*601. What is given to hemophilia patient before extraction or surgery?*

A. Penicillin (antibiotic).
B. Diphenhyramine sodium.
C. Epsilon aminocaproic acid.
D. Heparin.

Answer: C.

*602. Hemophilia is characterized by all except the following:*

A. Increased PTT.
B. Normal PT.
C. Normal bleeding time.
D. Decreased INR.

Answer: D.
INR is not affected in Hemophilia.
Bleeding with hemophilic patient usually delayed 12-24h.

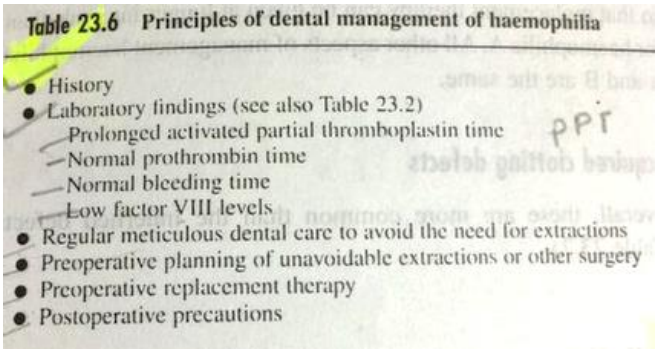


**Table 23.6 Principles of dental management of haemophilia**

- History
- Laboratory findings (see also Table 23.2)
  - Prolonged activated partial thromboplastin time
  - Normal prothrombin time
  - Normal bleeding time
  - Low factor VIII levels
- Regular meticulous dental care to avoid the need for extractions
- Preoperative planning of unavoidable extractions or other surgery
- Preoperative replacement therapy
- Postoperative precautions

*603. Root canal treatment is contraindicated in:*

1. bleeding disorders.
2. congenital heart diseases.
3. immunocompromised patient.
4. medical condition such as diabetes.

A. 1 and 4.
B. 2 and 3.
C. 1 and 3.
D. 2 and 4.

Answer: B.
Endodontic treatment leads to bacteremia, which may cause formation of bacterial vegetation in myocardium also in immunocompromised patient bacteremia may be lethal.

*604. Which of the following will require specific management prior to emergency extraction:*

A. Carcinoma of tongue.
B. Glaucoma.
C. Hemophilia.
D. Mixed tumor of parotid gland.
E. All above are correct.

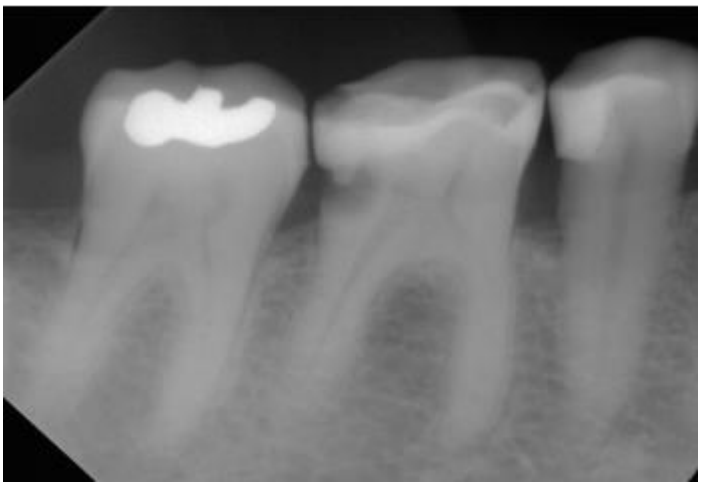
Answer: C.

*605. Patient taking warfarin can be investigated by:*

A. Coagulation time.
B. Bleeding time.
C. Plasma INR.

Answer: C.

*606. 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.*



I. 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.

II. 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.

III. 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.

IV. If you decided to extract the tooth and in planning for the procedure you find that 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.

V. Which drug is used to control bleeding in warfarin taking patient having atrial fibrillation?
A. epsilon caproic acid.
B. Heparin.
C. ZOE pack.
D. Vitamin K.

Answer: D.

VI. 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.

VII. With atrial fibrillation on warfarin, what is the minimum INR required?
A. 3.
B. 2.
C. 4.
D. 5.

Answer: B.

**Warfarin**
Common medical conditions for which patients are warfarinised, and the usual therapeutic INR ranges, are:

| | |
|---|---|
| • Deep vein thrombosis | 1.5 – 2.5 |
| • Prosthetic heart valve | 2.5 – 3.5 |
| • Stroke | 1.5 – 2.5 |
| • Pulmonary embolism | 1.5 – 2.5 |
| • Atrial fibrillation | 1.5 – 2.5 |

VIII. What is the complication if this patients stops warfarin?
A. Myocardial infarction.
B. Cerebro-vascular Stroke.
C. Deep Venous thrombosis.

Answer: B.

Stopping warfarin causes thrombo-embolism, so the clinical outcome depends on the site of lodgment of these thrombi. If lodged in brain--> CVA or if in heart-->Myocardial infarction. In patients with atrial fibrillation, stoppage of warfarin has a high risk of CVA as compared to other thromboembolic events. Clots are more common in brain as it has very fine capillaries. Deep veins usually involve limbs as seen in bed ridden old aged people.

This question was a part of SBQ on patient with atrial fibrillation, so here answer is B. but if asked in general, the answer should be thromboembolism, it cannot be Deep vein thrombosis because it has a totally different pathogenesis which includes virchow's triad: Hypercoagulability of blood, blood stasis, endothelial injury (explanation by Amit Chhabria)

*607. Therapeutic dose of INR?*
A. Below 1.
B. 1-2.
C. 2-3.
D. 2-4.
E. 4-6

Answer: D.

*608. INR is used to:*
A. monitor patients taking anticoagulants.
B. estimate platelets count.

Answer: A.

*609. Which drug does not interfere with Warfarin?*

A. Cephalosporin.
B. Erythromycin.
C. Tetracycline.
D. Penicillin.

Answer: D.

Tetracycline can enhance the activity of warfarin so INR should be monitored (TG, 26).
Cephalosporins might increase the effect of warfarin by inhibiting the production of vitamin K-dependent clotting factors and other mechanisms.
Oral amoxicillin and amoxicillin/clavulanic acid may increase the risk of bleeding with warfarin.
Penicillin: only at a high doses of IV penicillins increase the risk of warfarin- associated bleeding by inhibiting platelet function. Penicillins are the safest and do not interfere with warfarin by increase or decrease its effect because it is recommended as a prophylactic for many cases predominantly takes warfarin (TG, 102-105).

*610. A patient aged 50, reports to your clinic for extraction of lower molar. He has been on warfarin since 10 years now. You have to perform a minor oral surgery.*

I. The most important factor to be considered before doing the extraction.
A. Administer antibiotics.
B. Cease warfarin 24 hours before the procedure.
C. Check pulse and blood pressure.
D. Take a detailed medical history and consult the GP.

Answer: D.

II. Blood test for INR should be undertaken:
A. 24 hours prior to the surgery.
B. 48 hours prior to the surgery.
C. 72 hours prior to the surgery.
D. On the day of the surgery.

Answer: A.

III. If the INR is between 2 to 4:
A. Proceed with the surgery alone.
B. Proceed with surgery using antibiotics and tranexemic acid mouthwash.
C. Proceed with surgery using tranexemic acid mouthwash (4.8%).
D. Refer to patient's GP.

Answer: C.

IV. INR values above 4.5 increase the risk of:
A. Thromboembolism.
B. Heammorhage.
C. Stroke.
D. All of the above.

Answer: B.

V. Action of warfarin is to:
A. Increase the production of vitamin K in the body.
B. Decrease the production of vitamin K in the body.
C. No effect on vitamin K.

Answer: B.

*611. Platelets play an important role in haemostasis; which of the following describes this role?*

A. They convert fibrinogen to fibrin.
B. They agglutinate and plug small, ruptured vessels.
C. They initiate fibrinolysis in thrombosis.
D. They supply fibrin stabilizing factors.

E. They supply pro-convertion for thromboplastin activation.

Answer: B.

*612. What is incorrect about treating a patient with epilepsy?*

A. Cease the medication before treatment.
B. Use of mouth props.
C. Reduce stress and anxiety before and after dental treatment.

Answer: A.

*613. Patient receiving treatment for oral cancer. What is incorrect?*

A. Can suffer from dehydration.
B. Can suffer from malnutrition.
C. Extract teeth in pain.
D. Mucositis.

Answer: C.

*614. A patient has type I diabetes. Multilocular radiolucency in the angle of the mandible (multilocular was given in the text of the question). OPG shows large radiolucent lesion in the right mandibular angle. 47(or 48 can't remember) is positioned in close proximity to the lesion. Only crown can be seen (horizontally impacted) well beyond the occlusal plain, near the roots of 46(47?).*

I. What is the diagnosis?
A. dentigorous cyst.
B. Ameloblastoma.
C. odontogenic keratocyst.

Answer: B.

If the x-ray shows there is a resorption of the root, the answer is B. If the lesion is expand along the long axis of the mandibular, the answer is C.

II. Best radiograph for it:
A. lateral oblique.
B. CT.
C. MRI

Answer: B.

III. What is the treatment?
A. enaculation + extraction + Carnoy's solution.
B. Resection.
C. Excision.
D. Marsupilization.
E. Curettage.

Answer: C.

Treatment is by excision. If large then we need to resect portion of jaw. but resection is not the treatment.

IV. Which of the following is best to assess glycemic control of diabetic patient?
A. Random blood sugar.
B. Glycoselated haemoglobin.
C. Glucose tolerance test.
D. Blood hemoglobin.

Answer: B.

V. What is the major risk in this patient?
A. Poor healing.
B. Infection.
C. Control the glucose before operation.
D. Control the glucose after operation.
E. Risk of operative fracture of the mandible.

Answer: A.

*615. Symptoms of stroke are all except:*
A. confusion.
B. headache.
C. generalised paralysis.
D. transient loss of consciousness.
Answer: C.

*616. What is incorrect about Addison's disease?*
A. Hypotension.
B. Weakness and lassitude.
C. Nausea and anorexia.
D. Bony expansion.
E. Amenorrhea.
Answer: D.

*617. What is incorrect in estimating the risk of endocarditis?*
A. Fallots tetralogy.
B. Previously repaired septal defect.
C. Previous history of bacterial endocarditis.
D. Rheumatic heart disease in indegenous Australians.
E. Prosthetic cardiac valve.
Answer: B.

*618. For urticaria will give:*
A. Give antihistamines.
B. Give adrenaline.
C. Give steroids.
Answer: A.

*619. Otalgia can be caused by the following EXCEPT:*
A. Jaws.
B. Posterior Teeth.
C. Oropharynx.
D. Trachea.
E. Neck.
Answer: D.

*620. In regard to HIV infection, which of the following is the earliest finding?*
A. Kaposi sarcoma on the palate.
B. Reduced haemoglobin.
C. Infection with pneumocystic carinii.
D. Reduction in white cells count.
E. B cell lymphoma.
Answer: D.

*621. A patient who is a hepatitis B carrier presents for an extraction. The extraction should be delayed and:*
A. rescheduled at the end of the day for infection control.
B. an antibiotic prescribed prophylactically.
C. the patient referred to a hospital dental department.
D. an evaluation of liver function performed.
Answer: D.

Other laboratory tests that may be necessary prior to dental treatment include a complete blood count with differential and tests for hemostasis, hepatitis B and C, and HIV.

*622. Pit and fissure caries is depend on:*

A. Anatomy of pits and fissures.
B. Anatomy of pits and fissure and type of bacteria in the fissures.
C. Morphology of pits and fissures and frequency of brushing.

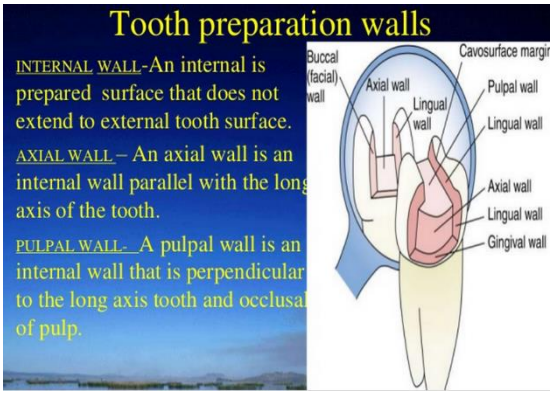
Answer: B.

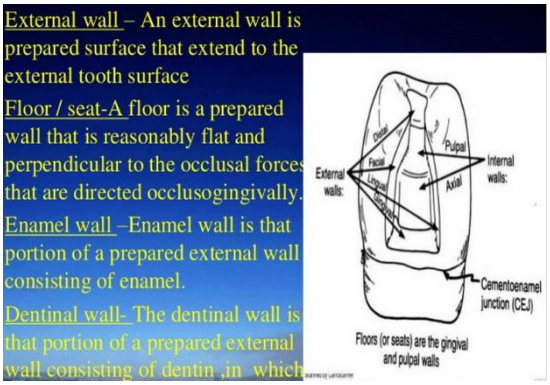
***Pits and Fissures.*** Pit-and-fissure caries has the highest prevalence of all dental caries (Figs. 3-17 to 3-22). The pits and fissures provide excellent mechanical shelter for organisms and harbor a community dominated by *S. sanguis* and other streptococci.[49] The relative proportion of MS most probably determines the cariogenic potential of the pit-and-fissure community. Complex communities dominated by filamentous bacteria, such as those in the gingival crevice, apparently fail to develop in the pit-and-fissure habitat.[31] The appearance of MS in pits and fissures is usually followed by caries 6 to 24 months later. *Sealing the pits and fissures just after tooth eruption may be the most important event in their resistance to caries.*

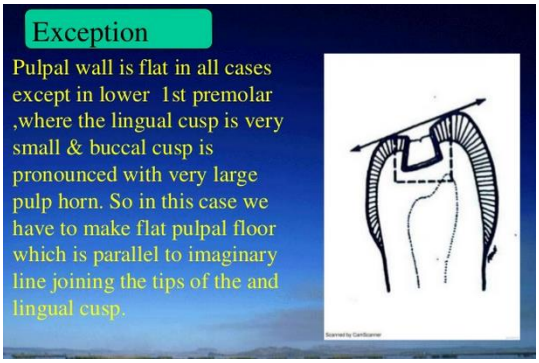
*623. There was a question about the pupal wall not floor of the lower premolar (the pulpal floor of the Class II cavity for a mandibular first premolar should be):*

A. Parallel to occlusal plane.
B. Perpendicular to long axis.
C. Perpendicular to occlusal plane.
D. Tilted lingually.

Answer: A.
Pulpal floor=pulpal wall.



*624. Action of Calcium Hydroxide on superficial pulp.*

A. Chronic Inflammation.
B. Necrosis of Pulp.

Answer: B.

