401. Patient with class I malocclusion, he has canine guard occlusion, where will you face difficulties in crown preparation?

A. You will not face difficulties.
B. Mandibular canine.
C. Maxillary canine.

Answer: B. (Appendix I).

402. In short clinical crowns, what is true in regards to crown preparation?

A. The shorter the crown the more parallel the walls should be.
B. Short clinical crowns are not good candidates.
C. The shorter the crown the more tapered the walls should be.

Answer: A. (Appendix, II)

403. In comparing porcelain to metal-crown with full porcelain crown in anterior teeth:

A. Porcelain to metal crown is more conservative (minimal reduction) on the palatal surface.
B. Metal-crowns are more aesthetic than full porcelain.
C. Preparation of the tooth is more simple when doing full porcelain crowns.

Answer: A.

404. In a class II/2 malocclusion, which bridge design would be contraindicated for a missing lateral upper incisor?

a. Cantilever bridge
b. Maryland bridge
c. Metal bridgework

Answer: B. (Shillinburg, 106 and Appendix III)

Options for replacement maxillary lateral incisor:

- Resin-bonded retainers A resin bonded bridge supported by teeth that are relatively upright with minimal overbitewill have a greater chance of success because they experience more vertical as opposed to lateral forces
- Metal-ceramic retainers if caries and/or restorations on the abutments.
- Single-abutment cantilever fixed partial denture can be used if the canine is long, well-supported periodontally, and in need of restoration, and if the pontic will not contact in centric or lateral excursions, in that case, a metal-ceramic crown also should be used as a retainer.
- Metal-ceramic crowns on the canine and first premolar if untouched central incisor and a first premolar in need of restoration could call for a pontic cantilevered from.
- Implant.
- Canine substitution.

405. Patient with class II division II, the lateral incisor is missing. You want to make a fixed bridge which of the following is suitable?

A. Rocket bridge using central incisor as abutment.
B. Cantilever using central incisor.
C. Fixed bridge using the central incisor and bicuspid.

Answer: C.

406. When lateral incisor is lost and patient has Class II Division II type with deep bite. Which of the following is contra indicated?

A. Fixed bridge with canine and central incisor as abutment.
B. Non-rigid connector with central incisor as abutment.

Answer: B.

407. You have patient with Class II division 2; which of the following is contraindicated?

A. Cantilever bridge.
B. Maryland bridge.

Answer: B.

408. In metal-ceramic restorations, failure or fracture usually occurs:

A. in the porcelain.
B. at the porcelain-metal interface.
C. in the metal.

Answer: B

409. Winged axial wall preparation:

A. is a metal porcelain transition.
B. may improve resistance form.
C. good for a short crown.
D. all of above.

Answer: D.

410. Which is the best cantilever bridge design for missing maxillary canine? Abutment on:

A. Both premolars.
B. Lateral and central incisor.
C. Lateral incisor.
D. First premolar.

Answer: A.

411. Final restoration that will last for a long time in severely discolored tooth is:

A. All ceramic crown.
B. Porcelin fused to metal.
C. Extrenal bleaching.
D. Composite veneer.

Answer: B.

412. Porcelain which combine strength and esthetic is:

A. Feldspathic.
B. Zirconia.
C. Alumina.
D. Sintered porcelain.
E. Procera (dont rem the whole sentence).
F. Inceram.

Answer: B. (Appendix IV)
Zirconia is a high-tech ceramic material that is characterized by its outstanding stability and biocompatibility, as well as strength levels that are significantly higher than other all-ceramic materials. In addition to strength, Lava all-ceramic system restorations display excellent esthetics and precise fit characteristics.

413. Patient is 18 years has badly decayed centrals need to be restore and there is a minimal overlap, the best treatment is:

A. Metal crown.
B. Porcelain jacket.
C. Veneer.
D. Metal ceramic.

Answer: D.

414. "Pop off" of a porcelain veneer from the under the lying gold crown is due to:

A. too thick application of pure gold surface conditioner.
B. contamination at the porcelain metal interface.
C. under firing the opaque layer.
D. All of the above.

Answer: D.

415. When should metallic framework not be contaminated during the fabrication of a porcelain fused to metal crown?

A. Between bisque stage and glazing stage.
B. Between preheat and opaque stages.
C. Between opaque and bisque stages.
D. Between one opaque and two opaque stages.

Answer: B.

416. A 55 year old man has a four unit bridge in upper anteriors that is 11,12,21,22. The 21 has chipped porcelain and the metal was seen.

I. Patient has important conference or meeting today. How will you repair it chair side?
A. Etch porcelain with APF and repair with composite.
B. Etch with 5% hydrofluoric acid and repair with composite.

Answer: B.

II. What is the reason for chipped porcelain?
A. Thin porcelain.
B. No vacuum.
C. Rapid firing.
D. Hard biting in teeth.
E. Inadequate framework.

Answer: D.

III. name of this defect is:
A. adhesion defect.
B. cohesion defect.
C. adhesion, cohesion defect.

Answer: C.

IV. What is the main problem to provide esthetics bridge to patient in future?
A. Gingival margin.
B. Grind incisal edge of 11.
C. Extract and place implant.

Answer: A.

V. The patient has bruxism how to treat?
A. Splint teeth together.
B. Big composite restoration on post to increase bite.
C. Refer for stress management.
D. Provide night guard.

Answer: D.

417. The opacity of a porcelain is due to:

A. Thin layers of porcelain.
B. Incorrect compression.
C. Incorecct firing.

Answer: A.

418. The most acceptable theory of bonding porcelain to noble metal is:

A. Formation of base metal oxide.
B. Formation of noble metal oxide.
C. Adhesion.

Answer: A.
Noble metals are stable and don't form oxide.

Porcelain Bonding to Metals

The addition of a small quantity of base metal to noble and high noble alloys promotes oxide formation on the surface, which promotes chemical bonding between the alloy and the porcelain. For base metal alloys, some oxides may be poorly adherent oxide to the metal substructure, which can result in porcelain delaminating from the metal substrate. The bond

Chemical bonding is indicated by the formation of an oxide layer on the metal[11,12] and by bond strength that is increased by firing in an oxidizing atmosphere.[13,14] When fired in air, trace elements in the gold alloy, such as tin, indium, gallium, or iron, migrate to the surface, form oxides, and subsequently bond to similar oxides in the opaque layer of the porcelain. A gold alloy containing minute amounts of tin

419. Which of the following contribute to the bonding of dental porcelain to metal casting alloys?

I. Metallic bonds.
II. Chemical bonding.
III. Adhesive bonds.
IV. Mechanical bonding.

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

Answer: D.

420. Electric pulp testing on crowned teeth evokes:

A. No response.
B. A gingival sensation mimicking a vitality response.
C. Best response on all ceramic crowns.
D. None of the above.

Answer: B.
If it touches the margins by mistake.

421. when considering PFM restorations :

A. it is more conservative than porcelain alone.
B. shoulder is needed overall.
C. metal ceramic bond is weaker in facial veneers as compared to full PFM crown.
D. metal sub frames with low AU content provide less consistent bonding to porcelain.

Answer: A.

422. A patient is unhappy with the esthetics of an anterior metal-ceramic crown, complaining that it looks too opaque in the incisal third. The reason for this is most likely:

A. using the incorrect opaque porcelain shade.
B. inadequate vacuum during porcelain firing.
C. not masking the metal well enough with the opaque.
D. the tooth was prepared in a single facial plane.

Answer: D.

423. Metal ceramic restoration may fail due to fracture of ceramic material. This can best be avoided by:

A. occlusal forces are minimal.
B. the metal is not over 0.5 mm thick .
C. the ceramic material is at least 1.5mm thick.

Answer: B.

The question and answer mean that to "avoid" making metal thickness more than 0.5mm. Increasing the thickness of metal will force you to decrease the thickness of porcelain and breaking of the porcelain.

424. Porcelain adhered to metal by:

A. chemical bond.
B. mechanical bond.
C. chemico-mechanical bond.

Answer: C.

425. Which of the following impression materials is NOT recommended for making a final impression for fabrication of dies for a porcelain fused to metal crown?

A. Addition silicone.
B. Condensation silicone.
C. Irreversible hydrocolloid.
D. Polyether.

Answer: C.

426. What are the artificial teeth in removable dentures made of?

A. Porcelain.
B. Cross-linked methyl-methacrylate.
C. Ethyl-methacrylate.
D. Acrylic.

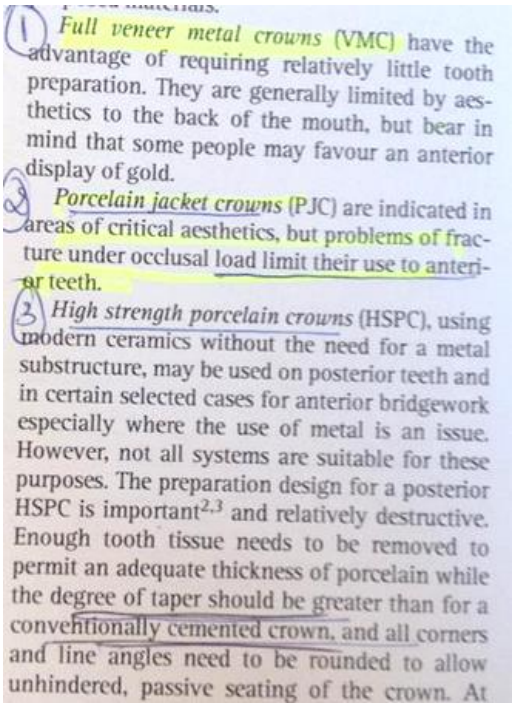
Answer: D.

A will cause attrition of the opposing natural teeth.
B will not adhere chemically to acrylic denture base.

