.
- D. Tap water.

Answer: A.

67. *In cavity preparation 1mm below DEJ what is seen:*

- A. More dentinal tubules, some intertubular and peritubular.
- B. Some dentinal tubules, more intertubular and less peritubular.
- C. More peritubular, some intertubular and dentinal tubular.
- D. Equal amount of dentinal tubules, intertubular and peritubular.

Answer: B.

68. *Stiffness of material is measured by:*

- A. Proportional unit.
- B. Modulus of elasticity.
- C. Stress/Strain.
- D. Ultimate tensile strength.

Answer: B.

There is something wrong with this question, **stress/strain is the modulus of elasticity.**

69. *Neutral zone is:*

- A. Buccal and lingual forces balanced in occlusion.
- B. Vertical dimension at rest.
- C. Varies with posture.
- D. Increases on tooth extraction.

Answer: A.

70. *Anterior teeth arrangement?*

- A. mandibular anterior should be set lingually.
- B. should be always arranged in class I relation.
- C. should be visible below the lip line.

Answer: A.

71. *A patient with a removable partial denture is dissatisfied with the false appearance of the mandibular anterior teeth. The dentist could CORRECT this appearance by*

- I. Moving the teeth farther lingually so that they are not so obvious.
- II. Varying the inclinations of the incisors so that alternate teeth appear tilted.
- III. Moving the teeth farther facially so that their appearance is enhanced.
- IV. Separating the teeth slightly to make each one look distinct.

Choose one answer.

- A. III only.
- B. Any of these options.
- C. II, III.
- D. II, IV.
- E. I, III

Answer: D.

Spaces, lapping, rotation and changing the color of the teeth to improve the natural appearance of prosthesis. **Setting the anterior teeth too far facially or lingually should not be done to satisfy the esthetic concern.**

72. *Porcelain bonded to metal is strongest when it is:*

- A. high fired.
- B. high tension.
- C. Low fusing under compression.

Answer: C.

73. *The pulp horn most likely to be exposed in the preparation of large cavity in permanent lower molar tooth is:*

- A. Mesio-Lingual in upper first molars.
- B. Mesio-Buccal in upper first molars.
- C. Disto-buccal in lower first molars.

- D. Mesio-Lingual in lower first molars.
- E. Mesio- Buccal in lower first molar.

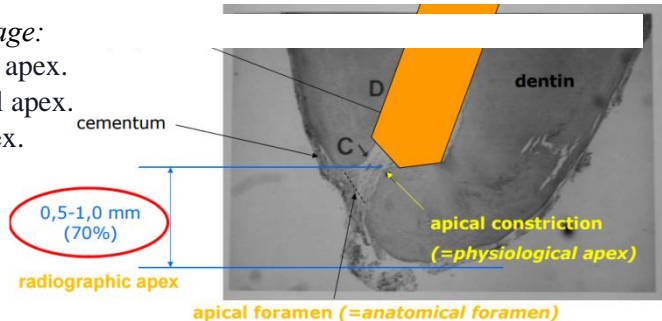
Answer: B & E.

Most cusps liable to pulp exposure are **mesiobuccal cusps of 1st molars** (both upper and lower). Regarding **most common cusp fracture** in molars, its **mesiobuccal cusp in upper molars and mesiolingual cusps in lower molars**.

74. Cementodentinal junction is shown on average:

- A. 1mm to 2mm from anatomical apex.
- B. 0.5 to 1.5 mm from anatomical apex.
- C. 0.5-3 mm from anatomical apex.
- D. same as anatomic apex.

Answer: B.



Apical constriction (=physiological foramen).

- is considered narrowest diameter of the root canal
- located at the cementodentinal junction.
- it is the apical limit of the root canal preparation preparation.
- it is also known as the histological foramen, because it is located at the junction between the pulpal connective and interstitial loose connective tissues of the periodontal ligament.
- not visible on x-ray (we may find it only using WL determination methods).

Apical foramen (=anatomical foramen)

- opening at the root surface through which pass nerves and blood vessels.

Between apical constriction and apical foramen cell-rich connective (periodontal) tissue is found that is after proper RCT this tissue may start the apposition of cementum -like cells to create hard -tissue closure of the root canal apically.

Radiographic apex (=anatomical apex, =radiographic vertex, =true apex)

- highest point of the root seen on X-ray.
- may correspond to apical foramen or (usually) not.

According to research these average distances are:

- apical constriction–apical foramen ~0.5-0.8mm.
- apical foramen–radiographic apex ~0-0.3mm.
- apical constriction–radiographic apex ~up to 1.1mm

75. 60 years – pain on bite – negative thermal stimulus. First thing to do:

- A. Vitality test.
- B. Bite wings radiograph.

Answer: B.

But there is something missing in these options.

76. pain-not localized is:

- A. irreversible pulpitis.
- B. reversible pulpitis.

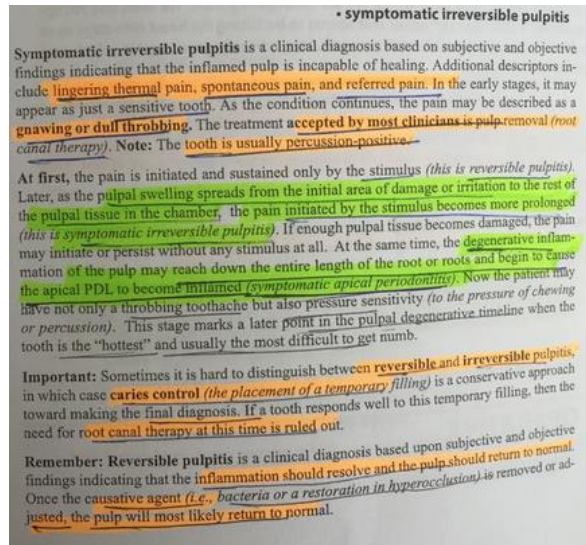
Answer: B.

77. Patient had throbbing pain, aggravated by heat, able to localized tooth and tooth was percussion positive.

- A. Irreversible pulpitis.
- B. Occlusal trauma.
- C. Pulp hyperemia.
- D. Pulp necrosis.
- E. -----.

Answer: A.

But the answer should be Irreversible pulpitis with periapical periodontitis.



78. All of the following are cardinal signs of a localized osteitis (dry socket) EXCEPT one. Which one is the EXCEPTION?

- A. throbbing pain (often radiating).
- B. bilateral lymphadenopathy.
- C. fetid odor.
- D. bad taste
- E. poorly healed extraction site.

Answer: B.

79. Pulpal pain is often difficult to localize because

- A. Of presence of inflammation.
- B. Of variety of insults including bacterial, thermal and chemical.
- C. Pulp doesn't contain any proprioceptive nerve endings.

Answer: C.

80. The "sensitivity" to hot and cold that the patient reports on specific tooth was always present but worse after hot or cold stimulus. It means that this tooth has:

- A. reversible pulpitis.
- B. irreversible pulpitis.
- C. pulp necrosis.
- D. normal tooth.

Answer: B.

81. When a patient complains of severe pain that cannot be localized:

- A. The pain is most likely periradicular in origin and likely to persist even when the necrotic pulp is removed.
- B. Treatment procedures should be delayed and the condition managed with analgesic medications.
- C. The cause is most likely nonodontogenic in origin.
- D. Selective administration of local anesthesia can lead to a definitive diagnosis.

E. The pulp of more than one tooth will be involved and the pathosis produce a synergistic-hyperalgesia response within the central nervous system (CNS).

Answer: D.

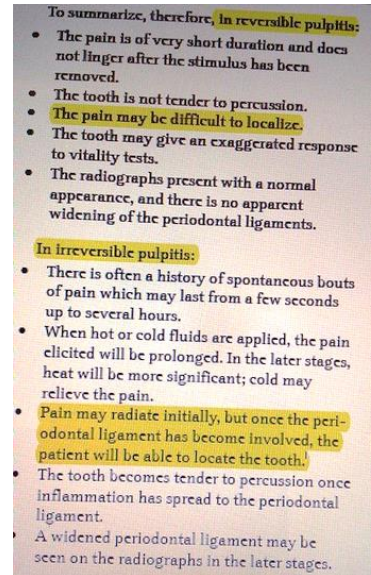
It's given in TG that we should not delay treatment by just giving medications alone. We need to do active dental treatment so initially, we have identify the source of pain.

82. *Reversible pulpitis is characterized by:*

- A. pain last longer on hot or cold stimulus than normal.
- B. patient cannot localize the pain.

Answer: B.

For irreversible pulpitis localization of pain may be difficult initially but as the inflammation spreads to the periapical tissue the tooth will become more sensitive to pressure, while for for **reversible pulpitis pain is sharp and may be difficult to locate quickly subside after removal of the stimulus.**



83. *Anesthetic testing is most effective in localizing pain to which of the following?*

- A. Specific tooth.
- B. Mandible or maxilla.
- C. Across the midline of face.
- D. Posterior tooth.

Answer: B.

Question asks for the "Most Reliable ", so differentiating the origin from mandible to maxilla is more straight forward with a mandibular block compared to intraligamentary injections for individual teeth after identifying the jaw. It is reliable but most reliable would be identification of the jaw.

When dental symptoms are poorly localized or referred, an accurate diagnosis is extremely difficult. Sometimes, patients may not even able to specify whether the symptoms are from the maxillary or mandibular arch. In such cases, and where pulp testing has proved inconclusive, an anaesthetic test may be helpful. The technique is as follows: using either infiltration or an intraligamentary injection, the most posterior tooth in the area suspected of causing the pain is anaesthetized. If pain persists once the tooth has been fully anaesthetized, the tooth immediately mesial to it is then anaesthetized, and so on, until the pain disappears.

84. *A patient came after two days of extraction, complains he had pain for two days, examination showed localized swelling, no lymphadenopathy. What is the first line of treatment?*

- A. Possible dry socket -irrigation and placement of sedative medicament.
- B. Irrigation - curettage of socket, antibiotics and analgesics.
- C. Irrigation and antibiotics.

- D. Possible root piece or bone piece take IOPA x-ray and analgesics.

Answer: D.