Calcium hydroxide has been the most widely accepted material for induction of an apical barrier. The mechanism of action of calcium hydroxide remains controversial in spite of much research on its effect on pulp tissue. It has, however, been demonstrated that the reaction of the periapical tissues to calcium hydroxide is similar to that of pulp tissue. Calcium hydroxide produces a multilayered, sterile necrosis permitting subjacent mineralization" (Walton 4th edition, 91).

*625. What kind of cellular response happens in the pulp at the point of application of CaOH during pulp capping?*

A. Differentiation of undifferentiated ectomesenchymal cells.
B. Accumulation of lymphocytes.
C. Necrosis next to CaOH.

Answer: C.

*626. The pulpal floor is perforated during access preparation. Which of the following is the best course of action?*

A. Repair the perforation immediately, continue the root canal treatment.
B. Continue the root canal treatment; repair the perforation at a subsequent appointment only if associate pathoosis develops.
C. Continue the root canal treatment; repair the perforation at a subsequent appointment.
D. Perform no further treatment at this time; repair the perforation and continue the root canal treatment at a subsequent appointment.

Answer: A.

the most important thing is to repair the perforation immediately and the RCT could be delayed but option D suggesting leaving the perforation unrepaired till a next visit which is wrong as delaying the repair will enhance proliferation of peridontal tissues to the perforation site which will affect the prognosis of the repair

Unpredictable endodontic root/pulp chamber floor perforations resulting in unacceptable high rate of clinical failure. Among the various materials used for perforation repair, MTA has been applied with good treatment outcomes. MTA is primarily composed of calcium and phosphate ions, this resemblance in chemical composition to the tooth structure. The ability of MTA to release Ca ions and its capacity to form hydroxyapatite are stated to be the factors responsible for its sealing ability, biocompatibility and dentino-genic activity. The highly biocompatible nature of MTA and its tendency to induce osteogenesis and cementogenesis makes it a suitable candidate for root perforation repair and attaining regeneration of periodontal attachment.

*627. A child has sustained a traumatic exposure of primary central incisor, he presents to you for treatment two days after the injury. Which of the following should be considered?*

A. Pulpotomy and Ca(OH)2.
B. Pulpotomy and formocresol.
C. Direct pulp capping.
D. Pulpectomy (RCT).

Answer: A. (is the best option provided, but if there is other option mentioning the use of MTA or Ferric sulphae as pulpotomy medication will be the bes)

- Although in Cameron mentioned that the best material used primary tooth pulpatomy is formacresol, It is against the law in Australia now. Ferric sulphate and MTA are the alternatives now, the use of ferric sulphate over MTA is due to the setting time and relative cost of the material. We can use either just put calcium hydroxide if the pulp is not bleeding, or apply ferric sulphate for 30 secs, then put calcium hydroxide as a base for further restoraion.

- CaOH is contraindicated because it is almost always causes internal root resorption as a pulp capping material in primary teeth but when applied as a pulpotomy medicament in primary teeth however, it doesn't.
- pulpotomy indicated post traumatic pulp exposure within 72 hour.

*628. While doing electric pulp test which devise gets affected?*

*A. Pacemaker.*
B. Hearing aid.
C. Ventricular node.

Answer: A.

*629. Which of the following is true about root canal irrigation?*

A. sodium hypochlorite 20% used.
B. chlorhexidine can dissolve inorganic materials.
C. 2% sodium chloride.
D. Enlargement of orifice helps in better seal of canal or prevent debris to reach apex.

Answer: D.
Option D: irrigation + canal instrumentation= enlargement of orifice that lead to better seal.
Option A&C: 2-2.5 % sodium hypochlorite not chlorite. The recommended concentration is 5.25% as may research suggest.
Option B: chlorhexidine cannot dissolve neither inorganic (like EDTA) nor organic substances and necrotic tissues present in the root canal system (as NaOCl). Its effect is only antimicrobial.

*630. Irrigation in root canal treatment, should be undertaken at frequent intervals during instrumentation to:*

A. Removes cementum falling from the canal
B. Remove noxious material since it may be forced to the apical foramen resulting in periapical infection.
C. Destroy all micro organism in the canal.
D. Stop instruments from going beyond the apical foramen.
E. None of the above.

Answer: B.

*631. During endodontic surgery the irrigation used is:*

A. Saline.
B. EDTA.
C. NaOCl.

Answer: A (Appendix I).
Since they are asking about endodontic surgery not root canal treatment, the use of sodium hypoclorite for irrigation may cause hypersensitivity as in the extruded Naocl during endodontic treatment.

*632. For intra radicular RCT, which irrigation is used?*

A. Saline.
B. CaOH.
C. EDTA.
D. Chlorhexidine.

Answer: D
Although many still recommend using NaOCl for canal irrigation, the safer irrigant for disinfection is chlorhexidine.

*633. During anesthesia what's true?*

A. The needle should be inserted before cartridge.
B. The needle cap is inserted before the stopper.

C. Excessive force should be applied to allow insertion of the cartridge into the harpoon.

Answer: A.

*634. Lateral canals are usually found at:*

A. The middle of the root.
B. Fist third of the root close to the crown.
C. The apical third.

Answer: C.

The usual management of these collateral canals is by good irrigation.

*635. Irrigation in canals should be done with:*

A. Small gauge needles and shallow placements into the canal.
B. Large gauge needles and deep placements into the canal.
C. Large gauge needles and shallow placements into the canal.
D. Small gauge needles and deep placements into the canal.

Answer: D.

*636. What is the best way to confirm that tooth is non-vital?*

A. Negative response to electric test.
B. Negative response to hot gutta percha.
C. Negative response to carbon dioxide (cold test).
D. Periapical radiolucency around the root.

Answer: D (Cawson MCQs).

*637. A 25 years old man presented at your clinic complaining about swelling of 2 days duration and severe pain in his upper right side of his face. On examination, a badly decayed upper right canine is present. The best way to diagnose his condition is to:*

A. conduct vitality testing.
B. periapical radiograph.
C. Both vitality testing and periapical radiograph.
D. Only inspection is sufficient.

Answer: A (Odell, 229).

*638. Which test would you use to distinguish between abscess of periodontal & endodontic origin?*

A. percussion test.
B. thermal test.
C. EPT.
D. Radiographs.

Answer: B.

*639. Maxillary central incisor in 10 years old child. No response to EPT and thermal, few days after sustaining a fracture through enamel and dentine. Diagnosis of pulp condition?*

A. Acute hyperemia.
B. Chronic hyperemia.
C. Chronic degeneration.
D. Acute necrosis.
E. No definitive diagnosis of pulp status is possible.

Answer: E.

Option E: Because the toot is still at shock and sometimes it need 6 week to recover and give a definite result. After 2 weeks after trauma pulp testing gives a false negative response.

*640. A 5 year old child got a trauma to his primary central incisor, and presented 7 days after trauma. On examination there is pulp exposure. Treatment will be:*

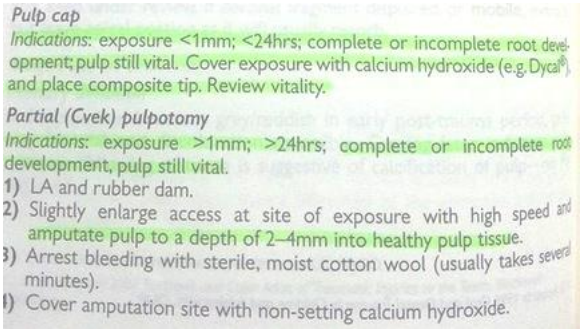
A. Pulpotomy.
B. Pulpectomy.
C. Extraction.
D. cvek's pulpotomy.
E. direct pulp capping.

Answer: B or C.
Option B: if not successful we do extraction because the tooth is near exfoliation.
Option D: cvek's pulpotomy is only done for permanent immature teeth (Cameron, 117).

*641. 8 years old boy fell from a bicycle and had a pin point exposure, came to your clinic in 30 mins. Best treatment is:*

A. DPC.
B. IDPC.
C. Cvek pulpotomy.
D. Pulpotomy.
E. Pulpectomy.

Answer: A.



*Pulp cap*

*Indications:* exposure <1mm; <24hrs; complete or incomplete root development; pulp still vital. Cover exposure with calcium hydroxide (e.g. Dycal®) and place composite tip. Review vitality.

*Partial (Cvek) pulpotomy*

*Indications:* exposure >1mm; >24hrs; complete or incomplete root development, pulp still vital.

1) LA and rubber dam.
2) Slightly enlarge access at site of exposure with high speed and amputate pulp to a depth of 2–4mm into healthy pulp tissue.
3) Arrest bleeding with sterile, moist cotton wool (usually takes several minutes).
4) Cover amputation site with non-setting calcium hydroxide.

*642. 8 years old child has sustained fracture of maxillary permanent CI in which 2mm of pulp is exposed; presents for treatment 3hrs after injury. Which of the following should be considered?*

A. Remove the surface 1-2mm of pulp and place caOH.
B. Place CaOH directly on exposed pulpy.
C. pulpotomy using formocresol.
D. pulpectomy and immediate root filling.
E. pulpectomy and apexification.

Answer: A.

*643. Pulpotomy is not recommended in PRIMARY ANTERIOR teeth.*

A. True.
B. False.

Answer: A.

*644. 12 year old kid has a deep carious lesion on tooth no. 3, while treating there is pin point exposure. Heamorrhage can be controlled, what serves best long term results?*

A. DPC.
B. IPC.
C. Pulpectomy.
D. Pulpotmy.

Answer: D.
Pinpoint exposure while excavating carious lesion in primary teeth, pulpotomy is indicated (pinpoint exposure due to trauma, DPC). The clue in the question is hemorrhage can be controlled means radicular pulp is vital.

*645. Which of the following fibers is most likely to be activated during reversible pulpitis?*

A. A delta.
B. Sympathetic.
C. Parasympathetic.
D. C fibre.

Answer: A (Appendix II).

*646. For the anterior teeth, Electric pulp test tip should ideally be placed at the:*

A. incisal edge.
B. mid labial surface.
C. cervical labial surface.
D. mid palatal surface.

Answer: A.

Although for cold test is different. Dry ice, or an ordinary ice stick (made in a plastic or glass tube), is placed on the cervical third (neck region) of the tooth crown. A response to the stimulus indicates that the pulpal tissue is capable of transmitting nerve impulses. No response may indicate pulp necrosis (Australia prescriber).

*647. Fracture with best prognosis is:*

A. apical third.
B. middle third.
C. coronal third.
D. Vertical.

Answer: A.

*648. A patient with a pre-existing MOD amalgam restoration has just had endodontic therapy completed on tooth 46 but cannot afford a laboratory fabricated final restoration. Interim restorative management of 46 with the best prognosis is to:*

A. restore with a MOD amalgam.
B. reduce the occlusal out of occlusion and restore with a MOD amalgam.
C. restore with a bonded MOD composite resin.
D. cusp cap the buccal and lingual cusps and restore with a MOD amalgam.

Answer: D.

*649. The main reason why high copper amalgam last longer than low copper is:*

A. less mercury content.
B. more compressive strength.
C. corrosion resistance.

Answer: C.

*650. Treatment for partially necrotic pulp:*

A. Pulp capping.
B. Pulpotomy with corticosteroids.
C. Pulpotomy with calcium hydroxide.
D. Root canal therapy.
E. Pulpotomy with formocresol.

Answer: D.

*651. Squamous cell carcinoma of the lip, what is correct?*

A. More in white skinned people.
B. tratment always radiotherapy.
C. Common in upper lip.
D. Rare in Australians.

Answer: A.

*652. What is incorrect about hairy leukoplakia?*

A. It is corrugated but not hairy.
B. It may show severe dysplasia.
C. It is usually seen in the lateral ventral surface of tongue.
D. It can be covered (or invaded) by candida.
E. It is invariably sign of HIV.

Answer: B&E (TG, 76).
If the two options are there in the question so we have to choose B but if only E (as suggested by others), so E is the right answer.
Option B: Hairy leukoplakia is a completely benign condition (remember it's caused by EBV and hence it's curable).
Option E: is also not correct (as it's a sign of immune-compromised conditions, as radio- chemo-therapies and AIDS but not necessarily HIV).

*653. What is true about the effect of removing soft cementum in root planning on periodontitis?*

A. Poor healing.
B. Not has effect on heeling.
C. Prevent reattachment.
D. Will lead to more attachment loss.

Answer: B.

*654. Cementoma treatment.*

A. No treatment.
B. RCT.
C. Excision.
D. Enculation.

Answer: A.

*655. In which condition you don't see sore tongue?*

A. nutritional.
B. dermatological.
C. hormonal.
D. Cardiological.

Answer: D.

*656. During patient's orthodontic treatment, new alveolar bone is deposited. Which of the following BEST describes this type of alveolar bone?*

A. Woven.
B. Compact.
C. Cementum.
D. Endochondral.
E. Intramembranous.

Answer: E (Appendix III).
Option D: osteogeneness is based on cartilage ossifying to bone.
Option E: hisological analysis has shown that the newly formed bone on periodontal surface of alveolar bone proper is fibrous (bundle bone). Thi soon become reorganized into lammelat bone.

*657. All of the following should be considered for systemic antibiotic except:*

A. Extraction of tooth with acute dento alveolar abscess.
B. Necrotic ulcerative gingivitis (ANUG) unless it is acute.
C. Extraction of 38 or 48 with acute pericoronitis.
D. Full mouth extraction for a patient with periodontal disease.

Answer: B.

*658. Elimination or reduction of periodontal pockets will occur by planning and curettage alone if the patient's periodontal condition includes:*

A. hyperemic and edematous gingival tissue.
B. gingival hyperplasia due to Dilantin therapy.

C. chronic periodontal pockets.
D. acute necrotizing ulcerative gingivitis.

Answer: A.

*659. Necrotizing Ulcerative Gingivitis is:*

A. communicable.
B. Contagious.
C. Transmissible.
D. Epidemic.

Answer: C.

ANUG is caused by fusospirochetal bacterial complex which is transmissible. Previously, it has been thought that it is contagious. It can never be A or B as if the disease is contagious it will be communicable as well, so A excluded B. It often occurs in groups in an epidemic pattern but the cause itself is TRANSMISSIBLE. (Carranza, Chapter 19, Acute Gingival Infections, 202-203. Essentials of Clinical Periodontology and Periodontics ,174).

*660. In acute necrotizing ulcerative gingivitis, which of the following is incorrect?*

A. Sudden onset, usually with ulceration of the tip of the interdental papillae.
B. The gingive are painful and a fetid odor is present.
C. The disease is contagious or communicable between individuals.
D. The histological findings are diagnostic for the disease.
E. The bacterial smear usually contains Borrelia Vincentii and Fusiform Bacilli.

Answer: C.

Option D: the beginning of the lesion start with a nonspecific necrotizing lesion and the crater like lesion develops later when the disease progress to involve the bone (the disease then called AUP eriodontits )

*661. The most appropriate treatment of acute necrotizing ulcerative gingivitis in a patient with lymphadenopathy is:*

1. *periodontal debridement.*
2. occlusal adjustment.
3. oral hygiene instruction.
4. antibiotic therapy.