427. An advantage of all ceramic crown over porcelain jacket crown is:

A. increased esthetics.
B. increased strength.
C. Both.

Answer: C. (Appendix IV)



(1) *Full veneer metal crowns* (VMC) have the advantage of requiring relatively little tooth preparation. They are generally limited by aesthetics to the back of the mouth, but bear in mind that some people may favour an anterior display of gold.

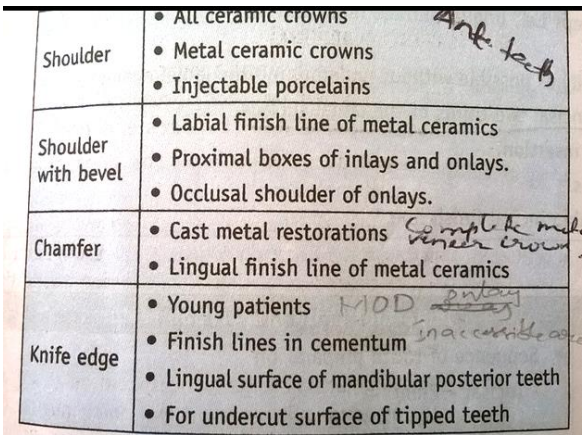
(2) *Porcelain jacket crowns* (PJC) are indicated in areas of critical aesthetics, but problems of fracture under occlusal load limit their use to anterior teeth.

(3) *High strength porcelain crowns* (HSPC), using modern ceramics without the need for a metal substructure, may be used on posterior teeth and in certain selected cases for anterior bridgework especially where the use of metal is an issue. However, not all systems are suitable for these purposes. The preparation design for a posterior HSPC is important[2,3] and relatively destructive. Enough tooth tissue needs to be removed to permit an adequate thickness of porcelain while the degree of taper should be greater than for a conventionally cemented crown, and all corners and line angles need to be rounded to allow unhindered, passive seating of the crown. At

428. For cast metal crowns, design of gingival margin is:

A. Knife edge.
B. Heavy chamfer.
C. Bevel.
D. Beveled shoulder.

Answer: B.



Shoulder	• All ceramic crowns • Metal ceramic crowns • Injectable porcelains
Shoulder with bevel	• Labial finish line of metal ceramics • Proximal boxes of inlays and onlays. • Occlusal shoulder of onlays.
Chamfer	• Cast metal restorations • Lingual finish line of metal ceramics
Knife edge	• Young patients • Finish lines in cementum • Lingual surface of mandibular posterior teeth • For undercut surface of tipped teeth

429. Excellent gingival margin design for porcelain fused to metal unit is:

A. Bevel design.
B. Knife edge design.
C. Chamfer.
D. Full shoulder.

Answer: D.

430. The best metal for a porcelain crown is:

A. pure Gold.
B. gold 14 Karat.
C. chrome cobalt.
D. copper.

Answer: B.

Pure gold 24 karats is only used in direct fillings coz highly malleable and ductile. 14 karats alloy with copper used for crowns for its more strength.

431. In metal porcelain crown why is there a butt join?

A. porcelain is brittle.
B. metal is brittle.
C. porcelain is thin.
D. metal is thin.

Answer: A.

432. If a patient has lichenoid reaction to amalgam, we should replace it with:

A. Composite.
B. GIC.
C. Gold inlay.

Answer: A.

433. What will you tell the patient in Q 432?

A. The white lesion will disappear.
B. There will be some mild sensitivity for the next few days.
C. Composite restoration will not last as long as amalgam.

Answer: C.

On average, longevity of resin composite restorations in posterior teeth is two to three times lower than amalgam restorations. The resin composite is an appropriate material to restore small Class I and Class II lesions, with margins located in enamel, on patients with low caries risk and, when complete field isolation can be achieved. The use of amalgam is preferable to the use of composite in large and complex restorations, with margins located in dentine, where isolation is deficient.

434. Better retention of resin bonded bridge:

A. nickel chromium.
B. beryllium.

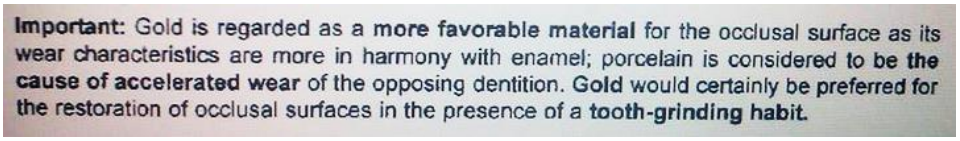
Answer: B.

Beryllium is added to some base metal alloys for use in crowns, bridges and partial denture frameworks. Incorporation of beryllium into the base metal alloy formulation facilitates castability

(lowering the melting temperature and surface tension) and increases the porcelain metal bond strength. Beryllium also allows the alloys to be electrolytically etchable for bonding veneers in conjunction with resin-bonded restorations.

435. Which material used for FPD restoration in patient with teeth grinding habit?

A. Gold.
B. Porcelain.
C. Acrylic.
D. Base metal.



Answer: A.

436. Which of the following is the MOST appropriate related to hardness?

A. Tungsten carbide>Porcelain> enamel>amalgam>acrylic.
B. Porcelain>Enamel>Tungsten carbide>amalgam>acrylic.
C. Porcelain>Tungsten carbide>amalgam>enamel>acrylic.
D. Tungsten carbide>porcelain>amalgam>enamel>acrylic.

Answer: A.
Tungsten carbide is very hard metal.

437. Porcelain must not be contaminated by handling between which two stages?

A. Pre-soldering and heat treatment.
B. Heat treatment and opaque /bake/ stages.
C. Opaque and bisque stages.
D. Bisque and glazing stages.
E. First opaque bake and second opaque bake.

Answer: B.

438. A patient complains of the discolouration of an unrestored upper central incisor. Radiographically, the pulp chamber and the root canal space are obliterated, there is no evidence of caries and the periodontal ligament space appears normal. The most appropriate treatment would be to
(select one):

A. fabricate a porcelain fused to metal crown.
B. fabricate a porcelain veneer.
C. perform root canal treatment and fabricate a post retained porcelain fused to metal crown.
D. perform root canal treatment and fabricate a porcelain veneer.
E. perform root canal treatment and non-vital bleaching.

Answer: B.

439. For a porcelain fused to metal restoration, the metal surface:

A. requires some degree of mechanical retention.
B. should not be heat treated.
C. requires a well polished surface.
D. must develop an oxide for chemical bonding.

Answer: D.

440. *What is the reason for chipped porcelain?*

A. thin porcelain.
B. no vaccum.
C. rapid firing.
D. inadequate frame work

Answer: D.

441. What is the best way to cement a Maryland bridge?

A. GIC.
B. Resin.
C. High compression restorative resin.
D. Zinc Phosphate cement.
E. Oxide Zinc and eugenol.

Answer: B.

The most likely reason for de-bonding of Maryland Bridges is inadequate tooth preparation. I recommend placing grooves and/or box forms in the enamel surfaces of the abutment teeth. These retentive features, combined with a good bonding agent and a current generation resin cement, provide adequate retention for most Maryland Bridge situations.

442. Maxillary distal extension partial denture extends to posterior palatal seal. True / false

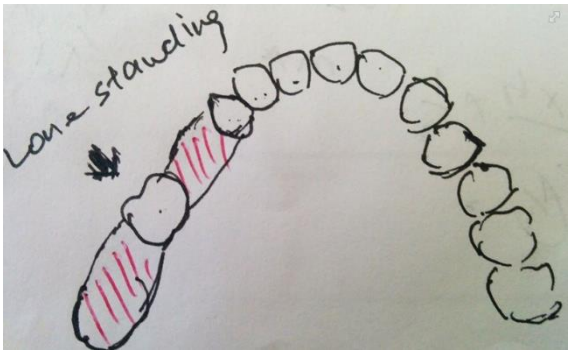
Answer: F.

443. What is true about partial dentures?

A. They cause immediate changes in the oral plaque behavior.
B. Night wearing of dentures reduces plaque accumulation.
C. Relieving the gingival area reduces gingival enlargement.

Answer: A.

444. When an edentulous space that is a modification of class I or II exists anterior to a lone standing abutment tooth, the splinting of the lone abutment to nearest tooth is mandatory and is best accomplished by FPD. Does it mean we need FPD for 456 and RPD for free end saddle?(Shillinburg, 96)

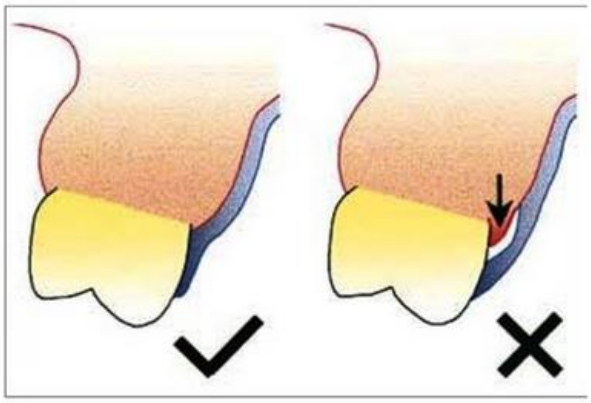


This is case is pier abutment. The treatment options for this:

- Non-rigid connector, keyway of the connector should be placed within the normal distal contours of the pier abutment, and the key should be placed on the mesial side of the distal pontic. If the keyway of the connector is placed on the distal side of the pier abutment, mesial movement seats the key into the keyway more solidly (Fig 7-24).19 Placement of the keyway on the mesial side, however, causes the key to be unseated during its mesial movements (Fig 7-25).20 In time, this could produce a pathologic mobility in the canine or failure of the canine retainer.
- rigid fixed partial denture distributes the load more evenly than a non-rigid design, making it preferable for teeth with decreased periodontal attachment.33 If the posterior abutment and pontic are either unopposed or opposed by a removable partial denture and if the three anterior units are opposed by natural teeth, the key and the posterior units that are subjected to little or no occlusal forces may supererupt.
- Implant supported tooth.