85. A female patient comes to you complaining of persistent pain in a heavily restored central incisor; you suspect irreversible pulpitis and you have been told that she is in transit leaving by plane next day. Your treatment will be:

- A. Remove filling and place a sedative dressing.
- B. Pulpectomy and Ledermix dressing.
- C. Pulpectomy and calcium hydroxide dressing.
- D. Prescribe analgesics and systemic antibiotic.

Answer: B.

ledemix used as intracranial medicament as an initial medication for rapid and reliable relief of pain associated with irreversible pulpitis (TG).

86. Dentin hypersensitivity cannot result from:

- A. Attrition.
- B. Erosion.
- C. Chronic periodontal disease.
- D. Pulpal pathology.

Answer: D.

Chronic periodontal disease can cause recession and lead to dentin hypersensitivity, but not all pulpal pathologies mimic DH:

- reversible pulpitis: may mimic pain of DH.
- irreversible pulpitis : poorly localized pain that is severe n lingers after stimulus is removed so no similarity with pain of DH
- necrosis N chr. hyperplastic pulpitis: no pain usually.

87. A patient presents to your clinic with sharp pain lasting a few seconds only on biting or clenching the teeth. Pain is poorly localized. The most probable diagnosis based on symptoms and investigations is cracked tooth syndrome (CTS)

I. Why is there pain in CTS?

- A. Stimulation of exposed pulpal tissue.
- B. Hypersensitivity of enamel and dentin.
- C. Can be attributed to the attrition of the teeth.
- D. Movement of fluid in dentinal tubules stimulating odontoblasts in pulp.

Answer: D.

II. Classic sign of CTS.

- A. Pain on biting only.
- B. Pain on biting that ceases after pressure has been withdrawn.
- C. Positive response to vitality test of the effected teeth.
- D. Pain due to faulty restoration / inlay.

Answer: B.

III. Most important investigation aid is:

- A. Transillumination.
- B. Periapical radiographs.
- C. Visual inspection.
- D. Presence of facets on occlusal surface.

Answer: A.

IV. Mostly the course of the crack in CTS is:

- A. Mesiodistal orientation.
- B. Buccolingual orientation.

Answer: A.

V. Immediate treatment of the tooth depends upon:

- A. The orientation of the crack.
- B. symptoms exhibited by the patient.
- C. adhesive restorative materials present.
- D. size of the involved portion of the tooth.

Answer: D.

88. A patient presented to your clinic complaining of severe throbbing pain in relation with tooth 12, there was no swelling. You immediately conducted RCT with no antibiotic prescription. After a day, the patient called you telling you that non fluctuant swelling developed along with pain which is unresponsive to pain killers. What will be your management?

- A. Prescribe antibiotics.
- B. Immediate incision & drainage and antibiotic prescription.
- C. Only incision and drainage is sufficient.
- D. Prescribe stronger NSAID.
- E. Reinstrumentation and gentle irrigation with prescription of strong NSAID.

Answer: D or E.

Option D if there is no option E.

Option E if there is option e among selection.

Previously Necrotic Pulp with No Swelling

Occasionally these teeth develop an acute apical abscess (flare-up) after the appointment. The abscess is confined to bone and can be very painful.

The tooth is opened and the canal is gently re-cleaned and irrigated with sodium hypochlorite. Drainage should be established if possible (see Figure 17-7). If there is active drainage from the tooth after opening, the canal should be re-cleaned (or debridement completed) and irrigated with sodium hypochlorite. The rubber dam is left in place after the tooth is opened; the patient is allowed to rest pain-free for at least 30 minutes or until drainage stops. Then, the canals are dried, calcium hydroxide paste is placed, and the access is sealed. The tooth should not be left open! If there is no drainage, the tooth should also be lightly instrumented and gently irrigated, medicated with calcium hydroxide paste, and then closed. The symptoms usually subside, but do so more slowly than if drainage was present. Again, patient education and reassurance are critical. A long-acting anesthetic and a strong analgesic are helpful; antibiotics are not indicated.^{25,26}

Previously Necrotic Pulp with Swelling

These cases are best managed with incision and drainage (see Figure 17-6). In addition, it is most

89. Early signs and symptoms of localized alveolar osteitis (dry socket) include:

- 1. bleeding.
- 2. bad odour.
- 3. pus formation.
- 4. pain.
- A. (1) (2) (3).
- B. (1) and (3).
- C. (2) and (4).
- D. (4) Only.
- E. All of the above.

Answer: C.

90. Patient comes with pain but he cannot localize the tooth. What is the best test:

- A. Thermal test.
- B. Percussion test.
- C. Cavity test.
- D. Anasthesia test.

Answer: D.

First one anesthesia test if the patient don't localized pain form mandibular or maxillary to exclude quadrant (usually starting with inferior alveolar nerve block) then exclude the tooth.

91. *Patient with pain on the upper right area, and he cannot tell the tooth cause the pain. What is the best way to test pulp?*

- A. Thermal test.
- B. Electric test.
- C. Stimulation the dentin.
- D. Anesthesia test.
- E. Cavity test.

Answer: A. Thermal test as the upper right area is mentioned.

92. *A patient comes with a firm, painless swelling of lower lobe of parotid which has grown progressively for the past year. He complains of paresthesia for the past 2 weeks. This is most likely to be:*

- A. Pleomorphic adenoma.
- B. Carcinoma of the parotid.
- C. Lymphoma of parotid

Answer: B.

Since the swelling has been present there for past one year and **progressively growing and painless, so definitely at the beginning it is not a malignant**. However, malignant tumors may invade nerves, causing localized or regional pain, numbness, paresthesia, or a loss of motor function. There is nothing to support the idea of adenoma causing parathesia except when it turn malignant. So this patient most likely have **carcinoma of the parotid which started as benign Pleomorphic Adenoma**.

93. *A 30 year old year old patient complains of severe attacks of pain each of a few seconds duration and fading away slowly but is unable to identify the tooth responsible. Hot, cold or sweet foods or cold air on the area of the jaw make the pain worse. The pain has been present intermittently for several months but has only recently become severe. There is no pain on biting. The patient appears fit and well otherwise. The tooth on examination was the 17 and had extensive caries. (Odell Case 9)*

- I. What do you think is the probable diagnosis?
 - A. Acute reversible pulpitis caused by extensive caries.
 - B. Acute periapical periodontitis due to extensive caries.
 - C. Acute irreversible pulpitis as a result of extensive caries.
 - D. Acute abcess due to a necrotic pulp.

Answer: A.

- II. Which investigations will you perform?

Answer: vitality test and radiograph.

- III. You have taken an IOPA of the 17 and see on it that the cusps are undermined and the caries are very close to the pulp but there is no evidence of any periapical pathology. The tooth responds strongly to the ethyl chloride (cold test). The response of the pulp to the cold suggests that:
 - A. The pulp is vital.
 - B. The tooth is vital.
 - C. The tooth has a viable blood supply.
 - D. The tooth's nervous system is alive.

Answer: A.

Since the tooth responds quickly and strongly to ethyl chloride, indicating a hypersensitive pulp, though the proximity of the pulp to the cavity may also contribute to this strong response.

IV. What do u think the long term prognosis of this (17) tooth?

- A. Very good.
- B. Good.
- C. Bad.
- D. Very bad.
- E. Guarded.

Answer: B.

V. If this tooth is extracted then the replacement options could be:

- A. move the 18 into the position of the 17.
- B. Implant only.
- C. refer to the specialist.

Answer: C.

VI. The tooth has to be restored and you want to use ZOE because the patient has pain, but also wants the composite filling done due to esthetic needs. Which other restorative material can you use instead with ZOE?

- A. RMGIC.
- B. GIC.
- C. Amalgam.
- D. Compomer.

Answer: B.

VII. Do u think that a rubber dam should be used here? Why? give reasons.

Answer: yes because as it is said that the caries is very close to pulp, to provide a sterile environment rubber dam should be applied.

94. *The patient reports severe, continuous pain in the mandibular, right quadrant. She states that the pain began when she was drinking iced tea last evening and the pain has not subsided. She slept poorly last night. Medical history is noncontributory. Amalgams were place a few months earlier after removal of deep caries on both molars. She has increased pain on lying down. The pain is not relieved with analgesics. She cannot localize the pain to an individual tooth. Pulp testing shows response on the premolar and second molar. The first molar does not respond. Cold-water application causes intense diffuse pain in the region. Percussion and palpation are not painful. Probing are normal.*

I. Which tooth (teeth) is (are) the most likely cause of her pain?

- A. Premolar.
- B. First molar.
- C. Second molar.
- D. First and second molars.

Answer: C.

II. What is the pulpal and periapical diagnosis for the first molar?

- A. Necrosis; chronic apical periodontitis.
- B. Necrosis; phoenix abscess.

- C. Irreversible pulpitis; chronic apical periodontitis.
- D. Irreversible pulpitis; acute apical periodontitis.

Answer: A.

- III. What is the pulpal and periapical diagnosis for the second molar?
- A. Irreversible pulpitis; normal.
 - B. Irreversible pulpitis; acute apical periodontitis.
 - C. Irreversible pulpitis; acute apical abscess.
 - D. Normal; normal.

Answer: A.

- IV. What would be the minimal emergency treatment on the offending tooth (teeth)?
- A. Remove the amalgam and place a sedative dressing. Prescribe analgesics and antibiotics.
 - B. Do a complete canal preparation. Place a cotton pellet of formocresol.
 - C. Reduce the occlusion and prescribe antibiotics.
 - D. Perform a pulpotomy and place a dry-cotton pellet.
 - E. Inferior alveolar injection is indicated. If the offending tooth (teeth) is (are) not.

Answer: B.

- V. The tooth cannot be anesthetized, what is the likely reason?
- A. There is a decreased pH in the region favoring formation of cations.
 - B. The anesthetic solution is diluted by the inflammatory fluids.
 - C. There may be morphologic changes in the nerves that originate in the inflamed areas; these nerves becomes more excitable.
 - D. Because of inflammation, there is increased circulation in the area; this carries away the anesthetic very rapidly.

Answer: A.

95. A 25 year old female in her first trimester of pregnancy presents with an acute dental infection. Which of the following is CONTRAINDICATED for this patient?

- A. Prescription of a radiograph.
- B. Prescription of penicillin V.
- C. Extraction using 2% xylocaine with 1:100,000 epinephrine.
- D. Acetylsalicylic acid for pain management

Answer: D.