A. (1) (2) (3).
B. (1) and (3).
C. (2) and (4).
D. (4) only.
E. All of the above.

Answer: E.

*662. The most appropriate treatment of necrotizing ulcerative periodontitis (NUP) in a patient with no fever and no lymphadenopathy is:*

1. *periodontal debridement.*
2. *antibiotic therapy.*
3. *oral hygiene instruction.*
4. *topical steroid therapy.*

A. (1) (2) (3).
B. (1) and (3).
C. (2) and (4).
D. (4) only.
E. All of the above.

Answer: B.

*663. An 18-year-old student smokes 10 cigarettes a day. Her main complaint is very sore gums at the front of the mouth and bad breath. This has been a problem before but has responded to antibiotics given by her doctor. What is the diagnosis?*

A. Generalised chronic periodontitis.
B. Periodontal abscess.
C. Plaque-induced gingivitis.
D. Localised aggressive periodontitis.
E. Necrotizing ulcerative gingivitis.

Answer: E.

*664. Severe throbbing tooth pain which increases when the patient lies down is a symptom of:*

A. pulp polyp.
B. late stage of acute pulpitis.
C. chronic pulpitis.
D. chronic periradicular abscess.
E. pulp hyperemia.

Answer: B.

665. *Necrotizing ulcerative gingivitis (NUG) and acute herpetic gingivostomatitis can be differentiated clinically by:*

A. location of the lesions.
B. temperature of the patient.
C. pain.
D. lymphadenopathy.

Answer: A.

*666. Which of the following statements is NOT correct concerning ANUG?*

A. Also called as Vincent's angina or trench mouth.
B. Risks are poor oral hygiene, smoking, emotional stress and poor nutrition.
C. Usually affects children.
D. Fusiforms and spirochetes and prevotella intermedia have been implicated in the etiology.

Answer: C.

*667. A cup like resorptive area at the crest of the alveolar bone is a radiographic finding of:*

A. Gingivitis.
B. Occlusal trauma.
C. Early periodontitis.
D. Acute necrotizing ulcerative gingivitis.

Answer: C.

*668. Most common oral finding which accounts for around 90% in HIV patient:*

A. Kaposi sarcoma.
B. Osteosarcoma.
C. Oral candidiasis.
D. Hairy leukoplakia.
E. Acute periodontitis.

Answer: E.

*669. Which is not related to gingival inflamation in children?*

A. endocrine Disturbances.
B. viral infection.

C. mouth breathing.
D. spirochetal infection.
E. streptococcal infection.

Answer: D.

*670. 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 a sedative restoration.
D. pulpotomy with calcium hydroxide.
E. extraction of the tooth.

Answer: E. and space maintainer.

*671. Cementoblastoma is treated by excision and extraction of tooth?*

A. True.
B. False.

Answer: A.

Extraction is mandatory as cementoblasts of the affected tooth are said to be the causative factor , however observation of the tooth is advised at first if pain develops ( in most of cases ) or the size of the mass increased extraction and excision is indicated (Essentials of oral pathology, 262)

*672. What is that lesion and how can be treated?*

Answer: Cementoblastoma. Extraction along with the tooth.

*673. The most common cyst in mandibular premolar area is:*

A. traumatic bone cyst.
B. lateral periodontal cyst.

Answer: B.

*674. Cytology smear is used for:*

A. Candida.
B. Squamous cell carcinoma.
C. lichen planus.
D. herpes simplex.

Answer: A.

*675. Which oral lesion are difficult to diagnose using oral cytology?*

A. Dysplastic lesions.
B. Keratinised lesions.
C. Carcinomas.
D. Viral lesions.
E. Fungal lesions.

Answer: B.

Cytology is scraping the surface cells from the lesion and making a smear for studies, though it is not diagnostic but it is quick and gives some idea about the disease.
In carcinoma: scrapings of epithelium can show dysplastic changes.
In viral disease: epithelial cells show features like ballooning degeneration.
In fungal: of course the hyphae.
In keratinized lesion hardly any cells are seen in a swab because of thick layer of keratin. For such lesions invasive procedures like punch biopsy or incisional biopsy may be helpful (Explanation by Amit Chhabria).

*676. Definite treatment for submandibular gland stone.*

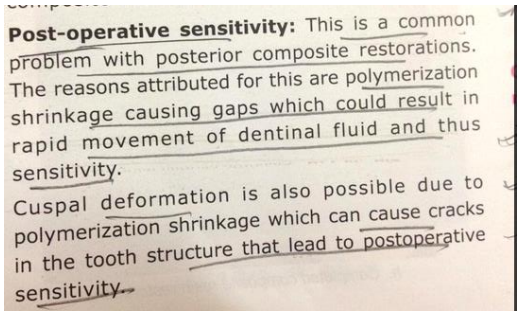
A. Widening of the gland duct orifice.
B. Excision of the whole gland.
C. Removal of the stone from inside the gland.
D. Something about laser treatment.

Answer: B.
If the stone in the anterior part of the duct, bypass the stone surgically. If in the posterior part of the gland (close to the glandular tissue) excise the gland.

*677. A patient complains of sensitivity the day following placement of a conservative posterior composite resin restoration. The most probable cause is:*

A. acid etching.
B. microleakage.
C. unpolymerized resin.
D. prolonged application of the curing light.
E. inadequate base thickness.

Answer: B.


**Post-operative sensitivity:** This is a common problem with posterior composite restorations. The reasons attributed for this are polymerization shrinkage causing gaps which could result in rapid movement of dentinal fluid and thus sensitivity.

Cuspal deformation is also possible due to polymerization shrinkage which can cause cracks in the tooth structure that lead to postoperative sensitivity.

*678. What is incorrect about long buccal nerve?*

A. Runs between the two heads of lateral ptrygoid muscle.
B. Supply the mucosa of upper and lower.
C. Supply buccinator muscle.
D. anaesthetised a little above the occlusal plane.

Answer: C.
Long buccal nerve does not innervate the buccinators muscle; the buccal branch of facial nerve does. Nor it provides sensory innervation to the lower lip or the corner of the mouth. This is significant because some doctors do not administer the long buccal injection immediately after completing the inferior alveolar nerve block until the patient's lower lip become numb.
Buccinator has motor supply from facial nerve but proprioception is from buccal branch of mandibular nerve.

*679. An oroantral fistula of 2 mm (very small) what is the appropriate simple treatment?*

A. Buccal Flap.
B. Palatal flap.
C. Suture.
D. Pack.
E. Primary closure.

Answer: C.

- Option E most portably not included among options because suture lead to primary closure.
- If the communication is 2mm or less, take measures to encourage formation of high quality blood clot and nasal precautions. If it is 2mm to 6mm, suture, nasal precaution, antibiotics like amoxicillin for 5 days. If 7 mm or larger then flap procedures (Tuckers oral and max surgery).
- Primary wound closure involves approximating the buccal and palatal ends together so that the wound heals by primary intention, ie, no granulation tissue formation.

*680. After an extraction of lower molar patient experiences swelling on his cheek on the same side, the area is warm on touch:*

A. submandibular space.
B. parapharyngeal space.
C. buccal space.
D. sublingual space.
E. Pterygomandibular space.

Answer: C.

In extracted either upper or lower molars; the area warm on touch is the buccal spaces because the swlling noticed on cheek.

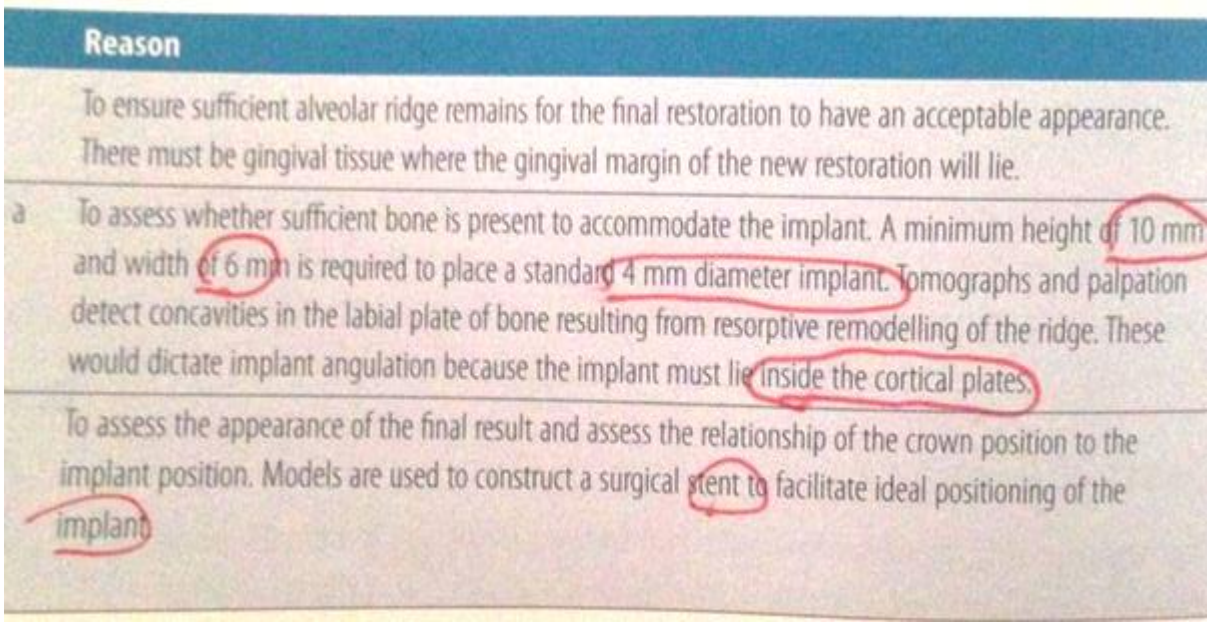
*681. What is the best bone for osteogenesis?*

A. Cortical.
B. Cancellous.
C. Heterezygous marrow.

Answer: B.

Option A: if the question ask about implant osseintegration,

Bone quality at the recipient site influences the interface between bone and implant.[21] Compact bone offers a much greater surface area for mineralized tissue-to-implant contact than cancellous bone. Clinical studies have shown that areas of the jaw exhibiting thin layers of cortical bone and large cancellous spaces, such as the posterior maxilla, have significantly lower success rates than areas of denser bone structures.[21] The best results are ob-



| | Reason |
|---|---|
| | To ensure sufficient alveolar ridge remains for the final restoration to have an acceptable appearance. There must be gingival tissue where the gingival margin of the new restoration will lie. |
| a | To assess whether sufficient bone is present to accommodate the implant. A minimum height of 10 mm and width of 6 mm is required to place a standard 4 mm diameter implant. Tomographs and palpation detect concavities in the labial plate of bone resulting from resorptive remodelling of the ridge. These would dictate implant angulation because the implant must lie inside the cortical plates. |
| | To assess the appearance of the final result and assess the relationship of the crown position to the implant position. Models are used to construct a surgical stent to facilitate ideal positioning of the implant. |

Option B: Compared to cortical bone, cancellous bone has a higher surface area to mass ratio because it is less dense. This gives it softer, weaker, and more flexible characteristics. The greater surface area in comparison with cortical bone makes cancellous bone suitable for metabolic activity e.g. exchange of calcium ions. Cancellous bone is typically found at the ends of long bones, proximal to joints and within the interior of vertebrae. Cancellous bone is highly vascular and frequently contains red bone marrow wherehaematopoiesis, the production of blood cells, occurs. The primary anatomical and functional unit of cancellous bone is the trabecula.

*682. A patient with swelling obliterating nasolabial fold, extending to inner canthus of the eye. The inner canthus was pustulating. The Periapical Radiolucency around which tooth is most probably the cause:*

A. maxillary cenral incisor.
B. maxillary lateral incisor.
C. maxillary canine.
D. maxillary premolars.
E. Impacted maxillary canine.

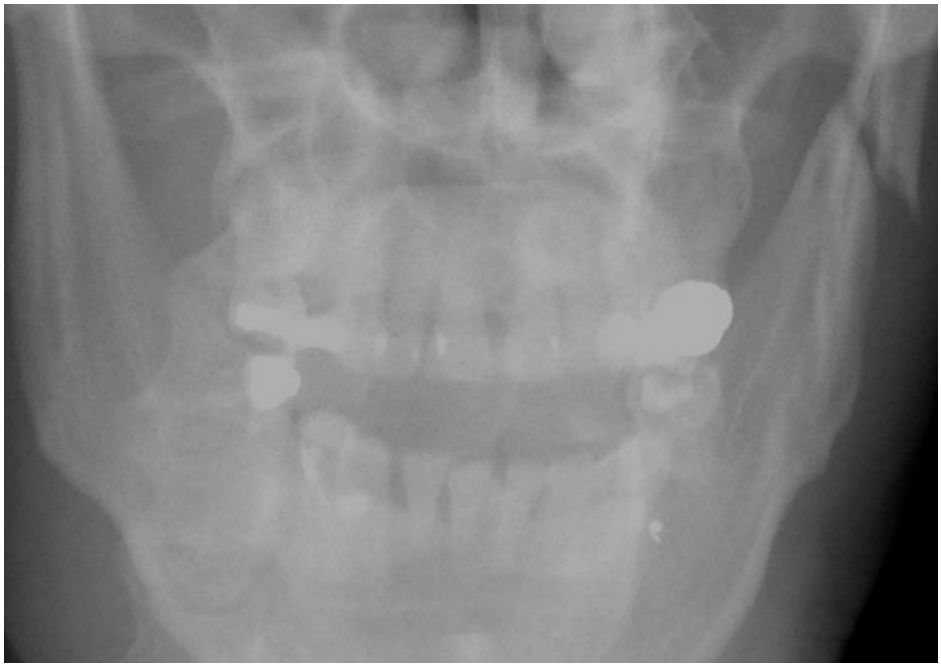
Answer: C.

*683. Regarding digital OPG:*

A. Radiation dose is equal to 2 conventional BW's plus 1 PA.
B. It is equivalent to PA in assessment of reriodontal/periapical areas.
C. It is useful for assessment of anterior teeth.
D. It should be done each year for the child with mixed dentition.

Answer: A.

*684. A patient is alcoholic. He drank last night and can't remember the details, but suffered a blow or trauma.*



I. According to some Australian Medical Guidelines how many drinks per day is the maximum recommended dose for a male?

A. 1.
B. 2.
C. 4.
D. 8.

Answer: C.

For men: No more than 4 standard drinks a day on average. And no more than 6 standard drinks on any one day. One or two alcohol-free days per week.

For women: No more than 2 standard drinks a day on average. And no more than 4 standard drinks on any one day. One or two alcohol-free days per week.

These drinks should be spread over several hours. For example, men should have no more than 2 standard drinks in the first hour and 1 per hour after that. Women should have no more than 1 standard drink per hour.