445. Gingival relief areas on partial dentures result in gingival enlargement? True or False.
Answer: True.

Fig. 5 — Palatal plate
If coverage of the gingival margin by the connector is unavoidable, close contact between the connector and gingival margin should be achieved whenever possible. If 'gingival relief' is created, the space is soon obliterated by proliferation of the gingival tissue; this change in shape increases the depth of the periodontal pocket and thus makes plaque control more difficult.



446. Why do you construct a lower removable partial denture with lingual bar?

A. It is used when the space between raised floor, mouth and gingival margin is minimal.
B. Plaque accumulation is less than with lingual plate.
C. Should be made thicker when short

Answer: B.

447. In planning and construction of a cast metal partial denture the study cast:

A. facilitates the construction of custom trays.
B. minimizes the need for articulating.
C. provides only limited information about inter ridge distance, which is best assessed clinically.
D. can be used as a working cast when duplicating facilities are not available.

Answer: A.

448. When an edentulous space is maintained without a replacement restoration or a prosthesis, which of the following is shown to be true?

A. Moderately shortened dental arches had little impact on occlusal stability, tooth loading, temporomandibular disorders, interdental spacing, periodontal disease, patient comfort, or masticatory performance.
B. Loss of a single posterior tooth, creating an interrupted dental arch or bounded posterior space, had significant effect on shifting, decrease in alveolar support, or loss of adjacent teeth.
C. Provision of a fixed partial denture was associated with a modestly improved survival rate of adjacent teeth.
D. Loss of teeth had considerable psychosocial impact.

Answer: A.

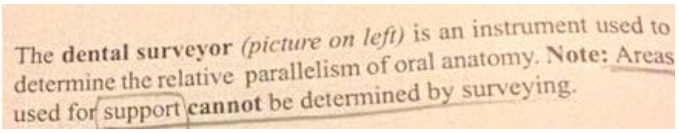
449. A free end saddle partial denture:

A. will exert less load on the supporting mucosa if the extension of the base is reduced.
B. will be most effectively retained when the clasps engage undercut nearest the saddle.
C. will usually have a path of insertion produced by tilting the anterior part of the cast upwards on the surveyor table.
D. will have support more evenly distributed between teeth and soft tissues if a mucostatic impression technique is employed.

Answer: B.

450. Which of the following areas CAN NOT be determined by survey analysis of partially edentulous cast?

A. Areas to be revealed as blocked out to properly location.
B. Areas to be shaped to properly location.
C. Areas used for guideline planes.
D. Areas used for retention.
E. Areas used for support.
F. Depth of rest seats.


The **dental surveyor** *(picture on left)* is an instrument used to determine the relative parallelism of oral anatomy. **Note:** Areas used for support **cannot** be determined by surveying.

Answer: E. (DECKS)
They attach a hand piece to surveying hand to prepare direct retainer rest seats at a desired level and ambulation with cast attached at a fixed position.

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

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

Answer: D.

452. How can a dental surveyor be used to prevent problems related to the production of removable partial dentures?

A. It can help to determine the path of insertion and removal of a removable partial denture.
B. Location of undercuts on abutment teeth.
C. Location of soft tissue undercuts.
D. All of the above.

Answer: D.

453. If aesthetic is not a concern, what is the first thing to do to treat soreness under dentures?

A. Take the denture off for a week.
B. Rinse the denture in nystatin.
C. Apply tissue conditioner.

Answer: A.

454. Frankfort plane extends from:

A. horizontally from sella to nasion.
B. ala of the nose to tragus.
C. horizontally from point on superior aspect of external auditory meatus to orbitale.

Answer: C.

455. Shape and irregularity of ridge edge in a patient who needs full denture, what is your treatment?

A. Do not proceed with treatment.
B. Minimal surgical intervention.
C. Implant surgery.

Answer: B.

456. A hinge axis face-bow records:

A. Bennett angle.
B. centric relation.
C. lateral condylar inclination.
D. horizontal condylar inclination.
E. opening and closing axis of the mandible.

Answer: E.

457. The infraorbital pointer is used for transferring:

A. midline shift.
B. hinge-axis relation.
C. occlusal plane position.
D. radius of condyle reference point .
E. horizontal condylar inclination.

Answer: C. (Appendix V)
The third point locator of face bow whether it is orbital or nasal, is designed to orient the occlusal plane to the Frankfort horizontal plane.

458. A facebow is used to record the:

1. vertical dimension of occlusion.
2. inter-condylar distance.
3. horizontal condylar inclination.
4. relationship of the maxilla to the hinge axis.

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

459. What is important in determining the terminal hinge axis?

A. Kinematic face bow.
B. Wax bite registry.
C. Working casts in dye stone.

Answer: A.

460. What is the advantage of over-denture in comparison to full denture?

a. Proprioceptors
b. Simplicity of elaboration
c. Aesthetics
Answer: A.

461. Disadvantage of over-denture is:

A. decreased masticatory force.
B. decreased retention, stability and support.
C. increased alveolar bone resorption.
D. None of the above.

Answer: D.

462. What will affect incidence of bone resorption (all except)?

A. Improper extraction technique.
B. Retained root.
C. Previous periodontal disease.
D. Ill fitting denture.

Answer: C.

463. Calcium hydroxide is the best material to induce root end closure but its disadvantage over mineral trioxide aggregate (MTA) is:

A. Less biocompatibility.
B. Extended use makes the root prone to fracture.
C. Lengthy treatment time.
D. All of the above.

Answer: D.

464. You decide to place overdenture for a patient who has sound abutment teeth, the order of preference while choosing abutment teeth would be:

A. Molars, premolars, canines, incisors.
B. Molars, canines, premolars,incisors.
C. Canines, molars, premolars, incisors.
D. Canines, pre molars, molars, incisors.

Answer: C.

465. *The minimum no. of implants required in mandible for construction of denture?*

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

Answer: A. (Zarb Boucher)

Overdenture support: In maxillary dentures require the placement of a minimum of three to four implant, which are usually joined with a connecting bar. Mandibular denture appears to be adequately supported by a minimum of two implants. When the anterior ridge shows a slight curvature or a straight line, a bar will connect the two implants on its short distance and preferably parallel to the patients arbitrary hinge axis. The interimplant distance should preferably exceed 12 mm to provide sufficient space to accommodate the retentive components. When a pronounced curvature of the mandibular ridge is encountered, the placement of more than two implants is recommended.

Fixed denture support: Five implants placed between the mental foramina to support 10-12 unit fixed mandibular prosthesis. For maxilla, six or more should comprise a starting point for fixed design.

466. *An adult patient who had a cleft palate surgically closed as a child still has a small patent cleft (oronasal fistula) to the anterior of the palate. She does not want further surgery for this cleft and is now to lose her remaining maxillary teeth. What is the most appropriate first stage of treatment?*

A. Chin block bone harvesting for grafting.
B. Iliac crest bone harvesting for grafting.
C. Maxillary overdenture supported by implants.
D. Maxillary fixed bridgework supported by implants.
E. No treatment.

Answer: C.

467. A 60-year-old male patient is to lose all of his remaining maxillary teeth due to periodontal disease. He has a severe gag reflex and has been unable to tolerate a partial denture at all. He is very anxious to have tooth replacement following the extractions. What is the most appropriate first stage of treatment?

A. Maxillary complete denture.
B. Maxillary overdenture supported by implants.
C. Maxillary fixed bridgework supported by implants.
D. No treatment.

Answer: C.

468. Several attachment systems exist for mandibular overdentures. Typically, two implants are placed in the mandibular anterior region, and either a bar is used to connect the two implants or the implants remain separate. What is the difference in patient satisfaction of the overdenture between the different attachment types?

A. There is no significant difference between the two retention mechanisms.

B. The bar - supported overdenture is more stable.

C. The individual implant - supported overdenture is more stable.

D. The bar - supported overdenture requires more maintenance in the long term.

Answer: A. (Zarb Boucher)

Recent results of comparative in vivo measurements of patients supporting an overdenture do not reveal a preference of one type of anchorage device or retention mechanism over another.

469. You will be constructing a new maxillary complete denture and a new mandibular overdenture for an edentulous patient. Why is the denture construction recommended prior to surgical implant placement?

A. The denture can be used as a guide for location of the implants.
B. Improved fit.
C. Improved occlusion.
D. Establishment of vertical dimension of occlusion.
E. All of the above.

Answer: C. (My personal preference depending on experience).

470. Failure of denture is commonly due to:

A. increased occlusal plane.
B. decreased vertical dimension.
C. insufficient denture bearing area.
D. wrong freeway space.

Answer: C.

471. Diffuse pain under a complete mandibular denture is most likely caused by:

A. overextension of the denture flange.
B. occlusal plane too high.
C. occlusal face height too great.
D. mental foramen near crest of ridge.

Answer: C.

472. 22 years old girl with pericoronitis, severe pain in lower 3rd molar impacted region and wanted it removed. You gave amoxycillin to patient, she comes after 4 days with rashes and itching.

I. What is the incidence of penicillin allergy reaction in population?

A. 5%.

B. 15%.

C. 25%.

D. 50%.

Answer: A.

The risk of an urticarial adverse reaction to penicillin is around 3% (TG, 5)

II. What is your immediate management for this patient?

A. Ask her to continue medication as penicillin allergy will not occur 4 days later.

B. Prescribe antihistamine.

Answer: B. (Appendix VI)

III. What is your treatment for this patient (pericorontitis)?

A. warm saline rinses.
B. povidone iodine rinses.
C. immediate removal of 3rd molar.
D. Operculectomy.
E. essential oil extract.

Answer: A.

IV. In 2 weeks acute symptoms have subsided you decide to extract lower 3rd molar. What antibiotic would you prescribe?

A. Clindamycin 600 mg, iv 1 hour before the procedure.
B. Clindamycin 600 mg, 8 hourly/day for 5 days.
C. Erythromycin 500 mg 8 hourly for 5 days.
D. Metronidazole 400 mg for 5 days.