96. A 20yr old man was riding a cycle and hit a rock, he fell over his lower jaw hit a rock (other resources suggested that he fell over and his lower jaw hit on the bar handle of the cycle, he fell head over the bar of his cycle, he was not knocked off, but was a little winded). He was brought to your clinic by his fellow cyclist. His right upper central incisor suffered laxative injury. The patient's medical history declares, he takes lot of NSAIDS and glucosamine to increase his performance as a cyclist.

- I. What will be your initial investigation?
- A. check his arms.
 - B. check his legs.
 - C. check his back.
 - D. check his neck.
 - E. check his teeth

Answer: D.

- II. The patient is feeling pain in his shoulders and tingling in his fingers. What will be your management?
- A. call ambulance.
 - B. ask his friends to take him to hospital.
 - C. take him to hospital yourself.

Answer: A.

- III. When should the teeth be re-repositioned?
- A. Immediately.
 - B. After X-rays.
 - C. After medical assessment.
 - D. not to be replaced

Answer: C.

- IV. What is the most unlikely to happen if the tooth is not re-positioned back into its place?
- A. Internal resorption.
 - B. External resorption.
 - C. Spontaneous resolution.
 - D. Pulp necrosis.
 - E. Tooth may fall out spontaneously.

Answer: E.

- V. The patient has history of taking NSAIDS and glucosamine. What effect are likely to have?
- A. Prolong bleeding.
 - B. He will feel no pain.
 - C. He may swell.
 - D. No effect on it.
 - E. Chances of kidney impairment

Answer: A.

97. *Prolonged sensitivity to heat, cold and pressure after cementation of crown or fixed bridge is related to:*

- A. Recurrent decay.
- B. Periodontal problem.
- C. Occlusal trauma.
- D. An open margin.

Answer: C.

98. *At his first post-insertion appointment, a patient with a new removable partial denture complains of a tender abutment tooth. The most likely cause is:*

- A. overextended borders of the partial.
- B. inadequate polishing of the framework.
- C. improper path of insertion.
- D. the occlusion.

Answer: D.

99. Clinically, a dull, throbbing pain associated with LL6, made worse on touching and when trying to eat. This tooth is heavily restored. It does not respond to sensitivity testing. Radiologically, LL6 has periapical rarefying osteitis associated with both roots. What is the most likely diagnosis?

- A. Chronic periapical periodontitis.
- B. Acute periapical periodontitis.
- C. Acute pulpitis.
- D. Chronic osteomyelitis.
- E. Chronic pulpitis

Answer: B.

Acute periapical periodontitis

Clinical features

The classic symptom is of a dull throbbing ache, usually well localised to a heavily restored or grossly diseased tooth. It may be difficult for the patient to determine whether an upper or lower tooth is affected as the pain is experienced particularly when the teeth are occluded. However, the affected tooth is painful to touch. The tooth should be non-responsive to sensitivity tests (as the periapical inflammation is usually provoked by a dead and/or infected pulp) although, particularly with multirrooted teeth, some response may still be elicited, as well as tenderness on percussion.

Acute periapical periodontitis may also occur after trauma or endodontic treatment to a tooth. In such cases, the history should lead to the diagnosis.

Radiology

The basic radiological sign accompanying acute inflammation around the apex of a tooth is localised bone destruction. Where there is little or no previous chronic inflammation, this will appear as loss of the lamina dura (Fig. 39). Where the periapical periodontal ligament was previously widened or a granuloma was present, acute inflammation will appear as a poorly defined radiolucency, termed a rarefying osteitis (Fig. 40).

100. The most appropriate treatment for a child with a primary tooth that caused a severe, throbbing toothache the previous night is:

- A. analgesics.
- B. antibiotic therapy.
- C. removal of caries and placement of sedative restoration.
- D. pulpotomy with calcium hydroxide.
- E. extraction of the tooth.

Answer: E.

But if they mentioned pulpectomy is a better option. CaOH is contraindicated in primary teeth bcs of internal resorption.

101. When immature permanent molars have been treated with Ledermix pulp capping, the most probable pathology is:

- A. Chronic inflammation of the pulp.
- B. Necrosis of the pulp

Answer: A (TG, 35).

102. Patient presents with a 3 weeks history of prolonged tooth pain to hot and cold. Three days ago, the symptoms changed to moderate pain on biting combined with a dull, spontaneous ache relieved by cold. The most likely diagnosis is:

- A. Chronic apical abscess.
- B. A cracked tooth.
- C. Pulpal necrosis.
- D. Reversible pulpitis.
- E. A vertical root fracture.

Answer: C.

Pulpal necrosis is USUALLY asymptomatic. There is no fine line between irreversible pulpitis and necrosis especially when the history is short. According to Walton, **pulpal necrosis may be associated with pain on pressure and spontaneous pain** (both of which are present in this individual). History is three weeks old (it is too early for a chronic abscess), also, **chronic apical abscess** is usually asymptomatic and is associated with **a sinus tract for drainage** which is not mentioned in the history.

103. *Most effective method of detecting pulpal pathology:*

- A. Cold test.
- B. Ept (electric pulp test).
- C. Radiographs showing periapical radiolucency.
- D. Percussion

thermal challenge.

As a general rule, thermal tests are more discriminating of pulp condition than electrical.¹⁷ They should be repeated, and contralateral and adjacent teeth tested for reference. An exaggerated and lingering response may indicate irreversible pulpal inflammation, whilst a consistent absence of response may suggest pulp necrosis.

Answer: A.

104. *A patient reports with occasional pain on chewing on a tooth restored two days ago with shallow amalgam without lining, what will be the management?*

- A. Remove filling and relining the cavity and give amalgam.
- B. Remove the premature contacts.
- C. Give sedating restoration.
- D. Tell the patient it will disappear in few weeks.

Answer: B.

But if occasional sensitivity so it will be D.

105. *How long should one give antibiotics for dental treatment?*

- A. 5 days.
- B. 7 days.

Answer: A.

106. *Female patient came to your clinic with continuous severe pain related to 1st maxillary molar. After examination dentist diagnose the tooth is carious and has irreversible pulpitis. He decides to do RCT. After enough time for anaesthisation, the patient won't allow the dentist to touch the tooth due to severe pain. Dentist should:*

- A. give another appointment to the patient with description of antibiotics.
- B. do extraction.
- C. give Intra-pulpal anaesthesia.
- D. reduce the occlusal high.

Answer: C.

Antibiotics SHOULD NOT be given for dental pain, pulpitis or infection localised to the teeth according to TG. So managing the patient's anxiety and acquiring adequate analgesia for endodontic access cavity preparation is required. Local anesthesia, not exceeding the maximum dose for the patient in conjunction with intrapulpal anesthesia is required, then remove coronal pulp and a ledermix dressing will be placed to control symptoms.

107. Why do not we put Adams clasp for a removable retainer after correcting a posterior crossbite in mixed dentition?

- A. Strong contact point.
- B. Because of the morphology of primary teeth.
- C. Static functional occlusion.
- D. Transitional age.
- E. Passive action

Answer: C.

108. The blood supply to the denture bearing areas of the maxilla:

- A. Superior Maxillary artery.
- B. Grand/greater palatine artery.

Answer: B.

109. What could be MOST cariogenic,

- A. Consuming a lot of carbohydrate with meals.
- B. Consuming a lot of elective sweets during meals.
- C. Excessive consumption of sugar soft drinks all day.
- D. Consumption of elective sweets between meals.

Answer: C.

Consuming soft drinks throughout the day the person is getting both sugars and acid for a maximum time, it's more damaging then eating only sweet.

110. 13 years old boy comes to you with excessive hyperplasia of the gingiva as a result of Phenytoin what is your management,

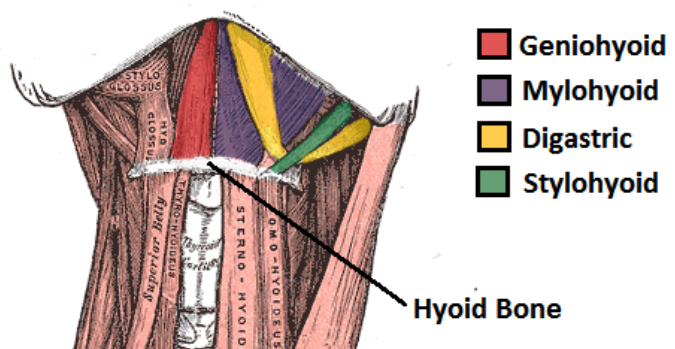
- A. Stop the medication.
- B. Force (? Not sure about this term) a strict oral hygiene and surgical removal of excess gingival tissues.
- C. Debridement and conservative approach

Answer: B.

111. During swallowing,

- I. suprahyoid muscles relax.
- II. masseter contract.
- III. tongue touches the palate.
- IV. teeth have contact.

- A. I, II, III.
- B. I, III, IV.
- C. II, III, IV.
- D. none of the above.
- E. all of the above.



Answer: C. (Appendix I)

112. A five-year old child, highly susceptible to caries, presents with missing mandibular deciduous first molars. Radiographs reveal the presence of the first premolars. The space maintainer of choice would be:

- A. lingual arch.
- B. removable acrylic space maintainer.
- C. two band and loop space maintainers.

Answer: C.

Although there is a bilateral missing teeth, A is not correct. The patient is 5 years old, his anterior teeth have not come through. Furthermore the patient is highly susceptible to caries and the lingual arch is contraindicated as it cause more plaque accumulation and more caries in this patient especially with poor oral hygiene.

113. What is incorrect regarding treatment of candidiasis?

- A. immersion of denture in 0.1percent sodium hypochlorite solution.
- B. prescribing nystatin mouthwash.
- C. prescribing amphotericin tab.
- D. medication must be more than 7 days.

Answer: B.

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114. Brachial cleft cyst is located:

- A. In front of the neck.
- B. On anterior border of sternocleidomastoid muscle.
- C. Shows when swallowing.

Answer: B.

115. What is the lithium prescription?

- A. Minor depression.
- B. Lack of lithium.
- C. Minor anxiety.
- D. Bipolar or deep depression.

Answer: D.

Indications of Lithium:

- Prevention of manic or depressive episodes in bipolar disorder.
- Treatment of acute mania.
- Schizoaffective disorder and chronic schizophrenia.