II. How many milliliters of alcohol are in 1 standard drink?
   A. 10ml.
   B. 20ml.
   C. 25ml.
   D. 50ml.

Answer: A.

III. Posteroanterior view of left half of the skull, identify the abnormality?
   A. displaced left condylar fracture.
   B. sub condylar fracture.
   C. body fracture.
   D. ramus fracture.
   E. left condylar fracture.

Answer: B.

IV. What is the treatment?
   A. Soft diet.
   B. Closed reduction.
   C. Open reduction.
   D. Inter maxillary fixation.
   E. Elastic intermaxillary fixation.

Answer: C.

V. What is the most common long term complication?
   A. Malocclusion.
   B. Loss of balance.
   C. Right TMJ dysfunction.
   D. Left TMJ dysfunction.

Answer: D.

*685. An elderly patient has a simple extraction of 16. The socket has not been healed within 10weeks. Patient is taking Alendronate.*

I. Alendronate is the treatment for:
   A. Osteoarthritis.
   B. Osteoporosis.
   C. multiple melanoma.
   D. Paget's disease.

Answer: B.

Alendronate is used to treat and prevent osteoporosis (a condition in which the bones become thin and weak and break easily).

II. What is the reason for non-healed socket (BRONJ, Bisphosphonate related osteonecrosis of jaws)?
   A. bisphosphonate-related osteonecrosis.
   B. oroantral fistula.
   C. c. ???

Answer: A.

III. Consult the patient's physician about:
   A. stop the medication.
   B. change Alendronate to risendronate.
   C. prescribing antibiotics.

Answer: A.

No point to change it to risendronate as both drugs are bisphosphonates.

IV. What is your management of the socket?
   A. leave it alone.
   B. pack it with dressing.
   C. primary closure.
   D. Sequestromy.

E. Curettage.

Answer: A.

But to avod it in this patient we have to do suture at the time of extraction.

V. After applying the physician advice, when do you expect the socket to heal?

A. 1 month.
B. 3 months.
C. 12 months.
D. Never.

Answer: C.

*686. Infraorbital abscess, the tooth has RCT before.*

I. Which tooth is most likely to cause the infection?

A. maxillary incisor.
B. maxillary canine.
C. maxillary premolars.

Answer: A.

II. What is the treatment?

A. drainage through the skin.
B. drainage through intraoral incision.
C. RCT of the tooth involved.
D. extraction of the tooth involved.

Answer: B (Appendix IV).

*687. 9 years boy has pain, swelling in infraorbital region, fever 39.8°C. Tooth 12 is extremely painful to percussion, no caries detected. PA of 13,12,11shows extremely immature root of tooth #12 with dens invaginatus, retained #53 and unerupted #13*

I. Diagnosis by PA.

A. dens in dente.
B. supernumerary tooth.
C. vertical fracture.

Answer: A.

II. Treatment.

A. LA and start RCT.
B. Give antibiotic and send home & further treatment after swelling subside.
C. LA and extraction.
D. LA, extraction and drainage.
E. Hospitalization and IV antibiotics and extraction.

Answer: D.

III. His mother concerned about if extraction will be done what will replace the tooth.

A. Replace with removable partial denture.
B. Resin boned bride on the central.
C. Do nothing and tell mother that canine will erupt in place of lateral.
D. Referral to orthodontist for consultation.
E. Immediate implant.

Answer: D.

IV. His mother would like to save the tooth and doesn't prefer the extrction option. What will you tell her?

A. Tell her that saving the tooth will take much time and repeated visits to put CaOH until apex closure.
B. RCT has very poor prognosis and extraction will be better option.
C. Refer to endondontist.
D. RCT is impossible.

Answer: B.

V. The other lateral incisor 22 has the same clinical and radiographic appearance but no symptoms with normal response to vitality and no tenderness to percussion. What will you do?
   A. To come again for follow-up.
   B. Prophylactic pulpotomy.
   C. Pulpectomy and initiate root closure.
   D. Sealing of any deep fissure and regular follow up.

Answer: D.

*688. A 35 year old man comes to your practice with the complaint of a cavity on the side of right back teeth. Picture shows posterior teeth in occlusion with bucco-cervical carious lesion on 16. Molar relation is class 1 & anterior teeth are in cross bite. ( some said there was mandibular proghnathism)*

I. What is the other tool you will use for diagnosis of occlusion?
   A. lateral cephalograph.
   B. make study casts.
   C. clinical examination, see difference between occlusion and retruded position.
   D. OPG.

Answer: C.

II. How do you approach patient?
   A. explain the situation, positive and negative points of treatment or non-treatment.
   B. refer to orthodontist.
   C. don't say anything, patient is not interested.
   D. Ask him and if he is concerned about his malocclusion, discuss in details the treatment plan and all up to date data of the treatment.

Answer: A.

III. Ortho diagnosis for this patient is:
   A. Class I.
   B. Class II division 1.
   C. Class II division 2.
   D. Class III.

Answer: A.

IV. When is the best time to treat this malocclusion?
   A. Before 8 years for maxillary expansion.
   B. Before growth spurt to get maximum benefit of growth.
   C. After 18-24years to get benefit of surgery.

Answer: A.

V. If you are going to commence orthodontic treatment for this patient, how will you restore tooth #16?
   A. Resin modified GIC.
   B. Elective RCT and crown.
   C. Crown for better prognosis with orthodontic treatment.
   D. Extract.

Answer: A.

*689. 8 or 11 years old comes with mother. Complain is that lower front not visible. 12 missing. Picture shows from the front in occlusion a deep bite.*
*No X-ray.*
*Teeth present are 16,55,54,53,11,21,22,23,64,65,26,31,32,73,74,75,36,41,42,83,84,85,45.*
*Dental charting was given -- erupted 22&23 unerupted 12*

I. Question about the main concern according to the chart:
   A. 23 erupted before 12.
   B. 22 erupted before 12.
   C. nothing is abnormal.
   D. missing 12.
   E. Presence of all second primary molars (75,85,55,45) at the age of 10.

Answer: A.

II. Away from the charting, what's obvious finding from patient picture?
   A. Deep bite.
   B. Missing 12.
   C. Gingivitis.
   D. Dental caries.

Answer: A.

III. What is your approach?
   A. extract 22 and move 13 & 23 to its place.
   B. Give cantilever bridge for 12.
   C. refer to orthodontist.
   D. refer to prosthodontist.

Answer: C.

IV. Treatment of patient condition.
   A. bite plane to allow eruption of molars and intrusion of incisors.
   B. removable appliance to arrange teeth and it can allow other correction

Answer: E.

V. Mother says not to use latex gloves. She says 5 days after last visit child got a rash on the face. What do u do?
   A. Listen, use non latex gloves.
   B. send to medical practitioner for more discussion.
   C. say that reaction is not possible after 4 days and continue.
   D. send for allergy tests.
   E. abandon any treatment and refer to allergist as repeated exposure may result in anaphylaxis.

Answer: E.

VI. correction of deep bite.
   A. bite plane to intrude incisors and erupt molars.
   B. removable appliance to arrange teeth now and later correct deep bite.

Answer: A.

VII. For Urticaria, you will give:
   A. oral antihistamine.
   B. Adrenaline.
   C. Steroids.

Answer: A.

*690. 72 years old patient (Doctor, GP) came for extraction of his lower left molar. He experiences pain of short duration, and bad odor (other symptoms can't remember). Previously he has a similar pain and one of his molars (46) and eventually was extracted.*

*Bitwing x-rays show:*

- *35 - caries on distal.*
- *36 – missing.*
- *37 - tipped, angular bone loss mesially contact between 35 and 37 is not fully closed, bone loss.*

*Bitwing x-rays several years before (for comparison)*

- *35- no caries*

I. What is the cause of the patient complain (diagnosis)?
   A. open contact and food impaction.
   B. caries on 35.
   C. perio-endo lesion on 37.
   D. periodontitis on 37.

Answer: D.

II. The patient 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 that the patient understand the diagnosis well.

Answer: C.

III. Periodontal state prognosis is based on assessment of:
A. periodontal pockets.
B. attachment loss.

Answer: B.

IV. what is the most significant difference between two BWs:
A. carious 15.

Answer:

V. How would you treat this patient?
A. scaling and root planning.
B. raise a flap to scale and root planning.
C. extraction 37.

Answer: A.

*691. A 60 years old lady with HbA1c level 12% on aledronate for osteoporosis reports to you as she is unhappy with her current treatment. She has generalized attachment loss of 6mm. OPG provided (recently splinted lower anterior segment) floating 41, diffuse apical radiolucency present for 34 to 36 region. She feels at her age she should remove all her teeth. Smoked previously but quit.*

I. Diagnosis of her condition.
A. chronic periodontitis.
B. acute periodontitis.
C. plaque induced gingivitis.
D. non-plaque induced gingivitis.
E. aggressive periodontitis.

Answer: A.

II. What will be the most significant sign in determining prognosis of 36?
A. Angular bone loss distal to 36.
B. Silver amalgam in 36.
C. Furcation involvement in 36.
D. Radiolucency involving periapical region of 36.

Answer: C.

III. HB1AC signifies:
A. Sugar level for past 2-3 months.

Answer: A.

The term *HbA1c* refers to glycated haemoglobin. It develops when haemoglobin, a protein within red blood cells that carries oxygen throughout your body, joins with glucose in the blood, becoming 'glycated'. By measuring glycated haemoglobin (HbA1c), clinicians are able to get an overall picture of what our average blood sugar levels have been over a period of weeks/months. For people without diabetes, the normal range for the hemoglobin A1c test is between 4% and 5.6%. Hemoglobin A1c levels between 5.7% and 6.4% indicate increased risk of diabetes, and levels of 6.5% or higher indicate diabetes. Because studies have repeatedly shown that out-of-control diabetes results in complications from the disease, the goal for people with diabetes is a hemoglobin A1c less than 7%. The higher the hemoglobin A1c, the higher the risks of developing complications related to diabetes.

IV. Asking about what is the most important risk factor in treating this patient?
A. Smoking.
B. Bisphosphonates.
C. Diabetes.

Answer: C.

This patient has ostoporosis and uncontrolled diabetes. If the treatment plan is to do scaling, the outcome is affected by the uncontrolled diabetes. If the treatment plan is to take out the loosen tooth, then you need check CTX, the patient may have a risk of BRONJ (TG, 154).

V. What is the most significant problem in giving RPD to this patient?
   A. Forces other than axial will contribute to rapid bone loss in abutment teeth (bad for abutment teeth because axial forces not along the line of teeth).
   B. Higher survey line on canine resulting in clasps that r visible in oral cavity.
   C. Insertion of RPD will increase plaque accumulation in this patient.
   D. lingually needs to be covered.

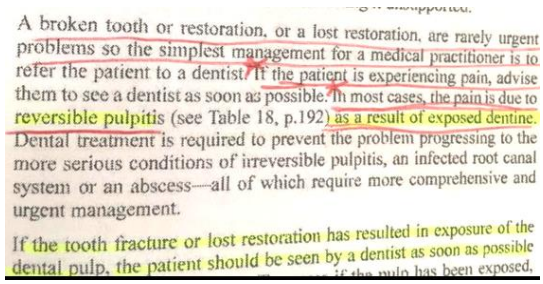
Answer: A.

VI. Final impression impression for a diagnostic casting this patient?
   A. Alignate.
   B. Polyvinyl siloxane.
   C. Poly ether.

Answer: A.

*692. Woman patient 40 years old lost an amalgam filling on upper right side. The tooth is vital. Picture of Upper Right side teeth:*

- *16: only disto-palatal and disto-buccal cusps left, dark area of dentin on mesial-occlusal-facialpalatal surfaces.*
- *14: MOD.*
- *15: MOD.*
- *17: MO amalgam fillings.*
- *Margins of fillings on premolars looked ditched, and fillings have overextended the margins.*

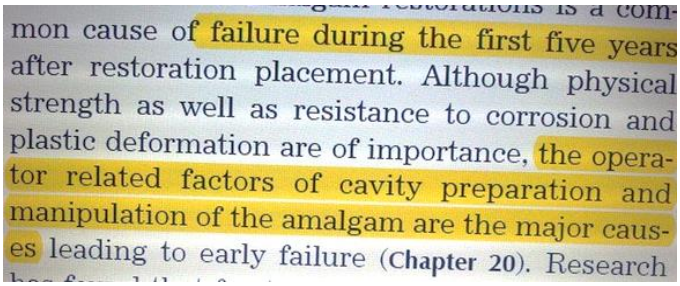

A broken tooth or restoration, or a lost restoration, are rarely urgent problems so the simplest management for a medical practitioner is to refer the patient to a dentist. If the patient is experiencing pain, advise them to see a dentist as soon as possible. In most cases, the pain is due to reversible pulpitis (see Table 18, p.192) as a result of exposed dentine. Dental treatment is required to prevent the problem progressing to the more serious conditions of irreversible pulpitis, an infected root canal system or an abscess—all of which require more comprehensive and urgent management.

If the tooth fracture or lost restoration has resulted in exposure of the dental pulp, the patient should be seen by a dentist as soon as possible

I. Why the patient was sensitive to cold?
   A. Dentine exposure.
   B. Reversible Pulpitis.
   C. Irreversible Pulpitis.
   D. Pulpal necrosis.

Answer: B.

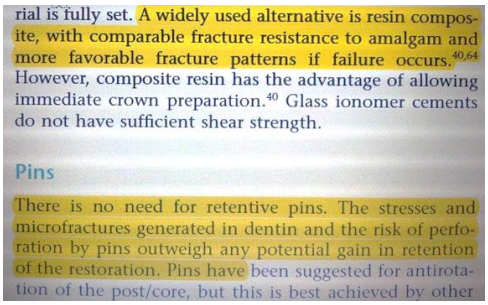
Some suggested B.


mon cause of failure during the first five years after restoration placement. Although physical strength as well as resistance to corrosion and plastic deformation are of importance, the operator related factors of cavity preparation and manipulation of the amalgam are the major causes leading to early failure (**Chapter 20**). Research

II. The cause of the filling on 16 to be lost:
   A. secondary caries.
   B. non-retentive cavity.
   C. Occlusal forces.
   D. Vertical fracture of the crown.
   E. Corrosion

Answer: A.

Option B: if the fracture occurs within 5 years.


rial is fully set. A widely used alternative is resin composite, with comparable fracture resistance to amalgam and more favorable fracture patterns if failure occurs.[40,64] However, composite resin has the advantage of allowing immediate crown preparation.[40] Glass ionomer cements do not have sufficient shear strength.

Pins

There is no need for retentive pins. The stresses and microfractures generated in dentin and the risk of perforation by pins outweigh any potential gain in retention of the restoration. Pins have been suggested for antirotation of the post/core, but this is best achieved by other

III. Best option to restore this tooth (16) is:
   A. amalgam filling with 3 pins for better retention.
   B. composite resin.
   C. GIC.
   D. post + core + crown.
   E. core GIC + crown.