Answer: B. in my opinion no need for anitibotic. (TG, 107)

V. Risk of lingual nerve injury following wisdom tooth extraction?

A. no risk.
B. 1:10.
C. 1:100.
D. 1:1000.
E. 1:500.

Answer: C.

Temporary damage is 1:50, permanent 1:200 (Odell, 71)

VI. Which of the following is not commonly used for assessment of nerve injury?

A. two point discrimination.
B. sharp point.
C. blunt point.
D. thermal.
E. Directional.

Answer: E.

473. Penicillin anaphylaxis may be fatal:

A. In 55% of cases and death usually occur within 15 minutes.
B. In 15% of cases and death usually occur after few days.
C. In 10% and death usually occurs within 15 minutes.
D. In 10% and death usually occurs after few days.
E. Rarely.

Answer: C.

While many reactions are labelled as 'allergic', true IgE-mediated immediate hypersensitivity is characterized by the development of the following conditions, usually within one hour of drug administration: Urticaria; Angioedema; Bronchospasm: or Anaphylaxis (with objectively

demonstrated hypotension, hypoxia or tryptase elevation within 1 to 2 hours of drug administration. Anaphylaxis is mainly associated with parental rather than oral administration.
For penicillin, anaphylaxis occurs at an estimated frequency of 1 to 4 cases per 10000 courses, with 10% only of these reactions are fatal and death may occur within minutes but rarely (TG, 18).

474. Lithium citrate is used for treatment of:

A. mild depression.
B. mild anxiety.
C. coping disorders.
D. deep endogenous depression.
E. lithium insufficiency

Answer: D.

A patient who is taking lithium has a serious psychiatric disorder (TG, 166).

475. How long Amoxicillin is usually prescribed for dental use?

A. 3 Days.
B. 5 Days.
C. 7 Days.
D. 9 Days

Answer: B.

476. What is INCORRECT about topical corticosteroids?

A. It is locally immunosuppressive.
B. Doesn't have systemic immunosuppressive effects.
C. Skin creams cannot be given intra orally.
D. Can be given alone in for oral infection.
E. Cannot be given in case of lichen planus until diagnosed.

Answer: D.

In case of recurrent aphthus ulcer (the disease has immunopathogenesis), topical corticosteroid is to control the disease rather than cure. Betamethasone dipropionte 0.05% ointement to the lesion, twice daily after meal.

In case of minor episodes of herpes simplex (primary herpectic gingivostomatis or recurrent episodes as a cold sore), topical corticosteroids are contraindicated as they prevent attachment of white blood cell to virally infected cells, and therefore prevent virus destruction as well as aiding local spread. It is usually treated by topical antiviral therapy like acyclovir or penciclover cream. Sever episodes of herpes simplex require systemic antiviral therapy (TG, 79)

477. What is INCORRECT about topical corticosteroids used in oral cavity?

A. Triamcinolone 0.02% ointment.
B. Betamethasone 0.05% ointment.
C. Beclomethasone dipropionate or Fluticasone propionate spray (the concentration is 0.05 or 0.01%).
D. Options A, B,C can be given indefinitely.

Answer: D.

478. Gingival sulcus is:
a. non-keratinized epithelium with rete pegs
b. non-keratinized epithelium without rete pegs
c. keratinized epithelium with rete pegs
d. keratinized epithelium without rete pegs
e. parakeratinized epithelium
Answer: B.

479. Tooth under occlusal trauma shows:
A. bone resorption.
B. necrosis of the pulp.
C. Hypercementosis.
D. Triangulation.
E. All of the above.
Answer: E.
Vertical defects occur adjacent to a tooth and usually in the form of a triangular area of missing bone, known as triangulation. triangulation doesn't communicate with the gingival sulcus and doesn't disrupt the junctional epithelium so there is no true pocket associated with occlusal trauma.

480. For which of the following pathological conditions would a lower central incisor tooth be expected to respond to heat, cold and electric pulp test?
A. Apical cyst.
B. Acute apical abscess.
C. Periapical cemento-osseous dysplasia.
D. Chronic apical periodontitis.
Answer: C.

481. In the examination of the child patient, normal gingiva is diagnosed on the basis of:
1. contour.
2. stippling.
3. sulcus depth.
4. color of Nasmyth's membrane.
5. tight fitting gingival collar.
A. (1) (2) (3) (5).
B. (1) (2) (4) (5).
C. (1) and (3).
D. (2) (3) (4).
E. (3) and (5).
Answer: A.

482. Maintenance care for a patient treated for periodontal disease includes periodic assessment of:
1. tooth mobility.
2. gingival sulcus depth.
3. signs of gingival inflammation.
4. oral hygiene status.
A. (1) (2) (3).
B. (1) and (3).
C. (2) and (4).
D. (4) only.
E. All of the above.
Answer: E

483. Restorative crown locate within the gingival margin (sulcus), produces inflammation:

A. Rarely.
B. Sometimes.
C. Always.
D. Never.

Answer: C.

484. The most accurate indicator of caries activity in root caries lesions is to:

A. assess the color.
B. evaluate the hardness.
C. use bitewing radiographs.
D. apply caries detector dyes.

Answer: B.

Radiograph doesn't show activity, it only shows how much destruction had already occurred. Dye is not very accurate in detecting the caries extent, hence not advisable. Color is only advisable to check for incipient caries, which are reversible.

Hardness can be used, like a bur or probe in order to check whether it is effected dentine or eburnated dentine. If infected dentine, we need to drill it out (Sturdevant)

485. Which cells migrate into the gingival sulcus in the largest numbers in response to the accumulation of plaque?

A. Plasma cells and monocytes.
B. Polymorphonuclear leukocytes.
C. Macrophages.
D. Lymphocytes.
E. Mast cells.

Answer: B. (Lindhe, 159)

PD status	Type of cell infiltrates
Pristine Gingiva (healthy)	Neutrophile (PMN)
Initial lesion (normal healthy, 24hours-4 days of plaque accumulation)	Big flux of neutrophile
Early lesion (early gingivitis, 4-7 days no OH)	Neutrophile. Monocytes/macrophages. Lymphocyte (75% are T-cells). very few plasma cells
Established Lesion (established gingivitis, 14-21 no OH)	Neutrophile. Lymphocytes. 10-30% Plasma cells
Advanced Lesion (periodontitis)	Neutrophile. Lymphocytes. >50% plasma cells

486. Which of the following is incorrect regarding veneering the tetracycline-stained tooth?

A. A more esthetic result can be achieved by leaving a thin layer of enamel.
B. Ensure proximal extensions are into contact area.
C. Ensure all discolored enamel is removed to expose dentin.
D. Extend gingival margin into sulcus (do not encroach on biologic width).

Answer: C.

487. Following successful periodontal surgical rehabilitation in which a mucoperiostial flap was reflected, the earliest advisable time to introduce a gingival retraction cord into the sulcus is:

A. two to three weeks.
B. four to five weeks.
C. six to eight weeks.
D. any time after eight weeks.

Answer: C.

488. A female patients, on examination, was found to have swollen gingivae around a crown that has been placed a few years ago on tooth 36. The papillae were particularly inflamed and showing some recession.

1. What common procedural damage could have been done?
   A. Violation of biological width.
   B. Premature occlusion with opposing.
   C. Finish line placed subgingivally.
   D. Finish line place equigingivally irritating the free gingiva.
   E. Pulp damage.

Answer: A.

2. What is the most important feature of a crown that may also be responsible for this?
   A. Material of the crown.
   B. Occlusion.
   C. Proximal contour.
   D. Labial contour.
   E. Surface finish.

Answer: C.
According to Carranza, iatrogenic factors prox. contour would have a more detrimental effect on perio compared to ther factors.

3. Knowing that this PFM crown margins were optimum, what is another possible consideration for this condition?
   A. Peripaical abcess.
   B. Periodontal abcess.
   C. Gingival abcess.
   D. Hypersensitivity.
   E. Drug allergy.

Answer: D.
Nickel Allergy in a female patinet may indicate the use of a PFG (porcelain fused to gold) or an All ceramic crown (e.g. Zirconia or e.max if favorable occlusion).

4. What is your first measure to assess the current damage?
   A. Remove the crown and do sensibility tests.
   B. Test cavity through the crown.
   C. Periapical x-ray.
   D. Periodontal probing.
   E. Bone sounding.

Answer: E.
Assessment of biologic width violation is done by BONE SOUNDING. Probing under local anesthesia to the bone level (referred to as “sounding to bone”) and subtracting the sulcus depth from the resulting measurement. If this distance is less than 2 mm at one or more locations, a diagnosis of biologic width violation can be confirmed. This measurement must be performed on teeth with healthy gingival tissues and should be repeated on more than one tooth to ensure accurate assessment, and reduce individual and site variations.

5. Which of the following is the most common situation in which subgingival margin placement is indicated?
   A. Subgingival erosion.

B. Subgingival decay.
C. Crown restoration of an upper incisor with high lip line.
D. Short clinical crown.
E. Crown lengthening.

Answer: C

489. Most often recommended method of teeth brushing in a patient with a periodontal disease:

A. Roll technique.
B. Scub technique.
C. Circular technique.
D. Vibratory technique.
E. Vertical technique.
F. Horizontal technique.

Answer: D.

With a soft brush and a 45 degree angle to the sulcus, with very fine vibrations, you shouldn't cause any trauma while cleaning the sulcus.

490. A lower molar requiring a crown has an amalgam restoration extending 1.0 mm subgingivally. The crown margin should be placed:

A. on the existing amalgam.
B. at the amalgam/tooth junction.
C. 1 mm apical to the amalgam margin.
D. 2 mm apical to the amalgam margin.

Answer: C.