116. Which one is true?

- A. Tongue thrust causes anterior open bite.
- B. Tongue thrust is because of anterior open bite.

Answer: B.

According to Proffit, 4th edition, page No. 154, tongue thrust swallow therefore should be considered the result of displaced incisors not the cause". According to Mc. Donalds, Page. 649, Tongue and Swallowing Habits. Abnormal tongue position and a deviation from the so-called normal movement of the tongue during swallowing have long been associated with anterior open bite and protrusion of the maxillary incisors. According to Proffit, three major problems are usually associated with the anterior tongue position, which is also called tongue thrust, deviate swallow, visceral swallow, or infantile swallow." These problems are open bite; protrusion of the incisors, particularly the maxillary incisors; and lisping."

117. *Pain and difficulty on swallowing, trismus and a displaced uvula are signs and symptoms of infection of which one of the following spaces?*

- A. Submandibular.
- B. Lateral parapharyngeal.
- C. Sublingual.
- D. Deep temporal.
- E. Submasseteric.

Answer: B.

118. *Adverse effects of radiation therapy on the oral and paraoral tissues:*

- I. Rampant caries.
- II. Difficulty in swallowing.
- III. Varying degree of trismus.
- IV. Dermatitis.
- A. I, III.
- B. I, II, III.
- C. III, IV.
- D. All of the above.

Answer: D.

119. *Which of following not seen in sjogrens syndrome?*

- A. Xerostomia.
- B. Lung disease.
- C. Liver disease.
- D. Sialolith.
- E. Cataract.

Answer: E.

Sjogren's Syndrome cause dry eye but not cataract.

120. *Swallowing will aid in the diagnosis of:*

- A. Branchial cyst.
- B. Thyroglossal duct cyst.
- C. Ranula.
- D. Retention cyst.
- E. Glossothyroid cyst

Answer: B.

121. *The reflex in gagging patients is caused by:*

- A. Trigeminal nerve.
- B. Glossopharyngeal nerve.
- C. Facial nerve.
- D. Recurrent laryngeal.

Answer: B.

122. *Which function is NOT affected if the lingual nerve is anesthized distal to the anastomosis of the lingual and chorda tympani nerve?*

- A. Swallowing.
- B. Salivary gland.
- C. Sensitivity of gingiva and tongue.
- D. Taste.

Answer: A.

Taste supplied by facial n. sense of tongue and gingive by lingual. salivary glands by facial.

123. *A patient telephones and tells you he has just knocked out his front tooth but that it is still intact. Your instructions should be to:*

- A. put the tooth in water and come to your office at the end of the day.
- B. wrap the tooth in tissue and come to your office in a week's time.
- C. put the tooth in alcohol and come to your office immediately.
- D. place tooth under the tongue and come to your office immediately.
- E. place the tooth in milk and come to your office immediately.

Answer: E.

124. *Hypoglycemia in the conscious patient is best managed with:*

- A. Oxygen.
- B. Epinephrine.
- C. oral carbohydrates.
- D. Glucagon.
- E. Insulin.

Answer: C.

According to therapeutic guidelines, 20 to 25gm of glucose orally, but if the patient is unconscious glucan is indicated (odell, 99).

125. *White man 56 years old comes to you with a brown spot on his gingiva and another one on his oral mucosa, when taking the history he mentioned loss of weight and memory lost. He as well complains of headaches. What is your most probable diagnosis?*

- A. Addison's disease.
- B. Hyperthyroidism.

Answer: A.

126. While removing the second primary molar of 9 years old child, the apical $\frac{1}{4}$ of the root fracture and stay in the socket,

- A. you will just leave it and observe it.
- B. you take surgically by a lingual flap.
- C. you try to take out by using a root apex elevator.
- D. you use a fine end forceps to take it out.

Answer: A.

127. Subgingival plaque changes from,

- A. gram positive to gram negative.
- B. gram negative to gram positive.

Answer: A.

128. What is the earliest age that the diagnosis of a congenitally missing mandibular second bicuspid can be confirmed?

In a three and a half year old male the mandibular second premolars were not evident radiographically. What may be assumed about these teeth?

- (a) congenitally missing
- (b) may develop late
- (c) will develop with hypoplastic enamel
- (d) probably extracted

(b) It is quite common for mandibular second premolars not to be evident radiographically in children age three and a half years. Occasionally, these teeth do not become evident until age seven or eight.

- A. 2 years.
- B. 4 years.
- C. 6 years.
- D. 8 years.

Answer: B.

2years is early time to develop, 8years is late time to develop mandibular 2nd premolar.

129. Which permanent teeth will normally be present in an 8-year old child?

- A. Maxillary and mandibular central and lateral incisors.
- B. Mandibular central and lateral incisors and first molars.
- C. All central and lateral incisors and first molars.
- D. All central and lateral incisors, first molars and first premolars.

Answer: C.

130. 7 years old patient comes to your practice with pain in the first permanent maxillary molar. Pain to hot and lingers for a long time and has recently suggested that keeps awake at night as well. Management is by: (Odell, 33)

- A. cvek pulpotomy.
- B. Pulpectomy with formocresol.
- C. coronal pulpotomy.
- D. extraction and await for 7 to erupt in its place.

Answer: B.

Since the long term prognosis for apexification of multi-rooted tooth is questionable, so the best solution is extraction. On the other hand we could not do extraction until the age of 9 years old to minimize the adverse effects of extractions at early age.

131. What is the most important factor to reduce dental irradiation?

- A. Speed of film.
- B. Collimation.
- C. Filtration.
- D. Cone shape and length.

Answer: A.

132. With view to Nitrous Oxide, what is the major pharmacological problem?

- A. Contraindicated in pregnancy.
- B. Contraindicated in cardiac dysrhythmias.
- C. Diffusion hypoxia at the end of the case due to slow solubility of the agent in blood.

Answer: C.

133. Which of the following is an expansile lesion of the oral mucosa,

- A. Keratocyte.
- B. Radicular cyst.
- C. Cementoma.

Answer: B.

Expansile lesion of jaw bone, (boucher, 168 and 100 MCQs, 846), along with some other disease. if asked expansile lesion of oral mucosa , radicular cyst.

134. The initial therapy in HIV patient is,

- A. debridement and antimicrobial mouth rinses.
- B. root planing and surgical approach.

Answer: A.

135. The concentration of Fluoride in the topical NaF is:

- A. 2%.
- B. 5%.
- C. 8%.
- D. 10%.

Answer: A.

Answer will differ according to whether it is a varnish or mouth rinse. 5% NaF in varnish, 0.05% for daily mouth rinse and 0.2% for weekly mouth rinse.

Table 2. Concentrations of selected topical fluoride agents.					FLUORIDE SOURCE	PRODUCT CONSIDERATIONS
PRODUCT	APPROX [F] (%)	ACTUAL [F] (%)	F PPM	RECOMMENDED U	Acidulated Phosphate Fluoride (APF) Administered In-Office	1.23% aqueous solution, gel, or foam. Effective for 4 minutes with tray application. Can also be painted on. Has a low pH of 3.5 that enhances fluoride uptake. Also comes in varnish 5%. Not recommended on porcelain, composites, or sealants.
0.05% NaF	0.025	0.023	230	Daily Rinse (OTC)	Sodium Fluoride (NaF) Administered In-Office	2.0% aqueous solution, gel, or foam. Has a neutral pH of 7.0. Most commonly administered in-office every 4-6 months.
0.20% NaF	0.10	0.091	910	Weekly Rinse (Rx)	Fluoridated Dentifrice At Home Use	Concentrations of fluoride in dentifrices in the United States range from 1,000 ppm – 1,500 ppm. Sodium fluoride or sodium monofluorophosphate is approved by the ADA.
0.243% NaF	0.12	0.10	1000	Daily Dentifrice (OTC)	Stannous Fluoride Dentifrice At Home Use	0.454% stannous fluoride in dentifrice. Approved by the ADA for cavity protection, plaque and gingivitis reduction, and hypersensitivity.
0.76% NaMFP	0.095	0.10	1000	Daily Dentifrice (OTC)	Fluoridated Mouthrinses At Home Use	Most common form of sodium fluoride. Over-the-counter solutions of 0.05% sodium fluoride (230 ppm) used daily for persons over age 6; solutions of 0.20% sodium fluoride (920 ppm) used in supervised, school-based rinsing programs.
0.4% SnF ₂	0.10	0.097	1000	Daily Dentifrice (OTC); Daily Gel (OTC)	Stannous Fluoride Mouthrinse At Home Use	0.63% stannous fluoride. Used for hypersensitivity and caries prevention.
1.1% NaF	0.55	0.50	5000	Daily Gel (Rx); Daily Dentifrice (Rx)	Fluoride Supplements By Prescription	Sodium fluoride as the active ingredient. Must be prescribed by a dentist or physician. Usually prescribed for children at high risk for decay and whose primary drinking water has low fluoride concentrations or no fluoride.
0.5% APF	0.5	0.50	5000	Daily Gel (Rx)	Fluoride Varnish	Available as sodium fluoride. Can paint directly onto child's teeth. Holds the fluoride in contact with the tooth. Recommended to be used twice yearly for optimal benefits.
2.0% NaF	1.0	0.90	9040	Office Gel	Adapted from: Mattana DJ. Fluorides. In: Wilkins EM. <i>Clinical Practice of the Dental Hygienist</i> . 9th ed. Boston: Lippincott, Williams & Wilkins; 2005:552-561. Dimensions OF DENTAL HYGIENE JULY 2007	
1.23% APF	1.23	1.23	12,300	Office Gel		
8% SnF ₂	2.0	1.94	20,000	Office Gel		
5% NaF	2.5	2.26	22,600	Office Varnish		

136. Precipitation of salivary calcium salts to form calculus is:

- A. promoted by a higher buffering capacity.
- B. inhibited by a higher buffering capacity.
- C. inhibited by a higher pH.
- D. promoted by a higher pH.

Answer: D.

137. Which of the following most probable does not exist in the kids acute gingivitis,

- A. Spirochetes.
- B. Streptococcus.
- C. Staphylococcus.

Answer: A.

138. Which of the following is **NOT** true about warfarin,

- A. INR of 3 is enough to start any extraction.
- B. Affects extrinsic system and increases prothrombin time.
- C. Heparin can be given subcutaneously and acts rapidly.