Answer: E.

IV. Why amalgam fillings on premolars have such margins?
   A. thermal expansion of amalgam.
   B. Creep.
   C. Corrosion.
   D. Marginal breakdown/ leakage.
   E. Enamel wear off.

Answer: B.

V. What is the major challenge in treatment if the tooth needs RCT?
   A. Rubber dam placement.
   B. Root curvature.
   C. Periapical infection.

Answer: A.

*693. 30 years old man suffered a sport trauma 10 years ago. Now he is concerned about the discoloration of his front tooth. No pain. Picture: from the front in centric occlusion, 11 seems to be darker, no fillings.*

I. What diagnostic tests should be done first?
   A. Vitality test.
   B. Periodontal probing.

Answer: A.

II. On the PA tooth 11 has a successful endodontic treatment. What is the best treatment?
   A. non-vital bleaching.
   B. vital bleaching.
   C. porcelain veneer.

Answer: A.

*694. 13 years old came to your clinic with his mother, 21 fractured, kept the fractured segment in milk for 2 days. 21 was really sore at the beginning, now it's better. Pain on biting. 11 is ok, 21-horizontal crown fracture, approximately half or a bit more (or you noticed there was a pin point exposure).*

I. What is the immediate treatment for this tooth?
   A. pulpotomy and temporary restoration.
   B. Pulpectomy.
   C. indirect pulp capping.
   D. direct pulp capping.
   E. composite restoration.

Answer: B.

- Pulpotomy does not serve any purpose here since the roots are fully formed at 13yr age. It is either direct pulp capping which is ruled out because pulp has been exposed for 2 days, other option is pulpectomy.

II. His mother noticed that 11 is having greyish discoloration, what is the most likely explanation for this?
   A. Internal resorption.
   B. external resorption.
   C. pulp necrosis.
   D. intrinsic stain.
   E. extrinsic stain.

Answer: C.

III. X-ray, 47 was shown with 3/4 root had formed but it had still not erupted. Patient's mother says this tooth had erupted when his brother was of the same age and she is worried about it. What would you do?
   A. Explain that it is normal for it to erupt between 12-14 years.
   B. Help it to erupt surgically (incision) at a later visit when you give LA.

Answer: A.

IV. The mother tells you that he is a child model and has an assignment in two weeks and wants you to fix.
   A. was something like delaying it because it is not appropriate at this time.
   B. Composite veneer.
   C. Porcelain veneer.

Answer: B.

*695. Middle-age woman has seen a dentist 3 years ago, no treatment was required back at that time. Now she is concerned about her teeth. She has money and want her teeth to be fixed.*
*Picture from the front: Multiple caries on front teeth, but I couldn't see fillings*
*Picture of the upper arch: 14, 15 are missing.*

I. Question about the reasons why she got problems with her teeth in since last dental check-up?
   A. Changes in saliva production.
   B. Failed previous restorations.

Answer: A.

She had a friend, who did implants in the front and quiet happy with them. She also wanted 2 implants to replace her missing premolars. What should be considered when planning implants in that region? Or what can complicate the implant placement in comparison with anterior region?

   A. not enough interocclusial distance (should be checked on the photo).
   B. not enough space between canine and 1st molar (should be checked on the photo).
   C. maxillary sinus in the area.

Answer: C.

*696. A patient has problems with his front crowns. (Pain or mobility).*
*Picture of front teeth.*
*PA of front teeth:*

- *11 - crown, metal post (seems to be in the canal, but rather big), radiolucency and lost lamina dura in the apex region and extending up mesial. No root filling apical to the post or just residual.*
- *21 - crown, metal post, radiolucency only in the apex, root filling can't be seen in the apical part.*

I. Diagnosis for 11.
   A. vertical root fracture.
   B. inadequate RCT.

Answer: A.

II. Diagnosis for 21.
   A. inadequate RCT.

Answer: A.

*697. BW:*
*Upper 25, 26, 27.*
*lower -35, 36, 37 and a bit more of retromolar area, 34 was not seen for sure, also a small part of upper and lower right corners of the film seem to be bended, and black. 36 has a mesial radiolucent area (like a lost filling), but more radiopaque area surrounded it (like a cement base).*

I. Question about the main radiographic error.
   A. cone cut.
   B. film placed too far posteriorly.
   C. patient failed to bite fully.
   D. wrong vertical angulation.

Answer: B.

II. Question about sensitivity from the 36.
   A. no sensitivity.
   B. sensitivity to cold.
   C. sensitivity to sweet.

Answer: A.

*698. A woman, who has a lot of amalgam fillings, was advised by her naturopath to change them all for composite. She is allergic to nickel. She also has some problem with the tooth 17 (lost cusp) Picture of upper right side:*

- *Upper teeth are seen with amalgam restorations.*
- *On buccal tissues there is an area of white lines, not the all buccal, just adjacent to 17.*

I. What is diagnosis of white area on the cheek?
   A. Lichenoid reaction.
   B. Answer: A.

II. What you going to do with amalgam fillings?
   A. Replace all as naturopath advised.
   B. Replace only on 17 and explain that there is no need to replace all of them.

Answer: B.
As I think the lichenoid reaction due to rough amalgam on 17.

*699. The best way to clean cavity before the placement of GIC is(when there is an erosion as well):*

A. H2O2.
B. Phosphoric Acid.
C. Polyacrylic acid.

Answer: C.

- 50% citric acid, 20% polyacrylic, 10% EDTA, 25% tannic acid are used for conditioning before applying GIC can be used but the best is polyacrylic acid.
- Low molecular weight acids such as citric acid or hydrogen peroxide were recommended initially but the most desirable material has proven to be a low concentration polyacrylic acid, applied for a brief period and then washed thoroughly from the tooth surface. Polyacrylic acid is a part of the glass-ionomer system and therefore any remaining residue will not interfere with the setting reaction (mount & Hume, 180).
- GIC needs tooth conditioning not etching, etching will make the ionic bond between GIC and tooth enamel weak.

*700. Following root planning, a patient experiences thermal sensitivity. This pain is associated with which of the following?*

A. Golgi receptor.
B. Free nerve endings.
C. Odontoblastic processes.
D. Cementoblasts.

Answer: C.

*701. The dentino-enamel junction is the most sensitive portion of a tooth because:*

A. free nerve endings terminate on odontoblasts at this region.
B. odontoblastic processes branch considerably at this region.
C. ameloblasts make synaptic connections with odontoblasts at this junction.
D. odontoblastic tubules help convey hydrostatic forces to the pulp cells.

Answer: B.

- The cross sectional area of dentin near DEJ is composed of only about 2.5% where as near the pulp is 22%.
- The tubules also show changes in the direction of much smaller. They are known as secondary curvatures.
- Dentinal tubules branch. The most profuse branching is in the periphery near the DEJ. Many small side branches appear to end blindly but some may unite with branches and the branches loop.
- Dentinal tubules contain odontoblastic processes that are responsible for their formation. The spaces are thought to be filled with extra cellular dentinal fluid.
- Microtubules and intermediate filaments run longitudinally throughout the odontoblastic process. Mictochondria, endoplasmic reticulum, vesicles and golgi apparatus are present in the processes.

*702. Dentin sensitivity is associated with which of the following?*

A. Free nerve endings.
B. Golgi receptors.
C. Ruffini and Pacini receptors.
D. Odontoblasts.

Answer: D.

*703. Pulp nerve endings*

A. free nerve endings.
B. kroff's fibres.
C. heat and cold fibres.

Answer: A.

*704. Autonomic neurons within pulp differ from sensory nerves as:*

A. Structurally they are entirely myelinated.
B. Vaso motor in function.
C. Both.

Answer: B.

Although in Boucher, 357 give option C.

*705. Sensory pulpal nerves have:*

A. Myelinated fibres that lose their myelin sheath after forming subodontoblastic plexus.
B. Functions only as pain receptors.
C. Both.

Answer: C.

**Innervation**

The innervation of the pulp comprises afferent nerves which conduct sensory impulses (A-fibers) and autonomic nerves (C-fibers) that are mainly involved in neurogenic modulation of the blood flow but also in transmission of pain (see p.66). The A-fibers are of the trigeminal system. They are myelinated, surrounded by Schwann cells, and enter the pulp in bundles with the blood vessels through the apical foramen. The C-fibers constitute the majority of the pulpal nerves. They are unmyelinated and enclosed singly or in groups by Schwann cells, and enter the pulp with the sensory fibers. Some branching of the nerves occurs in the root pulp and the branching becomes extensive in the coronal pulp. Beneath the cell-rich zone is the plexus of Raschkow, which consists of a large number of both myelinated and unmyelinated nerve axons. From this plexus some sensory

**Nerves**

The abundant nerve supply in the pulp follows the distribution of the blood vessels. There are two types of nerve fibers—

a. *Non- myelinated (sympathetic nerves)*—They are found in close association with the blood vessels of the pulp. They have terminals on the muscle cells of the larger vessels and function in vasoconstriction.
b. *Myelinated (sensory)*—They are sensory nerves. Whatever be the nature of stimulation, the only sensation felt by pulpal nerves is that of pain. It cannot differentiate between heat, cold, touch, pressure or chemicals. It is due to the free nerve endings which are specific for pain. Pulpal nerve also cannot localize the pain as it does not have the receptors for proprioception.

The nerve fibers divide and redivide into smaller branches as they migrate coronally. They lose their myelin sheath and form a rich plexus in subodontoblastic zone. From this plexus nerves pass to odontoblastic layer, dentinal tubules and predentin.

*706. Treat overdose of tricyclic antidepressants:*

A. Atropine.
B. Phenytoin.
C. Physostigmine.
D. Pentobarbital.
E. Amphetamine.

Answer: B.

Antidote for tricyclic antidepressant overdose is 50mmol/50ml single use prefilled syringe of sodium bicarbonate. If sodium bicarbonate therapy fails to improve cardiac symptoms, conventional antidysrhythmic drugs such as phenytoin and magnesium can be used to reverse any cardiac abnormalities.

*707. LA containing adrenaline is contraindicated in patients taking tricyclic antidepressants.*

A. True.
B. False.

Answer: B.

Antidepressants are basically 3 types:

- Monoamime Oxidase Inhibitor (MAOIs).
- Tricyclic Antidepressants (TCAs).
- Selective Serotonin Reuptake Inhibitors (SSRIs).

TG says adrenaline is NOT contraindicated with antidepressants (other than MAOIs).

*708. Adrenaline containing L.A. should be avoided due to potential adrenergic effects in asthmatic children if injected IV?*

A. True.
B. False.

Answer: A (Cameron).

*709. Xerostomia commonly occurs as a result of:*

A. Antibiotics.
B. Analgesics.
C. Tricyclic anti-depressants.
D. Calcium channel blockers.

Answer: C.

*710. 60 year old patient, comes with bilateral lesion at the corner of the mouth. He is wearing full dentures.*

I. What is the diagnosis?
A. Angular cheilitis.
B. Denture stomatitis.

Answer: A.

II. What will be your first treatment if there is no problem with esthetic?
A. Keep the denture out of mouth for one week and give oral hygiene instructions.
B. Nystatin / lozenges.
C. Make a new denture.
D. Give antibiotics.

Answer: A.

III. What is seen on the palate?
A. Chronic atrophic candidiasis.
B. Acute atrophic candidiasis.
C. Chronic hyperplastic/hypertrophic candidiasis.

D. Acute hyperplastic/hypertrophic candidiasis.

Answer: A.

IV. What do you think is the cause?

A. Faulty vertical dimension.
B. Increased vertical dimension.
C. Excessive salivation.
D. Decrease vertical dimension.

Answer: D.

V. Patient comes back after a week, and the lesion has not healed, what will be your next step?

A. Amphotericin lozenges 10mg.
B. Anitibiotics.
C. Nystatin spray (dosage given).
D. Miconazole 2%.

Answer: A.

*711. Where do you probe bifurcation on upper 1st molar?*

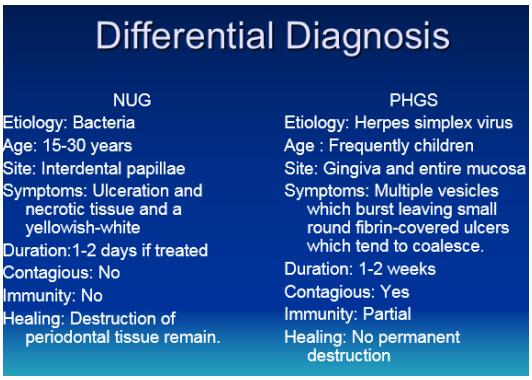
A. mesial, distal, buccal.
B. mesial, distal, palatal.

Answer: A.

*712. 14 years old girl has a fever for 2 days, ulcerated interdental papilla. Histologiacally smooth rete pegs.*

A. ANUG.
B. primary herpetic gingivostomatitis.

Answer: A.




*713. Calculus on a buccal surface of 1st maxillary molar because of:*

A. Stenson's duct opening.
B. Wharton's duct opening.
C. salivary glands in the area.

Answer: A.

*714. Which of the following elements is not found in normal periodontalmembrane?*

A. Fibroblast.
B. Epithelial cells.
C. Erythrocytes.
D. Rest cells of malassez.
E. Inflammatory plasma cells and lymphocytes.

Answer: E.

*715. What is present in periodontal ligament?*

A. Epithelial cells.
B. Collagen II.

Answer: A.

Collagen II only present in cartilage.

*716. A 52 year old patient presents with a limitation of mouth opening. The patient has loss of attached gingiva and multiple areas of gingival recession. A panoramic radiograph shows diffuse widening of the periodontal ligament. The most likely diagnosis is:*

A. scleroderma.
B. hyperparathyroidism.
C. cicatricial pemphigoid.
D. erythema multiforme.
E. advanced adult periodontitis.

Answer: A.

*717. Which of the following is the most propable postoperative complications of intracoronal bleaching a tooth that has not been adequately obturated?*

A. Fracture.
B. Discoloration.
C. Retrograde pulpitis.
D. Acute apical periodontitis.
E. External Cervical root resorption.

Answer: D.

*718. Which of the following is LEAST likely to cause pain?*

A. Carious pulp exposure.
B. Chronic hyperplastic pulpitis (pulp polyp).
C. Acute pulpitis.
D. Apical periodontitis.

Answer: B.

*719. A patient experiences pain and some gingival swelling in the anterior segment of the mandible. The mandibular lateral incisor has a shallow restoration, is tender to percussion and gives a positive response to the electric pulp tester. There is some mobility. The most likely diagnosis is:*

*A. acute apical abscess.*
B. acute serous pulpitis.
C. lateral periodontal abscess.
D. acute suppurative pulpitis.
E. chronic ulcerative pulpitis.

Answer: C.