Ferrule effect and to avoid invading the biologic width.

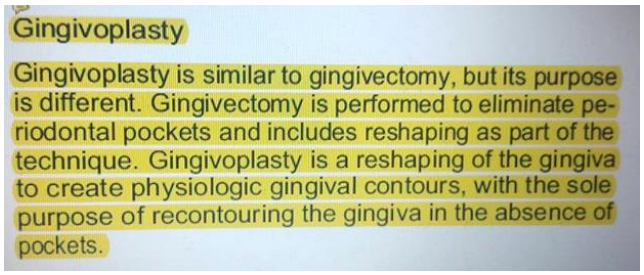
Ideally, this should be placed supra-gingivally on sound tooth tissue, but in reality this is often not possible. Sometimes aesthetics dictates a margin is placed subgingivally and in these situations it should extend by 0.5–1 mm, but certainly no more than half the depth of the gingival sulcus, to ensure the epithelial attachment is not compromised. Whether a finish line should ever be placed on core rather than tooth is an area of contention. Some consider the practice acceptable if the core has a perfect margin. However, in practice it is rarely possible to guarantee the condition of the core margin and we would generally recommend the preparation should be extended sub-gingivally to finish onto sound tooth tissue. Where the finish line is likely to be extensively sub-gingival a crown lengthening procedure can often facilitate crown provision and ensure a more accessible crown margin (BDJ).

491. Gingivoplasty is recommended for:

A. true pockets.
B. false pockets.
C. 4mm Pocket.

Answer: B.

Gingivoplasty is done for recontouring the gingiva in the absence of pockets (including Gingival enlargements=false pockets). (Carranza, 914).



492. Most reliable method of evaluation in 4 weeks of OH instructions given to a patient is:

A. bleeding on probing.
B. asking the patient to repeat instructions.
C. reduction of pocket depth.

Answer:A.

The question is asking about the MOST RELIABLE. A patient repeating instructions is not reliable. 4 weeks is too little time for pocket reduction.

493. Gingivitis progresses into periodontitis:

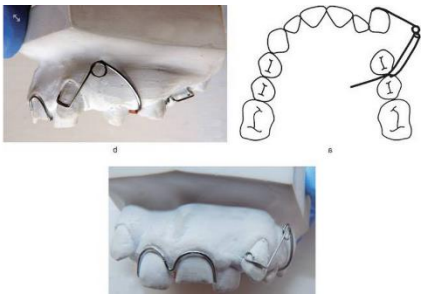
A. Sometimes.
B. Always.
C. Intermittently.

Answer: A.

494. *In case of canine when buccal retractor is preferred over palatal spring?*

A. labially displaced.
B. labially-distally rotated.
C. Buccal displaced.
D. Buccal-superior displaced.

Answer: A. (Appendix VII).



The ideal case for buccal canine retractor class I malocclusion space distal to the canine, mesially inclined canine if the canine distally inclined or rotated we don't use it.

495. A 25-year-old man, who has a history of generalized gingivitis, is seen on a six-month maintenance visit. During his appointment, which of the following clinical signs will likely confirm that this patient's disease has progressed to periodontitis?

A. Loss of attachment.
B. Bleeding upon probing.
C. Change in gingival color.
D. Increased tooth mobility.
E. Edematous gingival tissue.

Answer: A.

496. Periodontitis characterized by:

A. slow linear progress.
B. circulating or bursts.
C. quick progress.

Answer: B.

497. Chronic periodontitis is characterized as:

A. inflammatory.
B. irreparable.
C. atrophic.
D. hyperplastic.
E. none of the above.

Answer: A.

498. How would you diagnose a periapical abscess:

A. Pain on percussion.
B. Pain when eating hot food.
C. Pain when eating cold food.
D. The thickness of periodontal ligament on X-Ray.

Answer: A.

But some suggested D as only (radiographic changes range from widening of PDL space to ill-defined RL), A is definitely wrong as pain on percussion can also be related to apical periodontitis, whether acute or chronic (apical granuloma).

499. In regards to apically displaced flap; which is true?

A. Does not preserve attached gingiva.
B. Does not lengthen crown of tooth.
C. It is a pocket elimination procedure.
D. A and C.

Answer: C.

The apically positioned flap is a commonly used surgical approach for pocket elimination. This technique is important for maintaining an adequate zone of keratinized tissue, as opposed to the gingivectomy technique, where soft tissue is resected.

Indications for the apically positioned flap include:

- surgical crown lengthening procedures.
- the treatment of periodontal disease where preserving the maximum amount of keratinized gingiva is the desired outcome.

The contraindications for the apically positioned flap include:

- root hypersensitivity.
- high rate of root caries.
- esthetic limitations and anatomic limitations.
- inadequate clinical attachment, and deep infrabony defects.

500. Periodontal pockets can be seen on intra-oral radiograph.

A. True.
B. False.

Answer: B.

It is a soft tissue finding, can't be seen on radiographs. Only d bone loss after progression of periodontitis can be seen on radiographs. Even in case of bone loss, only mesial and distal ones because of tissue overlapping.

501. Clinical diagnosis of periodontitis requires the presence of:

1. bleeding upon probing.
2. loss of periodontal attachment.
3. periodontal pocket.
4. tooth mobility.

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

Answer: C.

502. Gingival recession:

A. is more likely to be found in a well maintained mouth than one with periodontal disease.
B. always implies the presence of chronic periodontal disease.
C. is always associated with pocketing.
D. requires the insertion of a graft.
E. is an important cause of tooth loss.

Answer: A.

- Well maintained mouth can show recession but only if the factor brushing is mentioned.
- Recession occurs after healing from periodontal disease.
- It could be produced by aggressive brushing.
- Recession could be due to thin buccal bone/absence of attached gingiva.
- It's not associated with pocketing but it's associated with CAL.
- Not all recession defects needs treatment.

503. Gingival recession is:

A. common in young children.
B. always associated with gingival inflammation.
C. frequently caused by fraenal pull.
D. more prevalent on buccal than palatal surfaces.
E. frequently the result of orthodontic tooth movement.

Answer: D.

504. True pocket is diagnosed when:

A. Bone loss is evident on radiograph.
B. Bleeding on probing.
C. Base of pocket is apical to CEJ.
D. Probing depth is 4mm.

1. A, B, C.
2. C, D.
3. C.
4. All of the above.

Answer: 2.

505. True periodontal pocket, as differentiated from psuedopocket, can be identified from the following?

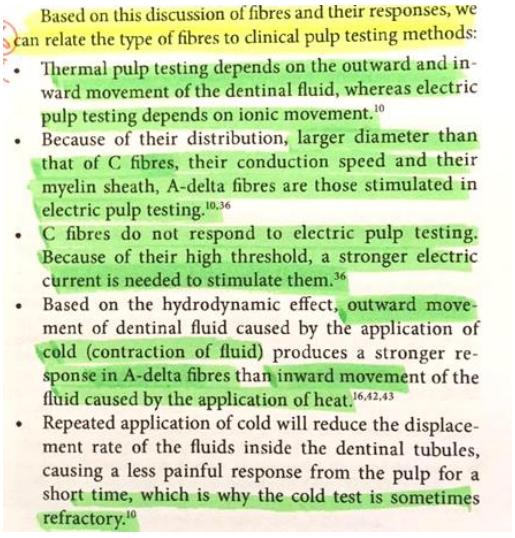
A. bleeding on probing.
B. apical migration of epithelial attachment.
C. gingival growth in coronal direction.

Answer: B.

506. 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. (ADJ, 573)



Based on this discussion of fibres and their responses, we can relate the type of fibres to clinical pulp testing methods:

- Thermal pulp testing depends on the outward and inward movement of the dentinal fluid, whereas electric pulp testing depends on ionic movement.[10]
- Because of their distribution, larger diameter than that of C fibres, their conduction speed and their myelin sheath, A-delta fibres are those stimulated in electric pulp testing.[10,36]
- C fibres do not respond to electric pulp testing. Because of their high threshold, a stronger electric current is needed to stimulate them.[36]
- Based on the hydrodynamic effect, outward movement of dentinal fluid caused by the application of cold (contraction of fluid) produces a stronger response in A-delta fibres than inward movement of the fluid caused by the application of heat.[16,42,43]
- Repeated application of cold will reduce the displacement rate of the fluids inside the dentinal tubules, causing a less painful response from the pulp for a short time, which is why the cold test is sometimes refractory.[10]

507. Mucogingival junction:

A. Junction between free gingiva and attached gingiva.
B. Junction between attached gingiva and alveolar mucosa.

Answer: B.

508. In a 10-year old child with a normal mixed dentition and healthy periodontal tissues, removal of the labial frenum (frenectomy) is indicated when:

A. the frenum is located at the mucogingival junction.
B. a diastema is present but the papilla does not blanch when tension is placed on the frenum.
C. the frenum is located on the attached gingiva.
D. None of the above.

Answer: D.

509. How to measure total width of attached gingiva?

A. from CEJ to mucogingival junction.
B. from free gingival groove to mucogingival junction minus pocket depth.

Answer: B.

510. In severe gingival recession, if the marginal tissue extends to themucogingival junction, and there is loss of interdental tissue, the likelihood of complete root coverage after gingival grafting is:

A. greater than 75%.
B. between 25 and 50%.
C. less than 20%.

Answer: C.

511. Curettage is used in treatment of pockets which are:

A. edematous.
B. fibrotic.
C. below the mucogingival junction.
D. infrabony.

Answer: A. (Appendix, VIII)

512. What is incorrect about Junctional epithelium,:

A. Keratinized.
B. Attached to tooth surface by hemidesmosomes.
C. No organic attachment with the tooth.

Answer: A.

513. In periodontitis, maximum destruction is present in:

A. lateral wall of pocket (proximal surface).
B. root surface.
C. junctional epithelium.
D. None.

Answer: A.