D. It takes at least 12 hours for Vitamin K to reverse the effects of Coumarin.

Answer: C.

Heparin sodium (Heparin): (Cameron, 339)

Shorter acting and has an immediate onset (inhibits factors IX, X and XII).

Can be administered either subcutaneously using a low-molecular-weight derivative or intravenously under the supervision of a paediatric haematologist.

When heparin is given IV, it works immediately and when given sub-cutaneous will work within 50-60 min. (TG)

139. *Patient on anti-coagulant therapy requires an extraction to be performed. Which of the following is NOT true?*

- A. Minor bleeding can be reduced somehow by using tranexamic acid.
- B. Prothrombin value above 2.5 is required to perform extraction.
- C. It takes up to 12 hours for Vitamin K reverse effects of warfarin.
- D. Heparin can be administered sub-cutaneous and acts rapidly.

Answer: D.

140. *Patient on anti-coagulant therapy requires an extraction to be performed. Which of the following is NOT true?*

- A. Post operative bleeding can be reduced somehow by using tranexemic acid.
- B. Prothrombin values of at least 2.5 is required to perform extraction.
- C. It takes at least 8 hours for heparin to take affects.
- D. Heparin should be administered sub-cutaneous.

Answer: C. (Appendix II)

141. *What is not true about tobacco smoking?*

- A. Redox potential is reduced resulting in anaerobic bacteria.
- B. It is caries immuno-suppressive.
- C. It is adrenergic.
- D. Affects neutrophils and chemotactic factors

Answer: B.

It alters the immune system and its reaction to the irritant, as a results smoking considred to be a predisposing factors for periodontal disease. But smoking might affect of PH make it more acidic resulting in more caries. So might affaects both PDD and caries but with different mechanism. Possible mechanisms through which smoking alters the expression of periodontal diseases include effects on the composition of plaque and effects on the host response. It has been hypothesized that smoking, through altering the oxidation-reduction potential in favour of anaerobic micro-organisms, would favour the formation of a more pathogenic plaque. However, in vive evidence for an altered composition of plaque is weak. Tobacco may alter the immune system's capacity to maintain an ecological balance. Smoking diminishes oral cellular immunity by reducing the chemotactic response and phagocytic capacity of leukocytes. Smoking causes peripheral vasoconstriction, further limiting the ability of the tissues to effect an immune response.

Table 1. Summary of major biological effects of tobacco related to dental caries

Forms of tobacco use	Biological effects
Tobacco smoking	<ul style="list-style-type: none"> • Concentration of thiocyanate found to be higher in smoker's saliva may have possible caries inhibiting effect (13). • Decreased buffering effect and possible lower pH of saliva in smokers may indicate increased susceptibility to caries (13, 14). • Higher number of <i>Lactobacilli</i> and <i>Streptococcus mutans</i> in smokers may indicate caries susceptibility (13, 14).
Environmental tobacco smoke (ETS)	<ul style="list-style-type: none"> • Biological plausibility of causal role of ETS in caries formation in children (32). • Immunosuppressive properties of ETS might be a risk factor for dental caries development (32, 36, 37). • ETS may decrease serum vitamin C level, which may be associated with growth of cariogenic bacteria in children (32, 38, 39). • ETS may reduce the protective properties of saliva that can operate against caries (32, 40).
Smokeless tobacco (ST)	<ul style="list-style-type: none"> • High levels of fermentable sugar and sweeteners in ST can stimulate growth of cariogenic bacteria (55, 56, 59). • Extracts from chewing tobacco with high sugar content increased in vitro growth of <i>Lactobacillus casei</i> (59, 61). • Extracts of ST may serve as a growth substrate for <i>Streptococcus mutans</i>, <i>Streptococcus salivarius</i> and <i>Streptococcus sanguis</i> (64).

142. Patient in your dental chair shows chest pain, weak pulse and dyspnea, what is your initial management?

- Give a nitro-glycerine tablet and keep the patient up seated. This answers is for any of the angina symptoms.
- Put the patient in supine position.
- Do nothing and wait until the symptoms go.

Answer: A.

143. What are two teeth connected at the cementum called?

- Concrescence.
- Dilaceration.
- Gemination.
- Fusion.

Answer: A.

144. Developer contaminated with other chemical and was not mixed properly. What is the effect on the X-ray film?

- Too dark film.
- Light film.
- Foggy.

Answer: C.

Developer leads to darken the film by reaction with energized silver atoms from exposure to X-ray radiation.

Fixer leads to clearing the latent image by fixing the silver bromide that were not exposed to X-ray radiation.

The film can be too dark for three reasons, each of which has a number of possible explanations:

Reason	Possible causes
Overexposure	Usually the time of the exposure is too great because the incorrect exposure setting has been selected by the operator. The X-ray set timer may be faulty.
Over- development	The developer solution could be too hot or too concentrated. The film could have been left in the developer for too long.
Fogged film	Light leakage in the darkroom, faulty safe lighting or poor film storage. Use of old film as a result of poor stock control.

145. Which part of the cranium is considered as the most stable area?

- A. Frankfort plane.
- B. Occlusal plane.
- C. Anterior cranial plane.
- D. Anterior nasal to gnathion.

Answer: C.

Sella Nasion Line which is consider the anterior cranial base or plane, is the most stable line because of early cessation of growth.

146. The difficulty of placing matrices on deciduous dentition is a result of:

- A. The small mouth of kids which result in problem keeping the matrices in their mouths.
- B. The occlusal convergence of the deciduous teeth.

Answer: B.

147. What would you expect to see a year after Auto- transplantation of tooth in a prepared socket?

- A. New well-formed periodontal ligament.
- B. Degree of external resorption and fibrous tissues.
- C. New well formatted lamina dura.

Answer: B.

148. Best A MULTILOCULAR RADIO LUCENCY

Radiographic view	Reason
Panoramic radiograph or an oblique lateral	To show the lesion from the lateral aspect. The oblique lateral would provide the better resolution but might not cover the anterior extent of this large lesion. The panoramic radiograph would provide a useful survey of the rest of the jaws but only that part of this expansile lesion in the line of the arch will be in focus. An oblique lateral view was taken.
A posterior-anterior (PA) of the jaws	To show the extent of mediolateral expansion of the posterior body, angle or ramus.
A lower true (90°) occlusal	To show the lingual expansion which will not be visible in the PA jaws view because of superimposition of the anterior body of the mandible.
A periapical of the lower right second premolar and the first molar	To assess bone support and possible root resorption.

radiograph for multilocular lesion at the angle of the mandible i: (Odell, page 8)

- A. Lateral oblique.
- B. OPG.
- C. CBCT.
- D. Occlusal

Answer: A.

149. Which of the following is not a proper indication?

- A. Zygomatic complex-Occipetomental view.
- B. Condylar fracture-Reverse Towns view.
- C. Maxillary fracture-OPG.

Answer: C.

For A, it is Zygomatic complex which is seen as a jug handle in occipitomental radiograph but if it was zygomatic ARCH then it would have been wrong, in that case submentovertex would be correct.

150. *Slip casting is a method utilized to construct all-ceramic restoration with:*

- A. castable glass ceramic.
- B. leucite-reinforced glass ceramic.
- C. alumina-reinforced glass ceramic.
- D. zirconia whiskers-reinforced glass ceramic.

Answer: C.

The In-Ceram technique uses alumina ceramics and glass in a two-step firing procedure to create a high-strength core material for single-tooth restorations as well as small fixed partial dentures. Fine-grain alumina particles are sintered to form a porous substructure, which is infiltrated with molten glass. The combination of these two processes gives the material its outstanding properties. The sintering process is almost without shrinkage, providing an excellent fit, while the glass infiltration leaves practically no porosities, resulting in high strength (Quintessence Int. 1992 Jan;23(1):25-31).

151. *Nitrous Oxide is contraindicated in:*

- A. Heart disease.
- B. Asthma.
- C. Mental retardant.
- D. Sick cell anaemia.

Answer: C.

152. *Blood count is least useful in which of the following?*

- A. Leukaemia.
- B. Lymphoma.
- C. Neutropenia.
- D. infectious mononucleosis.

Answer: D.

We cannot diagnose lymphoma by a blood test. All you can do is review the results and see if "something" appears to be wrong. Lymphoma circulates within the lymph system and not the blood system so detecting lymphoma by a simple blood test is extremely unlikely. What they can detect however is abnormal blood counts which simply gives them a clue to look for a cause. A positive "mono spot" test is usually enough to confirm infectious mononucleosis. The mono spot test is a rapid test used to detect the presence of antibodies. Also the blood test shows eosinophilia.

153. *Veneers:*

- A. are useful in adults because of completed growth.
- B. are useful in adolescents where more extensive tooth preparation may risk exposure.
- C. Both of the above

Answer: A.

This question mentions veneers, and porcelain veneers should not be put until the gingival contours are at their correct position.

154. *Most reliable method for occlusal caries determination in water fluoridated community:*

- A. explorer.
- B. bitewing radiograph.
- C. Transillumination.
- D. periapical radiograph.

Answer: C.

In the fluoride area, caries can penetrate deeply into dentine in individual teeth with little visual surface change being evident (occult or hidden caries). Therefore, diagnostic aids such as x-rays may be very helpful.

RADIOGRAPHY

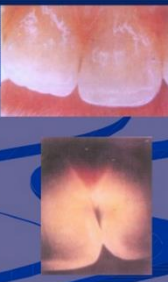
- Carious lesions are detectable radiographically when there has been enough demineralization to allow it to be differentiated from normal
- They are valuable in detecting proximal caries which may go undetected during clinical examination.
- On average they have around 50% to 70% sensitivity in detecting carious lesions.
- 40% demineralization is required for definitive decision on caries

Pitfalls Of Radiography

- 2 dimensional view of 3 dimensional object
- Radiographic depth of a lesion is often less than actual depth
- Overlapping of proximal surfaces on a radiograph
- Occlusal (incipient) caries of enamel difficult to detect
- Dental anomalies like hypoplastic pits mimic proximal caries
- Cervical burnout often confused with root caries.