*720. During root canal therapy, which of the following organisms will cause endocarditis in a patient with valvular heart disease?*

A. Hemolytic streptococcus.
B. Non hemolytic streptococcus.
C. Coagulase positive staphylococcus.
D. Candida monilia.
E. Bacteroides melaninogenicus.

Answer: A.

*721. The microorganisms responsible for formation of a dental or periapical granuloma are found mainly in the:*

A. granuloma.
B. root canal.
C. periapical periodontal ligament.
D. periapical alveolar bone and bone marrow.

E. periapical cementum.

Answer: B.

*722. Numbness 1 week after IAN block with articaine.*

A. tell her sensation will return and not to come back to see you.
B. review in a week.
C. review in 1 month.
D. review in 3 months.
E. review in 12 months.

Answer: C.

**Follow-up**

Three months after injury is a critical time when a decision should be made as to whether the OMFS Department will continue to follow up the patient at regular intervals or whether a surgical intervention option should be offered. If there is no improvement, it is imperative that arrangements be made with an appropriate specialist for evaluation regarding a surgical intervention within the 3 month time frame.

Therefore, it is suggested that follow-up appointments be scheduled as detailed below:

- After the surgical procedure that results in nerve injury
  - 1st follow-up – 2 weeks post surgery
  - 2nd follow-up – 1 month post surgery
  - 3rd follow-up – 2 months post surgery

At the 3rd follow-up appointment, the patient should be given a detailed explanation about treatment options and should be offered to be referred to a neurosurgeon or appropriate specialist for consultation about possible surgical treatment. The patient should be made fully aware of consequences of no surgical treatment or of the surgical treatment options. This should be documented in the patient's record, including comments made by the patient.

*723. If numbness is more than 3 month,*

A. Neuropraxia.
B. Axonotmesis.
C. Neurotmesis.

Answer: B.

Axonomethesis is from 2-4 months.

Ranging from least to most severe these are: neuropraxia, axonotmesis and neurotmesis.

- Neuropraxia is a mild form of injury. Here, there is little or no structural damage with no loss of nerve continuity. Symptoms are transient and most likely due to an ion-induced conduction block, thought to result from a mixture of mechanical compression and ischaemia. The effects appear to be reversible, unless ischaemia persists for approximately 8 hours.
- Axonotmesis is the term used when there is complete interruption of the nerve axon and its myelin sheath, but the mesenchymal structures including perineurium and epineurium are either completely or partially intact. This type of injury may be seen in association with fractures or lacerations, including those caused by broken glass, are also a common type of injury that may cause axonotmesis. Whereas these can be complete transections, usually some element of nerve continuity remains. Prognosis for axonotmesis depends on the extent of injury, with increasing severity related to poorer outcome.
- Neurotmesis occurs when a nerve, along with its surrounding stroma, becomes completely disconnected. There is no spontaneous recovery and even after surgery prognosis is poor. This type of injury is only seen in major trauma.

*724. A valuable research design, commonly used in clinical research, is the"double-blind" study. What does this expression mean?*

A. The research investigator is "blind" to the dependent or independent variables.
B. The person collecting the data does not know the person in the study nor do they know him.
C. The persons participating as subjects in the study do not know the purpose of the study nor do they know the people who are conducting the study.
D. Neither the person collecting the data nor people participating as subject know all the details of the study.

Answer: D.

*725. Double-blind studies,*

A. Nor the person collecting the data neither subject knows the purpose of the study.
B. Nor the person collecting the data neither subject knows all details of the study.

Answer: B.

*726. Dentinogenesis imperfecta. What is INCORRECT?*

A. More dentinal tubules than normal.
B. Enamel opalescent.
C. Chipped enamel.
D. Obliterated root, pulp chambers.

Answer: A.

*727. Dentinogenesis imperfect develops in:*

A. Initial stage.
B. Proliferation stage.
C. Histodiffrentiation stage.
D. Morphology stage.

Answer: C.

*728. Which statement is incorrect?*

A. Amelogenesis Imperfecta may look like fluorosis.
B. Amelogenesis imperfecta may be associated with osteogenesis imperfect.
C. Teeth with dentinogenesis imperfecta usually undergo pulpal obliteration.
D. Hypoplasia infers deficient matrix with normal mineralization.
E. Infraoccluded teeth have a higher incidence of absent permanent successors.

Answer: B.

*729. Hypoplasia as seen in x-ray:*

A. Thick enamel surface.
B. Thin enamel surface.
C. Sometimes large pulp chamber.
D. Cannot be detected on X rays.

Answer: B.

Hypoplasia can be either enamel hypoplasia (inadequate enamel matrix formation) affected teeth displays horizontal rows of pits or linear depression and enamel of less than normal thickness. Dentine hypoplasia teeth have thin dentine with large pulp chamber and normal enamel thickness.

*730. Rapid loss of tooth structure. What to check first?*

A. Family history.
B. Occlusion.

Answer: A.

*731. Most common congenitally missing tooth.*

A. mandibular first premolar.
B. mandibular lateral incisor.
C. maxillary first molar.
D. maxillary lateral incisor.
E. maxillary canine.

Answer: D.

The descending order of congenitally missing teeth is 3rd molars, maxillary lateral incisors then mandibular second premolars (Cameron).

*732. Most common retained primary tooth?*

A. upper lateral incisors.
B. upper central incisors.
C. second lower molars.
D. lower central incisors.
E. second upper molars.

Answer: C.

*733. The most common cause of a Class I malocclusion is:*
A. discoordinate growth of the dental arch.
B. insufficient tooth size.
C. inequity between tooth size and supporting bone.
D. maxillary incisor crowding.
E. congenitally missing teeth.
Answer: C.

*734. In Cleidocranial disostosis, what should be considered by the dentist?*
A. Early loss of teeth.
B. unerupted and missing teeth.
C. Presence of clefts.
Answer: B.

*735. All dental plaque:*
A. produce acid.
B. produce caries.
C. produce chelation.
D. not necessarily produce acid.
Answer: A.

*736. The MOST common place for initiation of gingivitis is:*
A. interdental papillae.
B. the free gingival ridge.
C. the attached gingiva.
D. the marginal gingiva.
Answer: A (Caranza).

*737. A 13 year old has enlarged gingivae; gives a history of Dilantin sodium what is you treatment?*
A. Oral prophylaxis and gingivoplasty.
B. Oral prophylaxis, scaling, root planning.
C. Stop medication.
Answer: A.
Option A: Consult the physician to look for a substitute to Dilanten the drug only in severe cases and persisting recurrence
Option B is not the answer because drug induced gingival enlargement doesn't respond to scaling and root planning therapy.

*738. Adverse effect of Prilocaine.*
A. Methaemoglobinaemia.
B. liver toxicity.
C. kidney toxicity.
Answer: A (TG p 116)
Option B & C: Prilocaine is metabolized by liver and kidney and excreted by kidney. So any disease affects these two organ will affect on the rate of metabolism and it excretion.

*739. Prilocaine contraindicated during pregnancy.*
A. True.
B. Faulse.
Answer: A.
Although prilocaine is indicated for anaesthesia in obstetrics there is no information on use of prilocaine in early pregnancy. Therefore, with the exception of its use in obstetrics, prilocaine should

not be used in pregnant women, or those likely to become pregnant, unless the expected benefit outweighs any potential risk.

*740. What is the underlying factor most commonly associated with temporomandibular disorder (including bruxism)?*

A. Emothional.
B. transition to REM sleep.
C. occlusal prematurities.

Answer: A (similar to 492 from 1000).

*741. When considering the dose of the drug, what is INCORRECT?*

A. Age.
B. Hepatic function.
C. Kidney function.
D. Diabetes Type II.
E. Diabetes Type I.

Answer: D.

*742. In regard to Benzodiazepines:*

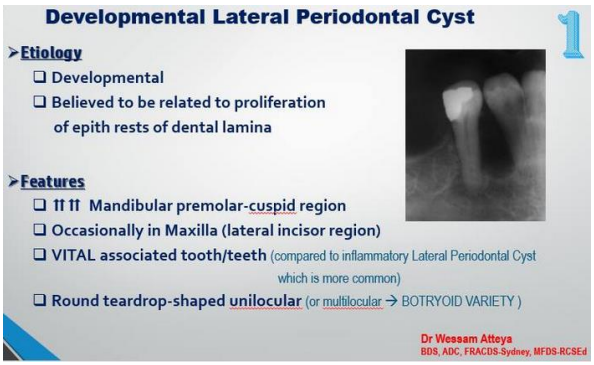
A. increases R.E.M. sleep.
B. has a hangover effects because of active metabolism.
C. includes carbamazepine.
D. can be used safely on children as it achieves reliable effects.

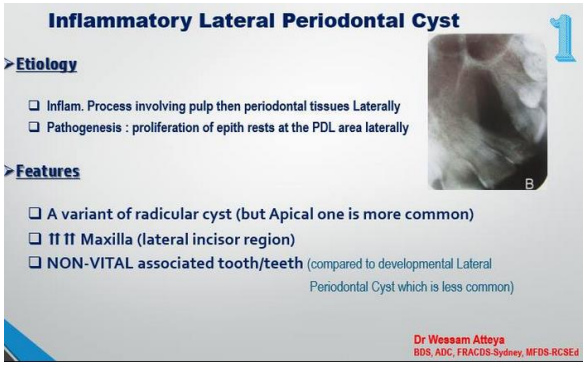
Answer: B.
Option A: REM sleep is considered the deepest stage of sleep, and normally occurs close to morning. Usually when it is used will reduce REM in the beginning then will have little effect.
Option B: When used to help you get to sleep, benzodiazepines can have some "hangover" effects, such as morning and daytime drowsiness.
Option C: Carbamazepine (CBZ) (Tegretol, Equetro) is an anticonvulsant and mood-stabilizing drug used primarily in the treatment of epilepsy and bipolar disorder, as well as trigeminal neuralgia.
Option D: different opinions, but can be considered the second right option.

*743. Lateral periodontal cyst is originally from:*

A. Epithelium inflammatory.
B. Epithelium developmental.
C. Connective tissue inflammatory.
D. Connective tissue developmental.

Answer: B.



*744. Cyst commom in mandibular premolar area:*

A. traumatic bone cyst.
B. lateral periodontal cyst.

Answe: B.

*745. Defined radiolucency in the premolar area in the mandible.*

A. Lateral cyst.
B. Radicular cyst.
C. Solitary cyst.

Answer: A.

*746. Which of the following is TRUE in regards to lateral periodontal cyst?*

A. more common in maxilla.
B. it is a part of dentigorous cyst, that expands along the root.
C. clinically expansion lateral to the tooth.

Answer: B (similar to 529 from 1000, but other options and "true").
Option C: Lateral periodontal cysts are most often identified during routine radiography, and the majority of patients are asymptomatic.[3] Rarely, these cysts can present with expansion of the mandibular or maxillary bone or with perforation of the bone and communication with the overlying gingiva.

*747. Treatment of lateral periodontal cyst.*

A. Enaculation.
B. Marsupialization.

Answer: A (Appendix V).
Enucleation but if is big marsupialization.

*748. What shows Hepatitis B immunity?*

A. surface antigen.
B. surface antibody.
C. core antigen.
D. core antibody.

Answer: B (similar to 840 from 1000, but about immunity).

*749. When a 42 year old man, apparently in good health, never having been sick, noticed a change in his gingiva. The gingival is red, swollen, and the papillae are blunted, the surface is granular and the consistency of thegingiva is dense. There are deep pockets, no exudates is present. A complete gingivectomy was performed. Histologically extreme fibrosis was present in the reticular layer relatively low grade inflammation. Diagnosis is:*

A. Dilantin hyperplastia.
B. Fibrous hyperplasia of the gingiva.
C. Pyogenic granuloma.
D. Acute necrotizing gingivitis.

Answer: B.

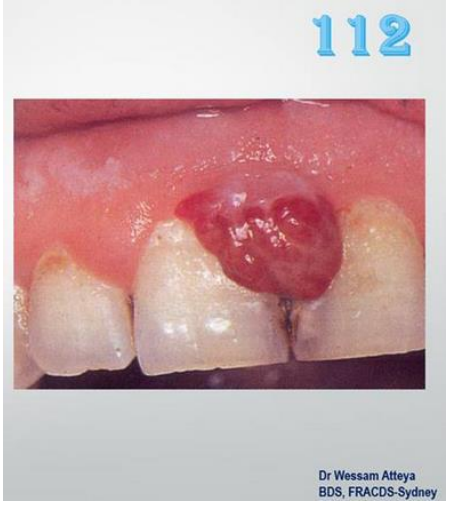
*750. A biopsy was taken from a hyperplastic gingiva of a 42 years old male who showed signs of slight anaemia ans poor nutrition but without signs of definitive symptoms of deficiency. The marginal gingiva was swallon and irregular, the papillae blunted, both of turgid consistence with the presence of deep pockets and a purulent exudate. Histologically, there was a lack of hornification, invasion of the epithelium by neutrophil leukocytes, lymphocytes and plasma cells. The diagnosis is:*

A. Hyperplastic gingivitis.
B. Atrophic gingivitis.

C. Pyogenic granuloma.
D. Eosinophilic granuloma.
E. Normal gingiva.

Answer: A.

*751. Regarding this picture: (Appendix VI)*




A. What is the clinical diagnosis?

Answer: pyogenic granuloma.

B. Justify the lesion's name?

Answer: even if the name is "pyogenic", it is a misnomer as there is no frank pus discharge.

C. What is the most probable cause?

Answer: Chronic bacterial irritation. Other causes are trauma, calculus, sharp edges, overhang fillings, hormonal imbalance.

D. A significant factor implicated in aggravating this condition is?

Answer: poor oral hygiene.

E. What predominates in this lesion' microscopy?

Answer: endothelial cells with rich vascular network, inflammatory cells, microabscess formation.

F. What treatment can be offered?

Answer: excision with removal of associated irritant.

G. Does your management differ if the patient is pregnant?

Answer: if it is small, will be self-limiting and resolve after pregnancy. No need to do any surgical excision during pregnancy only improve gingival health, observe for resolution after delivery. But big size and associated gingivitis, excise during pregnancy.

*752. On replantation of an avulsed tooth could see:*

A. Surface resorption, external resorption.
B. Internal resorption.
C. Inflammatory resorption.
D. Replacement resorption.
E. A, C and D.
F. All of the above.

Answer: E.

The method by which the body rejects the replanted tooth is a process called "replacement root resorption". During this process, the tooth root cells become necrotic (dead) and will activate the immunologic mechanism of the body to attempt to remove this necrotic layer and literally eats away the tooth root. This is called "root resorption". Research has shown that the critical factor for reduction of the death of the tooth root cells and the subsequent root replacement resorption following reimplantation of knocked-out teeth is maintenance of normal cell physiology and metabolism of the cells left on the tooth root while the tooth is out of the socket. In order to maintain this normalcy, the environment in which the teeth are stored must supply the optimum internal cell pressure, cell nutrients and pH.