514. The role of Guided Tissue Regeneration (GTR) is:

A. to prevent apical migration of junctional epithelium.
B. to allow the growth of connective tissue in contact with surface.

Answer: A.
GTR undesired cells are excluded from repopulating a defect or injury site by placing a physical barrier to prevent their migration. Desirable cells are able to renter the site from the surrounding. As a result it avoids formation of long juctional epithelium which is a usual scenario and hence allows connective tissue from periodontium to repopulate the area so that the width of attached gingiva if increased...the 2 option follows 1

515. *During teeth eruption, the reduced enamel epithelium merges with the oral epithelium and consequently:*

A. Down growth of oral epithelium which replaces the reduced enamel epithelium.
B. Proliferation of inner enamel epithelium.
C. Proliferation of outer enamel epithelium.
D. Down growth of oral epithelium which undermines the reduced enamel epithelium.
E. Gradual transformation of the reduced enamel epithelium.

Answer: E.

516. Histopathologic alterations associated with the pathogenesis of periodontal disease include:

A. inflammatory exudate that can involve neutrophils, lymphocytes and plasma cells.
B. proliferative and degenerative changes of the epithelium.
C. collagen destruction subjacent to the junctional epithelium.
D. All of the above.

Answer: D.

517. According to lee et al in his experimental study about gingivitis, it usually develop in a healthy individual within how many days?

A. 7 days.
B. 14 days.
C. 21 days.

Answer: A.

518. While routine periodontal therapy what is formed?

A. Long JE.
B. Short JE.
C. Bone.

Answer: A.

519. Blood supply of a rotated palatal flap is:

A. Greater palatine artery.
B. Lesser palatine artery.
C. Nasopalatine artery.
D. Mandibar artery.
E. Shenopalatine artery.

Answer: A.

520. In an 8yr old child there is insufficient space in the upper anterior segment for the upper permanent lateral incisors to erupt. Treatment is?

A. disk the proximal surface of maxillary incisors.
B. disk deciduous canines and 1st molars.
C. extract the deciduous 1st molars.
D. no treatment required but observe.

Answer: D.

521. Most commonly retained deciduous tooth is:

A. mandibular 1st molar.
B. mandibular 2nd molar.

Answer: B

522. Persistent oroantral fistula for a 12 weeks period following the extraction of a maxillary first permanent molar is best treated by:

A. Further review and reassurance since it will most probably heal spontaneously.
B. Antibiotic therapy and nasal decongestants.
C. Curettage and dressing of the defect.
D. Excision of the fistula and surgical closure.
E. Maxillary antral wash out and nasal antrostomy.

Answer: D.

523. Which of the following is the treatment of choice for a 7-year-old child with a nonvital lower first molar with buccal sinus tract?

A. Gutta-percha filling.
B. Gutta-percha filling followed by root-end surgery.
C. Extraction.
D. Apexogenesis.
E. Apexification.

Answer: C.

Non vital immature permanent molars have poor prognosis especially if they would need an apexification and is best extracted and the ideal time would be before alveolar eruption of second molar (Cameron, 428). This is the ideal time to extract this tooth as proposed by Odell, 268.

524. Prolonged, unstimulated night pain suggests which of the following conditions of the pulp?

A. Pulpal necrosis.
B. Mild hyperemia.
C. Reversible pulpitis.
D. Periodontal abscess.

Answer: A.

525. Which of the following diagnostic criteria is least reliable in the assessment of the pulpal status of the primary dentition?

A. Swelling.
B. Electric pulp test.
C. Spontaneous pain.
D. Internal resorption.

Answer: B.

526. If a permanent maxillary first molar has erupted ectopically against the distal root surface of a primary second molar, what would be the treatment of choice?

A. disking the distal of the primary first molar.
B. disking the distal of the primary second molar.
C. a brass wire placed between the primary second molar and permanent first molar.

Answer: B and A but most commonly B.

Management (Cameron, 426)

• Where there is impaction of the permanent molar against the distal of the second primary molar, slicing or discing of the distal surface of the primary molar will allow the spontaneous eruption of the permanent molar.
• Placement of orthodontic separators or brass ligature wire is usually difficult and uncomfortable, and has mixed success.
• Where the resorption of the primary molar is advanced, the loss of this tooth is indicated and space-regaining mechanics should be considered once the permanent molar has erupted.

527. To prevent mesial drift of a permanent first molar, the ideal time to place a distal-extension space maintainer is:

A. as soon as the tooth erupts through the gingival tissue.
B. after the permanent second molar has erupted.
C. immediately after extraction of the primary second molar.
D. as soon as the extraction site of the primary second molar has completely healed.

Answer: C.

528. The best time to begin interceptive orthodontic treatment for a patient with a skeletal Class II malocclusion is:

A. as soon as the malocclusion is diagnosed.
B. immediately following complete eruption of the deciduous dentition.
C. immediately following complete eruption of the first permanent molars.
D. several months prior to the pre-pubertal growth spurt.
E. after skeletal maturity.

Answer: D.

D for Skeletal class II is treated with myofunctional appliances so it is best to use appliance prior to the pre-pubertal growth spurt or during the spurt to take maximum advantage from growth. The early treatment will not change that much.

A for Skeletal class III, the reverse overjet of the mandible will inhibit the maxillary growth

529. When is the most ideal time to remove badly decayed submerging lower first permanent molar tooth?

A. after complete eruption of the second permanent molar.
B. before eruption of the second permanent molar at 7 years old.
C. before eruption of the second permanent molar at 8 years old.
D. before eruption of the second permanent molar at 9 years old.

Answer: D.

530. A 7 year old boy presents with rapidly decayed 1st permanent molar which is painful on intake of sweet food items and cold liquids and lingers on. He presents with a well-balanced diet with limited consumption of carbohydrates. On examination, there are opacities on all permanent anteriors and molars have areas of brown, rough, irregular enamel. The child has been using an adult formula fluoride containing paste since an early age and drinks an optimum level of fluoridated water. (Odell, 256)

Based on the provided information, the most probable diagnosis would be:

A. Amelogenesis imperfect.
B. Enamel hypoplasia.
C. Dental caries.

D. Flourosis.

Answer: B.

II. The most common cause of 1st permanent molar destruction is:

A. Dental caries.
B. Hypoplasia.
C. Flourosis.
D. Amelogenesis imperfect.

Answer: A.

III. Most appropriate Investigations required would be:

A. Panoramic radiograph.
B. Electric pulp testing.
C. Laser testing.
D. All of the above.

Answer: A.

IV. Out of the following, what should NOT be a suitable option for the anteriors at this age?

A. Composite veneers.
B. Enamel microabrasion.
C. Porcelain veneers.
D. None of the above.

Answer: C.

531. An ankylosis primary molar may result in all the following except:

A. loss of arch length.
B. serious problem of extraction.
C. delayed eruption of succadenous tooth.
D. failure of calcification permanent successor.

Answer: D.

532. An 8-year-old child presents with a firm swelling associated with the left body of mandible. He complains of occasional 'toothache' on that side. On examination, a hard but mild swelling can be palpated, principally on the buccal aspect of the alveolus, deep in the buccal sulcus, extending forwards to the canine region. He has gross caries of his first permanent molars. LL6 is sore when you press on it. Radiologically: LL6 shows a periapical condensing (sclerosing) osteitis. An occlusal radiograph, taken to assess the buccal swelling, shows a thin layer of periosteal new bone adjacent to the original buccal cortical margin of the mandible. What's the most likely diagnosis?

A. Chronic periapical periodontitis.

B. Acute periapical periodontitis.

C. Chronic osteomyelitis.

D. Garré's osteomyelitis.

E. Acute alveolar abscess.

Answer: D.

Chronic osteomyelitis

The natural course of acute osteomyelitis is that it develops into a chronic disease with pus accumulation and the formation of islands of necrotic bone (sequestra). Predisposing factors are depressed immune or inflammatory response, for example, diabetes or long-term corticosteroid use and bone abnormalities such as Paget's disease or cemento-osseous dysplasia.

Garré's osteomyelitis

Garré's osteomyelitis is a chronic sclerosing osteomyelitis with a proliferative periostitis. This rare condition is usually associated with either a chronic periapical periodontitis or, sometimes, a chronic pericoronitis.

Clinical features

This condition is usually seen in children and younger adults in the body and ramus of the mandible. Swelling is the principal feature. Symptoms and signs of an overlying periapical periodontitis will usually be present.

Radiology

There is an area of sclerosing osteitis in the mandible. Periosteal new bone will be evident at the periphery of the jaw.

Pathology

Garré's osteomyelitis is characterised by the formation of periosteal new bone. The latter is trabecular in nature; cortical bone is lacking and there may be 'onion skin layering' of the reactive bone.

533. Permanent first molars begin calcification at:

A. 1 to 4 months in utero.

B. birth.

C. 3 to 6 months.

D. 7 to 11 months.

E. 12 to 15 months.

Answer: B.

534. A 12 year old child presents with characteristic tetracycline discoloration of the maxillary and mandibular incisors and permanent first molars. The probable age at which this child received tetracycline therapy was:

A. 6 years.

B. 4 years.

C. 1 year.

D. before birth.

Answer: C.

Since the calcification for permanent molars, central incisors begins at birth and 3-4 months respectively, so the effect of tetracycline stain development has to be after this age and the drug becomes calcified in the tooth, generating tetracycline tooth stains. But it is not after 3 years for molar and 5 years for central incisor as the crown completed at this age.

535. The roots of the first permanent molar should be completely formed by the age of:

A. six years.

B. seven years.

C. nine years.

D. eleven years.

E. thirteen years.

Answer: C.

Apex formation usually completed 2-3 years after eruption.

536. A child has received a successful inferior alveolar nerve block using 1.5ml of lidocaine 2% with 1:100000epinephrine. However, during placement of a rubber dam clamp on the first permanent molar, the child complains that the "tooth ring" is hurting. Which of the following is the most appropriate management?