FIBEROPTIC TRANSILLUMINATION

- Different index of light transmission for decayed & sound tooth. Decayed tooth structure has decreased index & appears dark
- The tooth is illuminated using fiber optics
- Have a high level intra & inter-examiner variability
- Digital imaging FOTI introduced, images captured by a CCD camera & fed into the computer for image analysis
- DIFOTI can detect caries on all types of teeth & also detect incipient & recurrent caries before their visibility on radiographs



155. *What is the advantage of composite over silicate resin?*

- A. Less shrinkage.
- B. Less surface erosion.
- C. Less water absorption.
- D. All of the above

Answer: D.

156. *Before you restoring tooth with cervical abrasion what u do first?*

- A. Clean it and dry.
- B. Apply bicarbonates acids.
- C. Perform prophylaxis and polish.
- D. Perform scaling and polish.

Answer: D.

For a lesion in gingival area do not use prophylaxis paste (interfere with adhesion and ion exchange), just clean it with pumice and water, condition with polyacrylic acid for 10 sec, wash and dry thoroughly. Then RMGIC and cure for 20 sec.

157. A 7 years old child has normal occlusion except for a marked lingual eruption of a maxillary central incisor. Which of the following is the best orthodontic therapy?

- A. Crossbite elastics.
- B. Home therapy with a tongue blade.
- C. Maxillary acrylic inclined plane.
- D. Myofunctional therapy.
- E. A maxillary appliance to apply labial force.

Answer: B.

If erupting single teeth then tongue blade, if functional mandibular shift caused cross-bite then anterior Lingual plate. If it's dental cause and there is enough space in arch for correction then use modified Hawley appliance. (Appendix III)

158. What is NOT a result of thumb sucking habit?

- A. lingual deviation of lower incisors.
- B. labial deviation of upper incisors.
- C. narrow palate.
- D. unilateral crossbite.
- E. none of the above.

Answer: D.

159. Single retroclined upper incisor in 9 years old, space is sufficient. What is your management?

- A. Anterior inclined plane on mandibular teeth.
- B. Bite plane.
- C. Expansion screw.
- D. Hawley appliance.

Answer: D.

Hawley with z spring and bilateral bite blocks posteriorly to open the bite to reposition the retroclined incisor.

160. What is the treatment of displaced left condylar fracture?

- A. soft diet.
- B. closed reduction.
- C. open reduction.
- D. inter maxillary fixation.
- E. elastic inter maxillary fixation.

Answer: B.

To decide whether closed or opened you should look at the x ray and evaluate the next factors:

Open reduction is used in the following cases:

- degree of displacement , if its severe and displaced into cranial fossa or more than 30°.
- bilateral fracture.
- delated treatment after some days.
- there are many other factors please read about them as the position of fracture if its high or low.

Closed reduction is the safest and used management for subcondylar fracture.

If the fracture is simply displaced and patient has normal occlusion with teeth and you can easily reduce the displaced parts manually.

161. You have successfully treated a class II/2 malocclusion. The ideal class I incisor relationship has been produced and upper first premolars were extracted. The arches are now aligned. What molar occlusion will be there at the end of treatment when all spaces are closed?

- A. Full unit class II.
- B. ½ unit class II.
- C. Class I.
- D. ½ unit class III.
- E. Full unit class III.

Answer: A.

162. Branchial Cleft cyst is located:

- A. Medial to the neck.
- B. On anterior border of the Sternocleidomastoid muscle.
- C. shows when swallowing

Answer: B.

163. The most common way of oral carcinomas to other tissues is/are:

- A. Lymphatic.
- B. Invasion and blood.
- C. Lymphatic and invasion.
- D. Blood and lymphatic.

Answer: C.

164. Which of the following is true in regard to smoking?

- A. Smokers keratosis is common but metaplasia activity is not recognized.
- B. Redox potential is increased resulting in aerobic bacteria.
- C. Tissue perfusion is decreased resulting in increased infection.

Answer: C.

165. *What is true about smokers?*

- A. Causes immunosuppression.
- B. Increases redox potential of smokers fibrous growth of anaerobic organisms.
- C. Defects neutrophil function and characteristics.
- D. Can produce smokers palate but rarely metaplasia.

Answer: C.

166. *Which of the following statements is incorrect regarding Smoker's Keratosis?*

- A. Typically affects the hard palate.
- B. Minor mucous glands are swollen with red orifices.
- C. There is a little regression if smoking is stopped.

Answer: C.

167. *How do you assess that the root planning is completed?*

- A. There is no bleeding on probing after 3 weeks.
- B. There is no inflammation of gingival after 3 weeks.
- C. Checking the root surface for smooth and shiny surface.

Answer: C.

It is written in question after "COMPLETED", which is a tricky one so means answer is C. We have to choose option A when they ask about "SUCCESSFUL".

168. *The main purpose of periodontal treatment is:*

- A. elimination of plaque and calculus.
- B. elimination of periodontal pockets.
- C. reformation of all the periodontal ligaments.
- D. elimination of all occlusal trauma.

Answer: A.

Periodontal surgery aims towards removal of pockets and reattachment of new functional epithelium, while periodontal treatment aims to eliminate biofilm and calculus.

169. *What is the approximate unstimulated salivary flow rate?*

[TABLE 5] Flow Rates of Whole Saliva		
Whole Saliva Flow Rates (ml/min)		
	Normal Flow Rates	Abnormal Flow Rates
Unstimulated (Resting) Whole Saliva*	0.3 - 0.4 ml/min	< 0.1 ml/min
Stimulated Whole Saliva*	1 - 2 ml/min	< 0.5 ml/min

- A. 2 ml/min.
- B. 0.2 ml/min.
- C. 0.02 ml/min.
- D. 20 ml/min.

Answer: B.

Approximately 500ml of saliva secreted daily. Rates vary greatly between individual but less than 2 ml in 10 minutes (0.2ml/min) unstimulated whole saliva is generally considered to indicate xerostmia (Odell, page 34).

170. *Why is it difficult to use matrices on deciduous teeth?*

- A. It hurts the kids' parents.
- B. The small mouth opening of kids in that age range makes it difficult to keep matrices in mouth.
- C. The occlusal concavity of deciduous teeth.

Answer: C.

171. *For thermal and electric pulp tests,*

- A. It will give an accurate indications of the pulp status.
- B. The patient's response will be either pain or no pain.
- C. The patient can differentiate between cold or hot stimuli.

Answer: B.

172. *Under normal conditions, the most definitive test to confirm the loss of pulp vitality is:*

- A. applying warm gutta percha to the crown.
- B. cutting into the dentin without anaesthetic.
- C. applying ethyl chloride to the crown.
- D. performing a radiographic examination of the tooth.
- E. performing an electric pulp test.

Answer: B.

Electric test has a false negative and a false positive results and it's inaccurate, thermal test is also unreliable because heat might be transmitting to the underlying tissue and the patient will feel pain. So it's definitely a cavity test .

173. *Most reliable test for healing integrity of pulp:*

- A. thermal pulp test.
- B. electric pulp test.
- C. Cavity pulp test.

Answer: C.

Healing integrity is the ability of the pulp to regain the nerve reaction to external stimuli. Thermal and electrical tests can be non-reliable for two main reasons. First teeth who are undergoing healing are mainly restored / undergone mechanical trauma and will give false results. Second there is no restorative material until now has the same thermal or electrical conduct as the natural enamel and dentin. For these two reasons we cannot rely on them to test if the pulp healing integrity is regained, the most reliable way is by drilling.

174. *Caries which is close to the pulp chamber; on x rays you find dens in dent; the right treatment is:*

- A. Zinc oxide eugenol cement and amalgam.
- B. Pulpotomy.
- C. Pulpotomy.
- D. Calcium hydroxide on pulp and amalgam.

Answer: D.

Management of Dens in Dent:

- If newly erupted, the palatal fissures should be sealed as a preventive measure.
- If caries is evident, then place an acid-etched retained composite resin.
- If symptomatic and the root canal morphology is favourable, endodontic treatment of the root can be undertaken.
- If the internal anatomy is complex and the root canal is not negotiable then, in the event of infection, extraction is necessary. The presence of this anomaly should be carefully considered during orthodontic treatment planning.

175. *Best way to confirm tooth is non-vital?*

- A. negative response to electric test.
- B. negative response to cold test.
- C. negative response to hot gutta percha.
- D. periapical radiolucency around the root.

Answer: D.

It has been mentioned in the question to CONFIRM the non vitality, obviously one must have done the thermal or electrical test earlier.

176. *Immediately after the extraction of lower molar the patient complains of post operation bleeding and pain, how would manage this?*

- A. Prescribe analgesics and ask the patient to follow a strict oral hygiene.
- B. Administer 5% Marcaine Local Anastatic, prescribe analgesics and pack the socket with alvogyl.
- C. Administer 5% Marcaine Local Anastatic, suture the socket and prescribe analgesics.
- D. Suture and give pressure packs.

Answer: D.

- Neither marcaine (bupivacaine) nor ropivacaine are available in dental cartridge in Australia. The dose for bupivacaine is 0.25% for local infiltration and 0.5% for blocks, and it is should not be given to children under 12 years old. Furthermore the dose for ropivacaine is 0.5% that can be used in children because it is less potent than bupivacaine (TG, page 117)
- Usually immediately after extraction the patient will not feel pain because he is still under the effect of anesthesia.
- Immediately after the extraction (the patient still on dental chair), the patient complains of post operation bleeding how would manage this?. We have to apply a firm pressure at the site of the bleed, this will be sufficient to stop bleeding in most instances. Otherwise we have to follow the necessary protocol in Australia (TG, table 20 page 200).

- If the patient has bleeding and pain after being dismissed and the effect of anesthesia disappear we have to follow the necessary protocol in Australia (TG, table 20 page 200).

177. *Gracey curette is characterized by:*

- A. The blade and the shank form 90° angle.
- B. Can be used on both side.
- C. Can be used on any tooth surface.
- D. It is specific for each surface of the tooth.

Answer: D.

Gracey curette is used for subgingival calculus and its blade is 45 ° angle.

178. *Periodontitis characterized by:*

- A. Slow linear progress.
- B. circulating or bursts.
- C. quick progress.

Answer: B.

179. *Root planning is to:*

- A. remove infected Cementum.
- B. make root surface biologically acceptable.
- C. make root surface mechanically acceptable.

Answer: A.

180. *Bacteria at the base of periodontal pocket is:*

- A. aerobic gm positive.
- B. aerobic gm negative.
- C. non-aerobic gm negative motile.
- D. non-aerobic gm positive non-motile

Answer: C.