*753. The junction between primary and secondary dentine is:*

A. A reversal line.
B. Sharp curvature.
C. A resting line.
D. A reduction in the number of tubules.

Answer: B.

The primary dentin is secreted at a relatively high rate and constitutes the major part of the dentin in the tooth. It is regular in structure and contains dentin tubules that form an S-shaped primary curvature as a result of the directional movement of odontoblasts, which have a cell process that extends from a broad peripheral border towards a narrow, centrally located cell layer. After tooth eruption, the odontoblasts continue to lay down dentin but slightly change their direction, which contributes to bending of the dentinal tubules. It is referred to as *secondary dentin* and is synthesized at a much lower rate and is less regular in structure.

*754. What is the sequence from superficial to the deepest in dentine caries?*

A. Zone of bacterial penetration, demineralisation, sclerosis, reparative dentine.
B. Zone of bacterial penetration, reparative dentine, demineralisation, sclerosis.
C. Zone of bacterial penetration, sclerosis, reparative dentine, demineralisation.

Answer: A.

**Zones of Dentine Caries: Below is a ground section through the tooth. It shows enamel cavitation, and five Zones of Dentine Caries are:**

- Zone of destruction.
- Zone of Bacterial Invasion.
- Zone of Demineralisation.
- Sclerotic Zone (also known as Translucent Zone).
- Tertiary Dentine (also known as Reactive Dentine)

*755. Your employer in an attempt to update office sterilization procedures; what would you recommend as the BEST method to verify that sterilization has occurred?*

A. Use spore test daily
B. Use indicator strips in each load and color change tape on each package
C. Use indicator strips daily and spore test weekly
D. Use color change tape daily and spore test monthly
E. Use color change tape in each load and spore tests weekly.

Answer: E.

http://www.cdc.gov/oralhealth/infectioncontrol/faq/sterilization_monitoring.htm

Chemical indicators such as heat sensitive tape change color rapidly when a given parameter is reached. **How often should I perform biological monitoring (BI) (spore testing)?**

Correct functioning of sterilization cycles should be verified for each sterilizer by the periodic (at least weekly) use of BIs.

*756. The most significant finding in clinical evaluation of parotid mass may be accompanying*

A. Lympha adenopathy
B. Nodular consistency
C. Facial paralysis
D. Slow progressive enlargement
E. Xerostomia

Answer: C.

757. As far as surgical *removal* of wisdom teeth is concerned which of the following is true?

A. Prophylactic prescription of antibiotic reduces dramatically the chances of infection.
B. Raising a lingual flap will increases the incidence of neurapraxia but will reduce the incidence of neurotmesis with respect to the lingual nerve.
C. Prophylactic prescription of dexamethasone will dramatically reduce post-operative swelling.
D. Inferior dental nerve injury is unlikely since the nerve passes medial to the wisdom tooth root.
E. The use of vasoconstrictors in local anaesthetics will increase the chances of infection.

Answer: B.

758. Endogenous morphine like substance which can control pain is known as:
A. Bradykinins
B. Peptides
C. Prostaglandins
D. Serotonins
E. Enkephalins or endorphins.

Answer: E.
If E isn't there among option, then B is correct as endogenous neuropeptide responsible mainly for pain control.

759. Suppuration is mainly the result of the combined action of four factors; which of the following is not one of these factors?
A. Necrosis
B. Presence of lymphocytes
C. Collection of neutrophils
D. Accumulation of tissue fluid
E. Autolysis by proteolytic enzymes

Answer: C.
PMN neutrophils are seen in acute infections where there is no suppuration once it becomes chronic, suppuration sets in it mainly has plasma cells and lymphocytes along with necrotic debris.

760. In regards to HIV infection, which of the following is the earliest finding?
A. Kaposi sarcoma on the palate
B. Reduced haemoglobin
C. Infection with pneumocystic carinii
D. Reduction in white cells count
E. B cell lymphoma

Answer: D.

761. Benign migratory glossitis or Geographic Tongue, manifests itself in the oral cavity as:
A. Irregularly outlined areas of hyperkeratosis of the dorsal surface of the tongue
B. Furrows outlined the dorsal surface radiating out from a central groove in the centre of the tongue
C. Loss (atrophy) of filiform papillae in multiple irregularly outlined areas
D. Irregularly outlined erythematous area of hyper trophic fungiform
E. A fibrinous exudate on the dorsal surface
F. Grooves (fissures) radiating from a central fissure
G. Irregular area in the midline of the tongue

Answer: C (TG, 75).

762. Trichloroacetic acid, a strong acid, has been used by dentists for chemical cautery of hypertrophic tissue and aphthous ulcers; its mechanism of action is:
A. Thermodynamic action
B. Activation of tissue enzymes
C. Osmotic pressure
D. Protein precipitation PPT
E. Neutralization

Answer: D.

763. Which of the following adverse reaction of oral contraceptives is the most common and the most serious?

A. Hypotension
B. Hepatotoxicity
C. Uterine neoplasia
D. Thromboembolism disorder
E. Decreased resistance to infection

Answer: D.

764. A patient who has been taking quantities of aspirin might show increased post operative bleeding because aspirin inhibits:

A. Synthesis of thromboxane A2 and prevents platelet aggregation
B. Synthesis of prostacyclin and prevents platelet aggregation
C. Synthesis of prostaglandin and prevents production of blood platelets
D. Thrombin and prevents formation of the fibrin network
E. Increase the absorption of vitamin K and prevents synthesis of blood clotting factors

Answer: A (TG, 27).

765. A patient who recently had a calculus removed from the kidney presented with radiolucent area in the left maxilla with clinical evidence of swelling. The disease that you would immediately suggest is:

A. Diabetes
B. Thyrotoxicosis
C. Hyperparathyroidism
D. Osteoporosis
E. Adrenal insufficiency

Answer: C.

766. Exposure of the patient to ionising radiation when taking a radiograph is NOT REDUCED by:

A. The use of fast film
B. The addition of filtration
C. Collimation of the beam
D. The use of an open and lead lined cone
E. Decreasing the kilovoltage KvP

Answer: E.

767. The inverse Square Law is concerned with intensity of radiation using type D film of 200mm target to film distance, the exposure time was 0.25s. What would be the exposure for the same situation with 400mm target to film distance:

A. 0.5s
B. 1.0s
C. 2.0s
D. 0.25s
E. 0.125s

Answer: B.

768. The obturating material of choice for primary teeth following complete pulpectomy is:

A. Zn phosphate cement and formcresol combination paste
B. Quick setting hydroxide cement
C. Zinc oxide and eugenol cement
D. Gutta-percha
E. Polycarboxylate cement

Answer: C.

769. Titanium is used in dentistry:
A. In a very pure form in implants
B. In an alloy with aluminium in casting for crowns and bridges
C. In an alloy with nickel in orthodontic wires
D. A and B
E. A, B and C
Answer: E.

770. How is the regeneration process after damage by injury to odontoblasts working?
A. Proliferation of the remaining odontoblasts.
B. Differentiation from fibroblasts.
C. Regeneration from undifferentiated mesenchymal cells.
D. histodifferentiation from ectodermal cells.
E. differentition from the inflammation cells.
Answer: C.

771. Most common reason for pain after RCT is:
A. entrapped bacteria.
B. overfilled canal.
C. underfilled canal

Answer: A.

772. What is the most frequent cause of pain which occurs several days after obturation?
A. Entrapped Bacteria or the presence of bacteria in the peri apical region.
B. Under filling the root canal system.
C. Over filled root canal.

Answer: A.

773. The most common cause of immediate post-operative pain after root canal obturation?
A. Over instrumentation during treatment.
B. Over extended root canal filling.
C. Remnants of vital pulp tissues at the apex.
D. apical infection.

Answer: A.

## Appendix I

IRRIGATION

**Advantages**

It is biocompatible in nature. No adverse reaction even if extruded periapically because osmotic pressure of normal saline is same as that of the blood.

**Disadvantages**

- Does not possess dissolution and disinfecting properties.
- Too mild to thoroughly clean the canals
- Cannot clear microbial flora from inaccessible areas like accessory canal.
- Does not possess antimicrobial activity
- Does not remove smear layer

Normal saline

**POINTS TO REMEMBER**

**Normal saline**

- As an adjunct to chemical irrigant
- Used as 0.9% W/V. Acts by flushing action
- Biocompatible.

Sodium hypochlorite

Sodium hypochlorite is considered the most effective irrigant, as it is bactericidal, dissolves organic debris and is only a mild irritant. It must be clearly understood that almost any irrigant solution will cause an inflammatory reaction in the periapical tissues if it is expressed under pressure. Ordinary domestic bleach, such as that purchased from any supermarket, has approximately 5% available chlorine. This may be used neat, or may be diluted with purified water BP up to 5 times. Greater dilutions do not affect the antibacterial properties, but diminish the tissue dissolution property. There are other commercially available sodium hypochlorite products, but it must be emphasised that there should be no other additives, particularly sodium chloride. The needle must remain loose in the canal while the irrigant is being injected, to prevent the solution being expelled under pressure into the periapical tissues. It is suggested that the irrigation needle is only inserted to a maximum depth of 2.0 mm short of the working length. A file may then be worked in the apical 2.0 mm, to stir and withdraw the dentine debris further into the canal, so that it can be flushed away. There are several differently designed irrigation needle tips, but in the author.s opinion these are of little importance compared with the diameter of the needle.

Urea

**POINTS TO REMEMBER**

**Urea**

- 30% solution used as root canal irrigant.
- Denatures proteins by destroying bonds of the secondary structure.
- Chemically, debride by softening underlying substrate of fibrin.
- Vehicle for antimicrobials.

Hydrogen peroxide

**POINTS TO REMEMBER**

**Hydrogen peroxide**

- Clear, odorless liquid.
- Used as 3% solution.
- Dissociates into $H_2O$ + [O].
- When contacts with catalase and peroxidase, [O] produces bactericidal effect.
- Causes oxidation of bacterial sulfhydryl group of enzymes-interferes with bacterial metabolism.
- [O] reacts to organic tissue—causes effervescence, pushes debris mechanically out of root canal.

Chlorhexidine

Some practitioners have concerns about the use of sodium hypochlorite and prefer to use a solution of chlorhexidine 0.2%.

Whilst this has a similar antibacterial spectrum, it does not have the ability to dissolve organic debris and may not clean the entire root canal system as effectively. One of the major disadvantages of CHX is that it has no tissue solvent activity, however, chlorhexidine does exhibit substantivity (adherence to dentine) and there is some evidence to suggest that it may be a more appropriate irrigant for retreatment of failed orthograde cases where sodium hypochlorite was the original irrigant. Although chlorhexidine may not be quite as effective as sodium hypochlorite, its use should not be dismissed.

**Advantages and Uses**

- A 2% solution is used as root irrigant in canals.
- A 0.2% solution can be used in controlling plaque activity.
- It is more effective on gram-positive bacteria than gram-negative bacteria.
- Used in combination with $Ca(OH)_2$ as intracanal medicament in necrotic teeth and retreatment cases.

**Disadvantages**

- It is not considered as the main irrigant in standard endodontic therapy.
- It is unable to dissolve necrotic tissue remnants.
- It is less effective on gram-negative than on gram-positive bacteria.
- Does not show effect on biofilms.

Combination of NaOCl and CHX causes colour changes and formation a precipitate, which may interfere with the seal of the root filling (International Endodontic Journal).

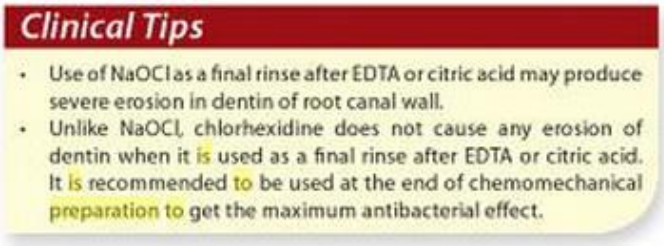
**Combination of 0.2% chlorhexidine and 2% sodium hypochlorite**

This combination is commonly used as irrigant in root canals because:

- Chlorhexidine being a base forms salts of organic acids where as sodium hypochlorite being an oxidizing agent, oxidizing gluconate part of chlorhexidine gluconate and forms gluconic acid
- There is an increase in ionizing capacity of chlorhexidine due to formation of chlorhexidine Cl ($Cl^-$ group get attached to guanidine part of chlorhexidine)
- Combination of chlorhexidine (pH 6.5) and sodium hypochlorite (pH 9–10) is more alkaline (pH 10) making it more effective
- *Chlorhexidine PLUS:* Detergent has been added to sodium hypochlorite which increases the speed of dissolution by NaOCl.

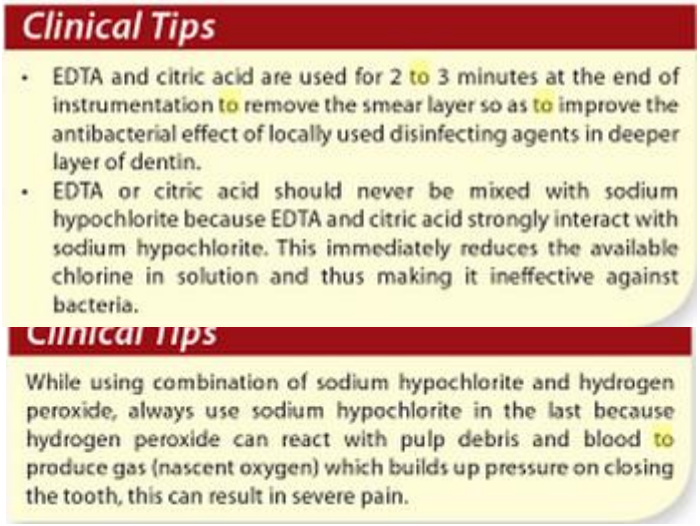
Ethylene-diamene tetracetic acid (EDTA)

- Endodontic instrumentation creates a smear layer on the root canal walls, particularly when using nickel-titanium rotary instruments. This smear layer occludes the dentinal tubules, and may protect microorganisms from the effects of the sodium hypochlorite irrigation. Flushing the canal with EDTA solution periodically during instrumentation removes the smear layer, and enables more effective cleansing.
- EDTA is a chelating agent which softens the dentine of the canal walls and greatly facilitates canal preparation especially of narrow or calcified canal.
- EDTA solution may be used as an irrigant at the end of the canal preparation phase to assist removal of the smear layer prior to placement of an intervisit dressing, or obturation.
- The final irrigation should always be with sodium hypochlorite (BDJ, 459&606).



**Clinical Tips**

- Use of NaOCl as a final rinse after EDTA or citric acid may produce severe erosion in dentin of root canal wall.
- Unlike NaOCl, chlorhexidine does not cause any erosion of dentin when it is used as a final rinse after EDTA or citric acid. It is recommended to be used at the end of chemomechanical preparation to get the maximum antibacterial effect.