A. Wait 15 minutes until more profound anesthesia is achieved.

B. Anesthetize the lingual nerve with the remaining lidocaine.

C. Anesthetize the long buccal nerve with the remaining lidocaine.

D. Proceed with treatment without rubber dam.

Answer: C.

537. To extract upper deciduous molars, the movement should be:

A. Buccal first to move tooth.

B. Palatal first to move tooth.

C. Distal first to move tooth.

D. Rotation movement.

E. Fraction of the tooth.

Answer: B.

First movement should be palatal because the roots of primary molars are flared and moving the crown palatally first cause the movement of roots buccally and prevents fracture of roots as buccal bone is resilient than palatal bone.

538. What technique is used in the extraction of permanent 1st molars:

A. Rotation movement.
B. Lingual movement.
C. Buccal movement.

Answer: C.

539. The loss of the first deciduous molar in 10 years-old children requires:

A. Band and loop to maintain space.

B. Evaluate the case radiographically and then decide whether space maintainer is needed or not.

C. No treatment.

Answer: C.

540. Ankylosis occurs most frequently in:

A. primary mandibular first molar.
B. primary mandibular second molar.
C. permanent maxillary lateral incisor.
D. primary maxillary second molar.

Answer: A.

541. Most common ectopically erupted tooth:

A. Maxillary 1st molar.
B. Mandibular 1st molar.
C. Maxillary lateral incisor.
D. Maxillary canine.

Answer: A.

Most ectopically erupted tooth in order: permanent max 1st molar----max canine---mand canine---mand 2nd p molar and max LI.

542. A 4mm diameter carious pulp exposure occurs on a permanent first molar of a 7 year old child. The tooth is vital and has no periapical involvement. The appropriate initial treatment would be to perform:

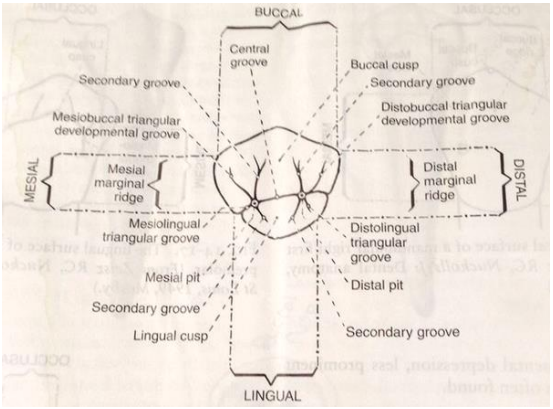
A. pulp capping.
B. pulpotomy.
C. pulpectomy.
D. Extraction.

Answer: B.

543. The mesiolingual groove is found on the mandibular:

A. permanent second molar.
B. permanent first molar.
C. second premolar.
D. first premolar.

Answer: D



544. In the mandibular dental arch of a 12-year old boy, the permanent first molars are in contact with the first premolars and the crowns of the second premolars have erupted lingually. The likely cause is:

A. ankylosis of the mandibular second premolars.
B. lack of space.
C. teeth too large for the dental arch.
D. premature loss of deciduous second molars.
E. faulty lingual eruption of the second premolars.

Answer: D.

545. Which of the following teeth are at greatest risk for developing root caries?

A. Mandibular incisors.
B. Mandibular posteriors.
C. Maxillary incisors.
D. Maxillary posteriors.

Answer: B.

1st permanent molars are the most teeth involved in caries because they are the 1st permanent teeth to erupt, since 6 years of age, therefore they are more expose, for more time than the other to all caries factors.

546. The last primary tooth to be replaced by a permanent tooth is usually the:

A. maxillary canine.

B. mandibular canine.

C. maxillary first molar.

D. mandibular second molar.

Answer: A.

547. Which of the following conditions is usually present in an Angle Class II, Division 2 malocclusion?

A. Open bite.

B. Retroclined maxillary lateral incisors.

C. Retroclined maxillary central incisors.

D. Distoclusion of permanent maxillary first molars.

Answer: C.

548. A 10 year old patient has mandibular canines erupting into a space deficient by 2mm. The first premolars are also erupting. The primary second molars are large and firmly in place. The most appropriate treatment for this patient is:

A. disking the mesial surfaces of the primary mandibular second molars.

B. extracting the primary mandibular second molars.

C. placing a removable bite opener.

D. extracting the first mandibular premolars.

Answer: A.

But if the deficiency of the space is more than 4 mm, we proceed with extraction.

549. Child lives his 1st 8 years in an area with water fluoride at 4ppm,

A. all permanent teeth mottling.

B. all deciduous and permanent teeth mottling.

C. only deciduous teeth.

D. deciduous teeth and incisors and 1st molars.

Answer: A.

Only permanent teeth are affected by high fluoride concentration because the deciduous teeth completed the calcification and crowns are fully formed intrauterine or shortly after birth.

550. A child has fractured Central Incisor 1day ago. Small portion of pulp is exposed. Treatment is by:

A. shallow pulpotomy.

B. pulp capping.

C. pulpectomy.

Answer: A.

551. *When giving IAN block in children (in comparison to adults) injection should be*:

A. lower.

B. more anterior.

C. higher.

Answer: A.

552. What is incorrect?

A. Caries can only progress in the presence of fermentable carbohydrates.

B. All acid producing microorganisms cause caries.

Answer: B.

Some bacteria including lactobacilli and other strains of streptococci are only weekly cariogenic or a non-cariogenic despite being able to produce acid (Cawson oral pathology).

553. What is true about fissure sealants?

A. Composite resin and GIC have equal success rate.

B. Fissure that catch the probe should be sealed.

Answer: A.

Option B is incorrect because probing should be avoided in occlusal caries detection.

Glass ionomers are useful in high caries-active individuals, partially erupted and hypomineralized teeth that are difficult to isolate and as temporary sealants until the teeth have erupted sufficiently to allow conventional fissure sealing. The main problem with the use of GICs as fissure sealants is the brittleness of the material when used in thin section over the occlusal surface. However, the incidence of fissure caries in these teeth is low and in the long term, similar to retained resinbased sealants. It has been suggested that either the GIC is retained in the depths of the fissures at a microscopic level or that fluoride, from the GIC, is taken up by the surrounding enamel, so increasing the resistance of the fissure walls to demineralization.

554. dmf index cannot take into account of sealed teeth (pit and fissure sealants):

A. True.

B. False.

Answer: True. (Appendix IX)

Teeth stored for reason other than dental caries should be excluded, which include:

- Trauma (fracture).
- Hypoplasia (cosmatic purposes).
- Bridge abutment (retention).
- Seal a root canal due to trauma.
- Fissure sealant.
- Preventive filling.
-

555. 14 year-old child has pain on lower right side. Periodontal probing reveals the pus coming out of area of 45. No caries was detected. The child is apparently healthy. PA of lower right side showed 45 has an open apex, no caries seen (I can't see any pathology in crown portion). Large oval area of radiolucency surrounding the root of 45, going up to the periodontal margins on mesial and distal. Patient's mother want the tooth to be extracted, because they are going somewhere.

I. What should be told to the mother?

A. The child should have a health check for any systemic disease, because it is strange, that an apparently sound tooth has such pathology.

B. extraction is the best option because of poor prognosis.

C. RCT is impossible.

Answer: A.

II. If the tooth is to be saved (RCT), what dressing will you leave?

A. Corticosteroid + antibiotic.

B. Calcium hydroxide.

Answer: B. (Apexification because of open apex)

III. If extraction is going to be done, who should sign the consent?

A. parent/guardian.

B. parent/guardian and the child.

Answer: B.
For Children< 14 years, parents/guardians, dentist acts as a witness
Children 14-16 years, both parents/guardians and the child, dentist acts as a witness
Children> 16 years, child signs the consent.
Gillick consent: If a child <16 years, the process has been explained to him/her and dentist thinks that the child has sufficient mental development, can sign the consent in emergency (Odell).

556. A 10 year old boy presents with non-vital, non-mobile tooth. Treatment is:

A. Pulpectomy with calcium hydroxide.

B. Pulpectomy with Zinc oxide eugenol.

C. Pulpotomy with formocresol.

D. No treatment is required if tooth is asymptomatic.

Answer: A.

557. Uncontrolled diabetes is considered as a contraindication to endondontic therapy.

A. True.

B. False.

Answer: True.

Uncontrolled diabetes is a contraindication to any treatment except for emergency work. Anything else is deferred after the patient adjusts his blood glucose level.

558. A 8 years old patient has avulsed tooth about 25 min ago, presented to dental office and replaced successfully and what u do next?

A. Wait and oberve.

B. RCT.

C. Apexsogenesis.

Answer: A.

The goal for replanting still-developing (immature) teeth in children is to allow for possible revascularization of the pulp space. If that does not occur, root canal treatment may be recommended. If closed apex then RCT after 7-10 of reimplantation. RCT is always carried for permanent teeth with closed apices.

8 years old, most commonly it is a permanent incisor. You should take an x ray, and according to how big the apex is, you either proceed with RCT (if it's smaller than 2mm) or wait and recall (if larger than 2mm).

559. Which of the following permanent restorations is indicated after a formocresol pulpotomy has been completed on a primary molar?

A. A stainless steel crown placed at the same appointment.
B. A stainless steel crown placed when a radiograph demonstrates no internal resorption.
C. An amalgam placed at the same appointment.
D. An amalgam placed when a radiograph indicates no bone destruction between the roots.

Answer: A.

560. A 6-year-old child presents with a Class I fracture to a tooth with an immature apex. What is the treatment of choice for this patient?

A. Restore tooth.
B. Place calcium hydroxide to exposed dentin, restore tooth.
C. Perform pulpotomy, then temporarily restore.
D. Perform pulpectomy, place stainless steel crown.
E. Extract tooth, place space maintainer.

Answer: A.