181. *How do you assess that the root planning is completed?*

- A. There is no bleeding on probing after 3 weeks.
- B. There is no inflammation of gingival after 3 weeks.
- C. Check the root surface for smooth and shiny surface.

Answer: C.

It is written in question after "COMPLETED", which is a tricky one so means answer is C. Choose option A when they ask about "SUCCESSFUL or EFFECTIVENESS".

182. A female patient, maxillary premolar, has gingival recession less than 1mm and attached gingiva 5mm. There is sensitivity by cold and air during examination. Rest of mouth is healthy. no gum bleeding and complain by patient. What is the treatment?

- A. lateral flap.
- B. apical flap.
- C. scaling and root planning.
- D. tell reason of sensitivity and give oral hygiene instruction.
- E. connective tissue flap.

Answer: D.

183. A 13 year old has enlarged gingivae; gives a history of Dilantin sodium what is your treatment?

- A. Oral prophylaxis and gingivoplasty.
- B. Oral prophylaxis, scaling, root planning.
- C. Stop medication.

Answer: A.

184. The removable partial denture requires relining what is would be the most appropriate action?

- A. Take a new impression by asking the patient to occlude on it.
- B. Provide equal space (may be it was thickness) between denture and gingival tissues.
- C. Make sure the framework and retainers are seated in place before taking impression.

Answer: C.

185. Why do we use Corticosteroid material in pulp obturation?

- A. To prevent the inflammatory process.
- B. As an Antibiotic.
- C. To minimize pressure on the periapical tissues.

Answer: A.

186. What is correct in regards to high copper amalgam?

- A. Reacts and strengthens the amalgam by its dispersion properties.
- B. Reacts to form copper-tin phase thereby eliminating the tin-mercury phase.
- C. Reacts to form copper-silver phase thereby eliminating the silver mercury phase.
- D. Reacts and strengthens the amalgam by its grain diffusion.

Answer: B.

187. *What is the best way to get optimum adoption of ceramic to metal?*

- A. Slow firing.
- B. High compression.
- C. Under tension.
- D. Fired several times before completion.

Answer: B.

188. *In the construction of a full veneer gold crown, future recession of gingival tissue can be prevented or at least minimized by?*

- A. Extension of the crown 1 mm under the gingival crevice.
- B. Reproduction of normal tooth incline in the gingival one third of the crown.
- C. Slight over contouring of the tooth in the gingival one fifth of the crown.
- D. Slight under contouring of the tooth in the gingival one fifth of the crown.

Answer: B.

189. *Which of the following does not affect the elasticity of retentive clasp?*

- A. Length of the arm.
- B. The cross section shape.
- C. The material used.
- D. The undercut area.

Answer: D.

190. *Following calcium hydroxide pulpotomy, the dentist would expect dentine bridge to form at:*

- A. The exact level of amputation.
- B. Level somewhere below the amputation.
- C. Half way between amputation and apex.
- D. At the apical region of the tooth.

Answer: B.

191. *The location of Class V is in,*

- A. The buccal pit /fissure.
- B. The occlusal surface.
- C. The cervical third.

Answer: C.

192. *While you finish a class I cavity, the enamel is sound but you notice a thin brown line in the dentine and on the dentino-enamel junction, what is your response?*

- A. You leave it and complete the final restoration.
- B. You extend your preparation and clean it.
- C. You apply a cover of varnish.

Answer: B.

Since it is not mentioned if it is just a stain, it could be infected so we have to remove it. In addition the caries spread at DEJ follow this pattern when reaches this area and no decay should be left at DEJ.

193. *Occlusal cavity with extension of the buccal fissure is classified as,*

- A. Class II.
- B. Class III.
- C. Class I.

Answer: C.

194. *Which of the following is true regarding TMJ dysfunction?*

- A. It is always due to arthritis, should be treated with NSAIDS before attempting surgery.
- B. Raising bite increases the space in the joint and should be attempted before surgery.
- C. It is mostly due to the medial movement of the condylar head over the glenoid fossa.

Answer: B.

A bite-raising appliance is often a very good method of reducing symptoms. This fits over the teeth and prevents grinding and/or clenching (often occurs at night). Because of the anatomy of the TMJ, this type of appliance alters the functional relationship of the joint elements and therefore gives symptomatic relief.

Medications which is anti-inflammatory, pain relief medications, or muscle relaxants may help.

195. *The beam that leaves the target is called:*

- A. The primary X-ray.
- B. The electrons.
- C. The secondary rays.
- D. X-rays photons.

Answer: D.

Electric current to cathode plate emit electrons, which reaches the target plate n converts into photons n these xray photons are emitted from x-ray tube, passes through the body part n absorb by film. Bones block the photons n soft tissue allows photons rays to reach x-ray film.

196. *The most common cause of caries in children is:*

- A. Soft diet.
- B. High intake of carbohydrate.
- C. Poor oral hygiene.

Answer: B.

197. *Most common way to induce anesthesia in children is:*

- A. Infiltration anesthesia.
- B. Nerve block anesthesia.
- C. Inhalation sedation.
- D. Oral sedation.

E. General anesthesia

Answer: A.

Oral sedation is the most popular route used by paediatric dentists, due to the ease of administration for most children. (Cameron, page 50).

198. Which is not true in sickle cell anaemia?

- A. Deformed cells with less oxygen transport capacity.
- B. Higher infraction risk.
- C. Have wide bone marrow spaces with narrow trabeculae in the alveolar bone of oral cavity.
- D. Resistant to malaria parasites.
- E. More common in Mediterranean people.

Answer: E.

The question mentioned more common and it is not thalassemia is more common in Mediterranean people.

- The malaria parasite has a complex lifecycle and spends part of it in red blood cells. In a carrier, the presence of the malaria parasite causes the red blood cells with defective haemoglobin to rupture prematurely, making the Plasmodium parasite unable to reproduce. Further, the polymerization of Hb affects the ability of the parasite to digest Hb in the first place. Therefore, in areas where malaria is a problem, people's chances of survival actually increase if they carry sickle-cell trait (selection for the heterozygote).
- Thalassemia is more common in Mediterranean people.
- Sickle cell anemia is most common in is common in african-american (White and Phaora 490).
- Sickle cell anemia is most common in people whose families come from Africa, South or Central America (especially Panama), Caribbean islands, India, and Saudi Arabia. But might Mediterranean countries (such as Turkey, Greece, and Italy).

199. The main purpose of finishing the enamel walls is:

- A. Remove loose enamel rods.
- B. Provide a better surface for the adoption of restorative material.

Answer: A.

Appendix I

There are four suprahyoid muscles. As the name suggests, all the muscles are located **superiorly** to the **hyoid** bone of the neck. In addition, they all act to elevate the hyoid bone, an action that initiates **swallowing**. All the muscles are **paired** structures, appearing in the left and right sides of the neck.

Stylohyoid

The stylohyoid is a thin muscular strip, which is located **superiorly** to the digastric muscle.

Attachments: Arises from the styloid process of the temporal bone, and attaches to the lateral side of the hyoid bone.

Actions: Initiates a swallowing actions by pulling the hyoid bone in a posterior and superior direction.

Innervation: Facial Nerve (VII).

Digastric

This muscle is comprised of two muscular bellies, connected by a tendon. In some cadavers this tendon can perforate the stylohyoid.

Attachments: The anterior belly arises from the digastric fossa of the mandible. The posterior belly arises from the mastoid process of the temporal bone. The two bellies are connected by an intermediate tendon, which is attached to the hyoid bone via a fibrous sling.

Actions: Depresses the mandible and elevates the hyoid bone.

Innervation: The two parts of the digastric muscles have different innervations. The anterior belly is innervated by the trigeminal nerve, the posterior by the facial nerve.

Mylohyoid

The mylohyoid muscle is a broad, triangular shaped muscle. It forms the floor of the oral cavity, thus supporting the floor of the mouth.

Attachments: It originates from the mylohyoid line of the mandible, and attaches onto the hyoid bone.

Actions: Elevates the floor of the mouth and the hyoid bone.

Innervation: Trigeminal nerve.

Geniohyoid

Located deep to the mylohyoid muscle, the geniohyoid lies close to the midline of the neck.

Attachments: Arises from the inferior mental spine of the mandible. It then travels inferiorly and posteriorly to attach to the hyoid bone.

Actions: Depresses the mandible and elevates the hyoid bone.

Innervation: By C1 roots that run within hypoglossal nerve.

Appendix II

Prothrombin time and INR

Prothrombin time (PT) is a **blood** test that measures how long it takes blood to clot. A prothrombin time test can be used to check for bleeding problems. PT is also used to check whether medicine to prevent blood clots is working.

A PT test may also be called an INR test. INR (international normalized ratio) stands for a way of standardizing the results of prothrombin time tests, no matter the testing method. So your doctor can understand results in the same way even when they come from different labs and different test methods. In some labs, only the INR is reported and the PT is not reported.

Blood **clotting factors** are needed for blood to clot (coagulation). Prothrombin, or factor II, is one of the clotting factors made by the **liver**. **Vitamin K** is needed to make prothrombin and other clotting factors. Prothrombin time is an important test because it checks to see if five different blood clotting factors (factors I, II, V, VII, and X) are present. The prothrombin time is made longer by:

- Blood-thinning medicine, such as warfarin.
- Low levels of blood clotting factors.
- A change in the activity of any of the clotting factors.
- The absence of any of the clotting factors.
- Other substances, called inhibitors, that affect the clotting factors.
- An increase in the use of the clotting factors.
- An abnormal prothrombin time is often caused by **liver** disease or injury or by treatment with blood thinners.

Another blood clotting test, called **partial thromboplastin time** (PTT), might be used if you take another type of blood-thinning medicine called **heparin**. This test measures other clotting factors. Partial thromboplastin time and prothrombin time are often done at the same time to check for bleeding problems or the chance for too much bleeding in surgery.

Why it is done?

Prothrombin time (PT) is measured to:

- Find a cause for abnormal bleeding or bruising.
- Check the effects of warfarin (**Coumadin**). You will have the test regularly to make sure you are taking the right dose.
- Check for low levels of blood clotting factors. The lack of some clotting factors can cause bleeding disorders such as **hemophilia**, which is passed in families (inherited).
- Check for a low level of vitamin K. Vitamin K is needed to make prothrombin and other clotting factors.
- Check if it is safe to do a procedure or surgery that might cause bleeding.