**Clinical Tips**

- EDTA and citric acid are used for 2 to 3 minutes at the end of instrumentation to remove the smear layer so as to improve the antibacterial effect of locally used disinfecting agents in deeper layer of dentin.
- EDTA or citric acid should never be mixed with sodium hypochlorite because EDTA and citric acid strongly interact with sodium hypochlorite. This immediately reduces the available chlorine in solution and thus making it ineffective against bacteria.

**Clinical Tips**

While using combination of sodium hypochlorite and hydrogen peroxide, always use sodium hypochlorite in the last because hydrogen peroxide can react with pulp debris and blood to produce gas (nascent oxygen) which builds up pressure on closing the tooth, this can result in severe pain.

The illustrations used above is cited from Textbook Of Endodontics.

## Appendix II

Pulpal innervation

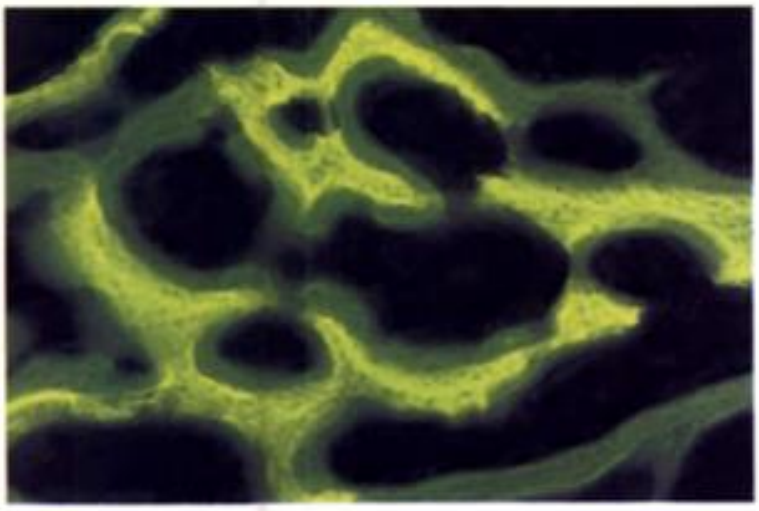
It is important to have an understanding of pulpal innervation characteristics in order to appreciate the rationale for, and mechanisms involved in, tests of pulpal sensitivity. Within the coronal pulp, nerve bundles diverge and branch out towards the pulpo-dentine border, and emerge from their myelin sheaths. Nerve divergence continues until each bundle loses its integrity and smaller fiber groups travel towards the dentine. This course is relatively straight until the nerve fibers form a loop and a resultant mesh termed the nerve plexus of Rashkow. Terminal axons exit from their Schwann cell investiture and pass between the odontoblasts as free nerve endings. This nerve plexus is most well developed in the peripheral pulp along the lateral wall of coronal and cervical dentine, and along the occlusal aspect of the pulp chamber. Two types of sensory fibers are present in the pulp: the myelinated (A fibres) and unmyelinated C fibers. The A fibers predominantly innervate the dentine and are subgrouped according to their diameter and conduction velocities into Aβ and Aδ fibers. The Aβ fibers may be more sensitive to stimulation than the Aδ fibers, but functionally these fibers are grouped together. Approximately 90% of A fibers are Aδ fibers. The C fibers innervate the body of the pulp. The Aδ fibres have lower electrical thresholds than the C fibers, and respond to a number of stimuli which do not activate C fibres16. Aδ fibres mediate acute, sharp pain and are excited by hydromechanical events in dentinal tubules such as drilling or air-drying. The C fibers mediate a dull, burning, and poorly located pain, and are activated only by stimuli reaching the pulp proper. C fibers have a high threshold and can be activated by intense heating or cooling of the tooth crown. Once activated, the pain initiated by C fibers can radiate throughout the face and jaws. C fiber pain is associated with tissue injury and is modulated by inflammatory mediators, vascular changes in blood volume and flow, and increases in pressure. As the intensity of the stimulus increases, more sensory nerves are activated, and this results in a progressive increase in the sensory response. The response to a given stimulus will be greatest where neural density is the highest. Key variables known to affect the response to pulp testing are the thickness of the enamel and dentine, and the number of nerve fibers in the underlying pulp. Some found that the highest concentration of neural elements was in the pulp horn region. A progressive decrease in the number of nerve fibers in the cervical and radicular areas was observed. Similar findings were reported by Byers and Dong. Presumably, the direction of the dentinal tubules is also important in establishing pulp test responses in various parts of the tooth crown. The dentinal tubules run an almost straight course from the incisal edge of anterior teeth to the pulp horn. In multi-cuspal teeth, the course of tubules is somewhat curved and resembles an ‘S’ shape. Because it is principally the fluid in the tubules that conducts electrical impulses from the pulp tester electrode to the pulp, the shorter the distance between the electrode and the pulp, the lower the resistance to the flow of current.

## Appendix III

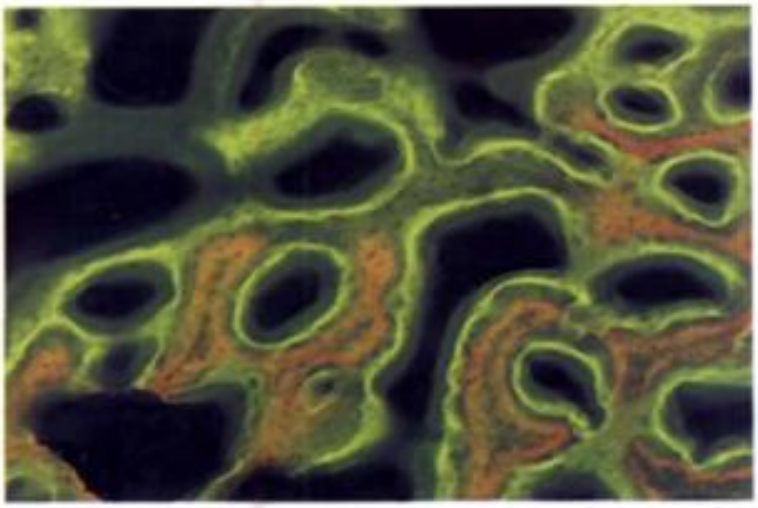
**Intramembranous ossification**

**7 1st phase**
Deposition of apatite in the connective tissue matrix. This results in a three-dimensional network of loose-packed bundle bone.

The mineralized tissue particles fluorescense yellow under the microscope (tetracycline staining, fluorescence with blue light excitation).

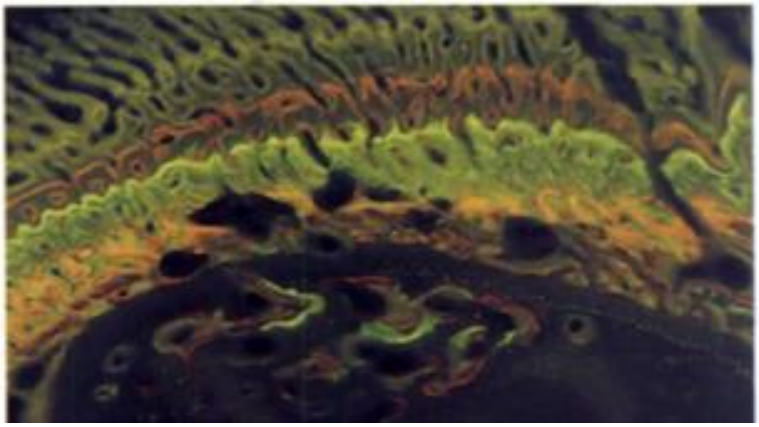


**8 2nd phase**
Deposits of lamellar bone (yellow) on the spicules of bundle bone (orange). The resulting bone is more compact. Either a cortical bone or trabecular bone is formed depending on the localization (vital staining; fluorescence with blue light excitation).



**9 3rd phase**
Periosteally derived cortex composed of bundle bone.

The periosteal, radiating spicules of bundle bone can be seen on the exterior. It is quite apparent that the bone deposited first is thicker (vital staining; fluorescence with blue light excitation).



## Appendix IV

What are the guidelines which should be done to assure profound anasthesia in case of RCT or extraction of acute periapical abscess?
Profound anesthesia is difficult to obtain in the presence of inflammation, swelling, or exudates.
Block anesthesia: Because direct subperiosteal infiltration is ineffective and may be quite painful, regional block anesthetic techniques are preferred.
Mandibular blocks for posterior areas, bilateral mental blocks for the anterior mandible, posterior superior alveolar blocks for the posterior maxilla, and infraorbital blocks for the premaxilla area are the preferred choices. These injections may be supplemented by regional infiltration. In addition to block anesthesia, one of the following methods may also be used. The first technique is infiltration that starts peripheral to the swelling. After the application of topical anesthetic, the solution is injected slowly with limited pressure and depth, and this is followed by additional injections in previously anesthetized tissue, moving progressively closer to the center of the swelling. This procedure results in improved anesthesia without extreme discomfort.
The second technique is the use of topical ethyl chloride. A stream of this solution is directed onto the swelling from a distance, permitting the liquid to volatilize on the tissue surface. Within seconds, the tissue at the site of volatilization turns white. The incision is quickly accomplished with continued ethyl chloride spray. This topical anesthesia is a supplement to block anesthesia when a quick incision is required.
If none of these procedures work, intravenous (IV) sedation can be used for incisions and drainage.

## Appendix V

ENUCLEATION

Definition

1. Total removal of a cystic lesion is achieved.
2. A shelling-out of the entire cystic lesion without rupture.
3. Enucleation of cysts should be performed with care, in an attempt to remove the cyst in one piece without frag-mentation, which reduces the chances of recurrence by increasing the likelihood of total removal.

Indications

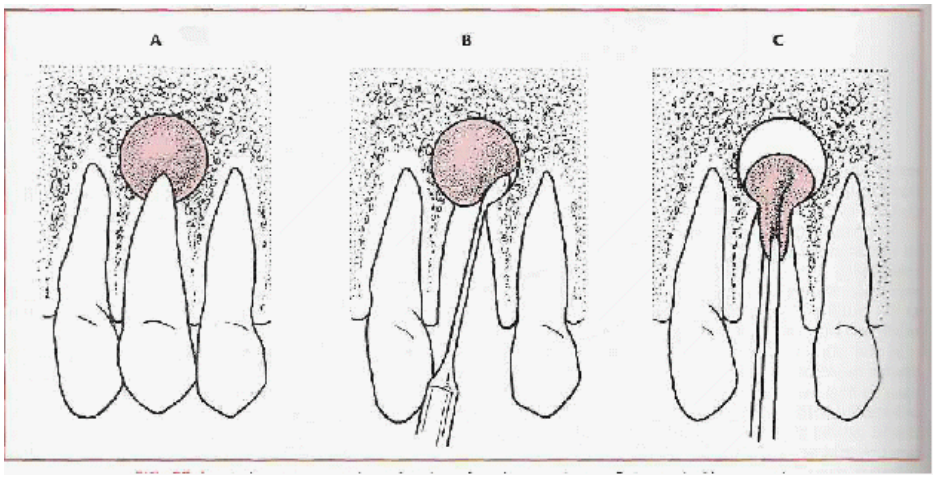
The treatment of choice for removal of cyst of the jaws and should be used with any cyst of the jaw that can be safely removed without unduly sacrificing adjacent structures.

**Advantages**

1. The main advantage to enucleation is that pathologic examination of the entire cyst can be undertaken.
2. Another advantage is that the initial exci-sional biopsy (i.e., enucleation) has also appropriately treated the lesion.
3. The patient does not have to care for a marsupial cavity with constant irrigations.
4. Once the mucoperiosteal access flap has healed, the patient is no longer bothered by the cystic cavity.

*Disadvantages*

1. If any of the conditions outlined under the section on indications for marsupialization exist, enucleation may be disadvantageous.
2. For example, normal tissue may be jeopardized, fracture of the jaw could occur, devitalization of teeth could result, or associated impacted teeth that the clinician may wish to save could be removed.




MARSUPIALIZATION

*Definition*

1. Marsupialization, decompression, and the Partsch operation all refer to creating a surgical window in the wall of the cyst, evacuating the contents of the cyst, and maintaining continuity between the cyst and the oral cavity, maxillary sinus, or nasal cavity.
2. The only portion of the cyst that is removed is the piece removed to produce the window.
3. The remaining cystic lining is left in situ.
4. This process decreases intracystic pressure and promotes shrinkage of the cyst and bone fill.

*Indications*

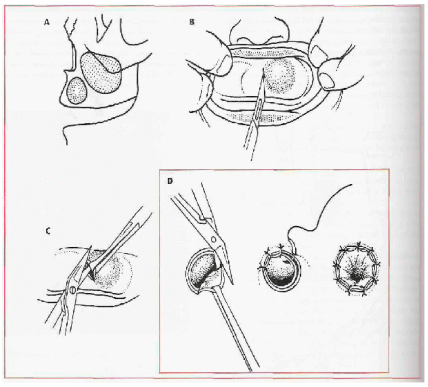
1. Amount of tissue injury.
2. Assistance in eruption of teeth
3. Surgical access.
4. Extent of surgery.
5. Size of cyst

*Advantages*

1. The main advantage of marsupialization is that it is a simple procedure to perform.
2. It may after spare vital structures from damage should immediate enucleation be attempted.

*Disadvantages*

1. The major disadvantage of marsupialization is that pathologic tissue is left in situ, without thorough histologic examination.
2. Another disadvantage is that the patient is inconvenienced in several respects.
3. The cystic cavity must be kept clean to prevent infection, because the cavity frequently traps food debris.
4. In most instances this means that the patient must irrigate the cavity several times every day with a syringe.



**Appendix VI**

# Pyogenic Granuloma

*Def. & Etiology :- ⇒ **"it's an overexubertant C.T. to a known stimulus or injury" .**

- **it's mainly composed of prominent capillaries in a hyperplastic granulation tissue.**
- **Its name is misnomer, as it doesn't produce pus as the word "Pyogenic" implies.**

*Clinical features :-

1- **Age & sex : any age, ♀ > ♂ .**
2- **Site : → most commonly gingiva (may be due to calculus in gingival crevice).**
   **→ other sites e' frequent trauma as lower lip, buccal mucosa & tongue.**
3- **Appears : as exophytic red mass (due to prominent capillaries).**
4- **It may be pedunculated or sessile (few mm to several cm).**
5- **If 2ry trauma → ulceration → pyogenic membrane (yellow fibrinous membrane).**
6- **Hormonal disturbances {pregnancy & puberty} may modify the response to the injury & may give multiple gingival lesions.**

*Histopathologically :-

1- **Well vascularized proliferating granulation tissue e' thick-walked B.Vs.**
2- **Scarring may be noted (suggesting C.T. repair).**
3- **Marked No. of chr. Inf. cells & necrotic tissue.**
4- **Neutrophils will be present if the lesion is ulcerated (pyogenic membrane).**

*D.D. :- ⇒ **peripheral fibrous lesions (usu. lighter in color).**