- Check how well the liver is working. Prothrombin levels are checked along with other liver tests, such as aspartate aminotransferase and alanine aminotransferase.
- Check to see if the body is using up its clotting factors so quickly that the blood can't clot and bleeding does not stop. This may mean the person has [disseminated intravascular coagulation \(DIC\)](#).

Results

Prothrombin time (PT) is a blood test that measures how long it takes blood to clot.

- **Normal**

The normal values listed here—called a reference range—are just a guide. These ranges vary from lab to lab, and your lab may have a different range for what's normal. Your lab report should contain the range your lab uses. Also, your doctor will evaluate your results based on your health and other factors. This means that a value that falls outside the normal values listed here may still be normal for you or your lab.

A method of standardizing prothrombin time results, called the international normalized ratio (INR) system, has been developed so the results among labs using different test methods can be understood in the same way. Using the INR system, treatment with warfarin (Coumadin) will be the same. In some labs, only the INR is reported and the PT is not reported.

Prothrombin time (PT) and international normalized ratio (INR)	
Prothrombin time (PT):	11-13 seconds
International normalized ratio (INR):	0.8-1.1

The warfarin (Coumadin) dose is changed so that the prothrombin time is longer than normal (by about 1.5 to 2.5 times the normal value or INR values 2 to 3). Prothrombin times are also kept at longer times for people with artificial [heart](#) valves, because these valves have a high chance of causing clots to form.

- **Abnormal values**

- A longer-than-normal PT can mean a lack of or low level of one or more blood clotting factors (factors I, II, V, VII, or X). It can also mean a lack of vitamin K; liver disease, such as [cirrhosis](#); or that a liver injury has occurred. A longer-than-normal PT can also mean that you have [disseminated intravascular coagulation \(DIC\)](#), a life-threatening condition in which your body uses up its clotting factors so quickly that the blood cannot clot and bleeding does not stop.
- A longer-than-normal PT can be caused by treatment with blood-thinning medicines, such as warfarin (Coumadin) or, in rare cases, heparin.

What Affects the Test

Reasons you may not be able to have the test or why the results may not be helpful include:

- Taking medicines that can affect the action of blood thinners (such as warfarin) and vitamin K. These include [antibiotics](#), aspirin, [cimetidine](#) (Tagamet), barbiturates, [birth control](#) pills, hormone therapy (HT), and vitamin K supplements.
- Having severe [diarrhea](#) or [vomiting](#) that causes fluid loss and [dehydration](#). This may make the PT time longer. If [diarrhea](#) is caused by poor absorption of nutrients, vitamins, and minerals from the intestinal tract ([malabsorption syndrome](#)), the PT may be longer because of a lack of vitamin K.
- Eating foods that have vitamin K, such as broccoli, chickpeas, kale, turnip greens, and soybean products.
- Drinking a lot of alcohol.
- Taking some herbal products or natural remedies.

What To Think About

- The U.S. Food and Drug Administration (FDA) has approved a home test for prothrombin time (PT). If you need a PT test frequently and for a long time, you may want to ask your doctor if this home test is an option for you.
- A PT is done at the same time of day each time so test results can check whether the right dose of warfarin is being used to prevent [blood clots](#).
- Another blood clotting test, called partial thromboplastin time (PTT), measures other clotting factors. Partial thromboplastin time and prothrombin time are often done at the same time to check for bleeding problems. To learn more, see the topic [Partial Thromboplastin Time](#).
- Prothrombin levels are checked along with other liver tests, such as aspartate aminotransferase and [alanine aminotransferase](#) to check how the liver is working.
- [Aspartate Aminotransferase \(AST\)](#)
- [Alanine Aminotransferase \(ALT\)](#)

Partial Thromboplastin Time

Partial thromboplastin time ([PTT](#)) is a [blood](#) test that measures the time it takes your blood to clot. A PTT test can be used to check for bleeding problems.

Blood [clotting factors](#) are needed for blood to clot (coagulation). The partial thromboplastin time is an important test because the time it takes your blood to clot may be affected by:

- Blood-thinning medicine, such as [heparin](#). Another test, the activated partial thromboplastin time (APTT) test, may be used to find out if the right dose of heparin is being used.
- Low levels of blood clotting factors.
- A change in the activity of any of the clotting factors.
- The absence of any of the clotting factors.
- Other substances, called inhibitors, that affect the clotting factors.
- An increase in the use of the clotting factors.

Another blood clotting test, called [prothrombin time](#) (PT) or INR (international normalized ratio), measures other clotting factors. Partial thromboplastin time and prothrombin time are often done at the same time to check for bleeding problems caused by a problem with the clotting factors.

Why It Is Done

Partial thromboplastin time (PTT) is done to:

- Find a cause of abnormal bleeding or bruising.
- Check for low levels of blood clotting factors. The lack of some clotting factors can cause bleeding disorders such as [hemophilia](#).
- Check for conditions that cause clotting problems. Conditions such as [antiphospholipid antibody syndrome](#) or [lupus](#) anticoagulant syndrome develop when the immune system makes [antibodies](#) that attack blood clotting factors. This can cause the blood to clot easily in veins and [arteries](#).
- Check if it is safe to do a procedure or surgery that might cause bleeding.
- Check how well the [liver](#) is working.

The activated partial thromboplastin time (APTT) test is used after you take blood-thinners to see if the right dose of medicine is being used. If the test is done for this purpose, an APTT may be done every few hours. When the correct dose of medicine is found, you will not need so many tests.

Results

Partial thromboplastin time (PTT) is a blood test that measures the time it takes your blood to clot.

- **Normal**

The normal values listed here—called a reference range—are just a guide. These ranges vary from lab to lab, and your lab may have a different range for what's normal. Your lab report should contain the range your lab uses. Also, your doctor will evaluate your results based on your health and other factors. This means that a value that falls outside the normal values listed here may still be normal for you or your lab.

Partial thromboplastin time	
Partial thromboplastin time (PTT):	60–70 seconds
Activated partial thromboplastin time (APTT):	30–40 seconds

The heparin dose is changed so that the PTT or APTT result is about 1.5 to 2.5 times the normal value.

- **Abnormal values**

- A longer-than-normal PTT or APTT can mean a lack of or low level of one of the blood clotting factors or another substance needed to clot blood. This can be caused by bleeding disorders, such as [hemophilia](#) or [von Willebrand's disease](#).
- A longer-than-normal PTT or APTT can be caused by [liver](#) disease, [kidney](#) disease (such as [nephrotic syndrome](#)), or treatment with blood thinners, such as heparin or warfarin (Coumadin).
- A longer-than-normal PTT may be caused by conditions such as antiphospholipid antibody syndrome or [lupus](#) anticoagulant syndrome. These conditions happen when the immune system makes [antibodies](#) that attack blood clotting factors. This can cause the blood to clot easily in veins and arteries.
- The PTT can get longer when you are using heparin, so your PTT value needs to be closely checked. If you have a longer PTT, you may have a higher risk of bleeding.

What Affects the Test?

Reasons you may not be able to have the test or why the results may not be helpful include:

- Taking some herbal products or natural remedies.
- Taking some medicines, such as [antihistamines](#).

What To Think About

- The partial thromboplastin time (PTT) and activated partial thromboplastin time (APTT) may be normal in people who have inherited bleeding disorders but have only mild symptoms.
- The APTT is used to check treatment of people who are using heparin or other blood-thinning medicine to prevent [blood clots](#).
- Sometimes people who use heparin have a higher APTT because of other substances in their blood and not because of blood-thinning medicines. A test called the heparin neutralization assay may be done to see if this is true.
- Another blood clotting test, called prothrombin time (PT), measures other clotting factors. Partial thromboplastin time and prothrombin time are often done at the same time to check for bleeding problems. To learn more, see the topic [Prothrombin Time and INR](#).
- An PTT or APTT is done regularly in people who have bleeding or clotting problems. The tests are also done before procedures or surgeries where too much bleeding may be a concern.

Appendix III

Management

Tongue blade

If there is only one permanent incisor in cross-bite without an excessive overbite, a tongue blade, or paddle pop stick may be used to correct this. The stick is placed lingual to the upper tooth in cross-bite and the patient instructed to close firmly against the stick while it is held in position against the chin. The child should hold it there while biting against it and another person should count to 50 out loud, as in one apple, two apples, etc., for approximately 1 minute. Repeat this six times per day with an interval of at least half an hour. Correction is often complete within a few days.

Inclined planes

Where there is a functional shift of the mandible into an anterior cross-bite, an acrylic inclined plane can be fitted to the lower incisors to restrict the forward posturing and place pressure on the palatal of the maxillary incisors to push them labially. Alternatively, a composite build-up of the lower incisors will mimic the action of an incline plane. (It is preferable to choose a shade of composite resin that is easily distinguished from normal tooth structure to facilitate safe removal).

Treatment is usually complete within a few weeks. This appliance works best where there is a slight increase in overbite, which helps to retain the incisors in positive overjet once the appliance is removed.

Removable appliances (Figure 14.16)

- These appliances should only be used to correct cross-bites of dental origin.
- A modified Hawley appliance can be used in the maxilla to correct one or two teeth in cross-bite.
- Ensure there is adequate space to move the teeth into the desired position and movement will occur rapidly.
- Occlusal surfaces of both the primary and permanent molars should be covered to open the bite and allow free labial movement of the teeth in cross-bite.
- Adams' clasps are placed on the first permanent molars.
- If the primary molars are present, ball-ended clasps can be fabricated to engage the interproximal areas of these teeth.

Where a single tooth is in cross-bite, a Z-spring placed palatally to the malposed tooth can be used, or if both central incisors are in cross-bite, two springs can be used to provide sweep arms on the palatal surface. Initially, the appliance should be fitted and checked for comfort with the springs passive. The springs are then activated 1–2 mm at a time. The patient is reviewed after 4 weeks to reactivate the springs as required and to check the retention of the appliance.

As with all removable appliances, the success of treatment is reliant on cooperation and compliance. If these qualities can be encouraged and the patient takes responsibility for the wearing of the appliance, treatment will progress satisfactorily. Occasionally,