561. What is the least accepted restoration for the pulpotomiated deciduous tooth?

A. Amalgam filling.
B. Composite filling.
C. SS crown.
D. Glass ionomer.

Answer: C.

562. Which of the following is not properly defined?

A. Incidence: the change in experience over a particular period of time, usually one year.
B. Experience: a single specific episode.
C. Prevalence: the proportion of a population that demonstrates a particular characteristic.
D. Tooth mortality: the loss of teeth.
E. Tooth morbidity: and injury or pathology of the teeth.
F. All of these definitions are correct as stated.

Answer: B.

Experience is usually defined as the total cumulative history of the dentition; it therefore includes all episodes from birth (or before) up to the point in time being considered.

563. Bitewing radiography is the main special text used to help in diagnosis of proximal caries. The performance (accuracy) of a diagnostic test like bitewing radiography can be expressed in terms of sensitivity and specificity. Which of the following is a reasonable summary of the diagnostic accuracy of bitewing radiography for proximal caries diagnosis?

A. Moderate sensitivity and low specificity.
B. Moderate sensitivity and moderate specificity.
C. Moderate sensitivity and high specificity.
D. High sensitivity and moderate specificity.
E. High sensitivity and high specificity.

Answer: C.

Radiographic assessment has consistently a higher specificity but lower sensitivity than visual inspection and other diagnostic methods. The sensitivity and specificity of caries detection can be improved by the use of laser-induced fluorescence (LIF) technology.

564. In treating a patient, the dentition with inadequate remaining tooth structure with favorable periodontal support was given elective endodontic treatment with post and core buildup. Considering the fracture resistance of endodontically treated teeth, which of the following is incorrect?

A. Endodontically treated teeth with a uniform 2 mm ferrule were more fracture resistant than those with 0.5 mm ferrule.
B. A minimum of 1.5 mm ferrule is recommended for the effectiveness of ferrule.
C. A minimum of 0.5 mm ferrule is recommended for the effectiveness of ferrule.
D. A uniform ferrule of 2 mm may be an important factor for endodontically treated incisors.

Answer: C.

565. How much ppm of fluoride is there in 0.304% Sodium monofluorophosphate?

A. 400ppm.
B. 1000ppm.
C. 1500ppm.
D. 3000ppm.
E. 5000ppm

Answer: A.

THIS IS HOW TO CALCULATE FLUORIDE CONCENTRATIONS
STEP BY STEP:

First STEP: This is how to convert between different units: "PPM", "mg/gr or mg/ml" and "%".

- PPM is mg/liter or mg/kg.
- PPM divided by 1000= mg/gr or mg/ml.
- mg/gr or mg/ml divided by 10 = %.

So to convert from % to PPM MULTIPLY BY 10000 Example: 0.304% Sodium monofluorophosphate contains 3040 PPM of Sodium monofluorophosphate.

2ND STEP: is to calculate how much PURE FLUORIDE in that:

- for sodium fluoride , divide by 2.2.
- for stannous fluoride , divide by 4.1.
- for monofluorophosphate , divide by 7.6.

So let's continue the example: 0.304% Sodium monofluorophosphatecontains 3040 PPM of Sodium monofluorophosphate. We divide that by 7.6, so its contains 400 PPM of pure Flouride (Dr Edward Amin).

566. What is incorrect about Child abuse?

A. Parents and siblings are responsible.
B. Most commonly reported.
C. Presence of injuries on face.
D. Child is immediately brought into notice or treatment.

E. Box in somewhere with" all risk "record maintenance.

Answer: D.

567. Most resistant to acid is:

A. fluorapatite.

B. Hydroxyapatite.

C. carbonated hydroxyapatite.

D. Calcium fluoride.

Answer: A.

568. When the enamel of the tooth is exposed to preparation containing high concentrations of fluoride; the major reaction is:

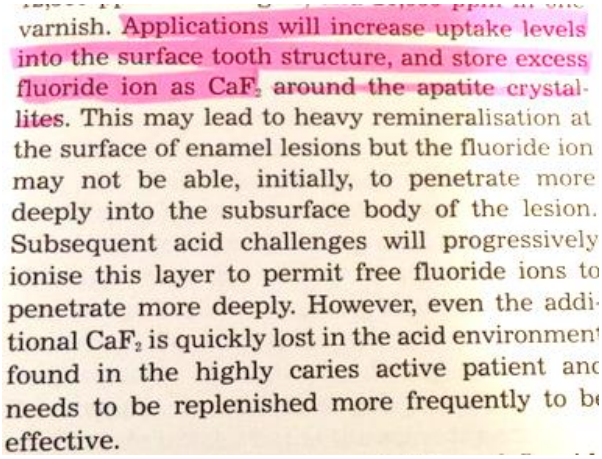
A. Sodium fluoride.

B. Calcium fluoride.

C. Stannous fluoride.

D. Fluorapatite.

Answer: B. (Mount&Hume)



varnish. Applications will increase uptake levels into the surface tooth structure, and store excess fluoride ion as CaF_2 around the apatite crystallites. This may lead to heavy remineralisation at the surface of enamel lesions but the fluoride ion may not be able, initially, to penetrate more deeply into the subsurface body of the lesion. Subsequent acid challenges will progressively ionise this layer to permit free fluoride ions to penetrate more deeply. However, even the additional CaF_2 is quickly lost in the acid environment found in the highly caries active patient and needs to be replenished more frequently to be effective.

569. A patient has a small incisal fracture of the maxillary incisor. Which is the best material to resist fracture at the acid etched tooth composite interface?

A. Micro-filled composite.

B. Hybrid composite.

C. GIC.

D. Silicate

Answer: B.

Microfills composites are appropriate choice for restoring class V defects where cervical flexure can be significant and they are clinically wear resistant.

570. 65-year-old female patient under treatment of oral cancer (chemotherapy). What is the most probable diagnosis of the lesion in the given picture?

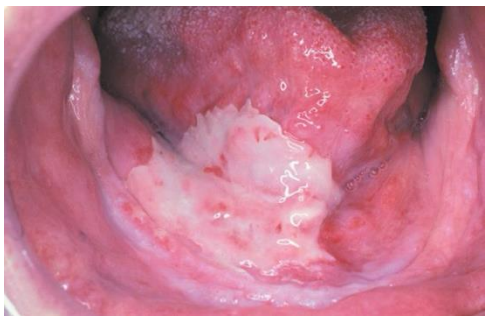
A. Oral candidosis.

B. The oral cancer lesion (SCC).

C. Mucositis.

D. Oral leukoplakia.

E. Sublingual keratosis.



Answer: C (Appendix V)

Since the patient is currently under chemotherapy so option C is correct.

571. Which oral mucosa changes are possible side effects of chemotherapy?

1. Atrophic thinning.
2. Ulceration.
3. Necrosis.
4. Spontaneous bleeding.

A. (1) (2) (3).

B. (1) and (3).

C. (2) and (4).

D. (4) only.

E. All of the above.

Answer: E.

572. The oral mucosa covering the base of the alveolar bone:

A. is normally non-keratinized but can become keratinized in response to physiological stimulation.

B. is closely bound to underlying muscle and bone.

C. does not contain elastic fibres.

D. merges with the keratinized gingiva at the mucogingival junction.

E. has a tightly woven dense collagenous corium.

Answer: D.

573. Treatment of ameloblastoma is:

A. Chemotherapy.

B. Enucleation.

C. Resection.

D. Radiotherapy.

Answer: C.

574. Nitrous oxide sedation is contraindicated in all except:

A. middle ear infection.

B. uncommunicative patient.

C. first trimester of pregnancy.

D. COPD.

E. Asthma.

Answer: E.

Since N_2O is not irritating to the tracheobronchial tree, ASTHMA IS NOT A CONTRAINDICATION TO THE USE OF N_2O, providing the patient is not having an"attack". In fact, there is benefit in administering nitrous oxide since in many asthmatics, the primary precipitant appears to be emotional stress, especially in children. No dental procedure should be attempted if the patient is having respiratory difficulty due to asthma.

All other options are either relative or absolute contraindications.

575. A patient gives a history of rheumatic fever. Which of the following procedures require prophylactic antibiotic cover?

A. scale and polish.

B. extraction of tooth.

C. inferior dental nerve block.

D. impression for a new lower complete denture.

E. placing a class 1 amalgam restoration.

Answer: None of the above, only indigious Australians with a history of RHD is indicated for antibiotic cover if they need extraction (TG, 102)

576. Absolute contraindication to implants:

A. History of breast cancer.

B. Diabetes.

C. Osteoporosis.

D. Hormone therapy.

E. None of the above.

Answer: E. (absolute contraindication is different from risk factor that smoking is one of it)

Absolute contraindications:

- Myocardial infarction: within six months of an attack.
- Cerebral infarction and cerebral apoplexy: In cases where the condition of the disease is serious and the patient are concurrently taking anticoagulants.
- Severe immunodeficiency.
- Patients who are undergoing strong chemotherapy.
- Severe neuropsychiatric disease, mental disability, and narcotic drug addicts.
- Patients who are concurrently taking bisphosphonates.
- Youths under the age of 15.

Not all of osteoporosis are contraindicated for implant treatment. Bone density measurement may be necessary in some cases but it has been reported that normal level of bone metabolism is still possible.

577. Benign neoplasms:

1. grow slowly.
2. are generally painless.
3. can be managed conservatively.
4. can metastasize.

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

Answer: A.
Benign tumors have to turn into carcinoma in situ before metastasize.

578. Osteomyelitis of the mandible may follow:

1. radiotherapy.
2. dentoalveolar abscess.
3. fracture.
4. Vincent's angina.

A. (1) (2) (3).

B. (1) and (3).

C. (2) and (4).

D. (4) only.

E. All of the above.

Necrotizing ulcerative gingivitis, also known as Vincent's angina or trench mouth, is a polymicrobial infection of the gums leading to inflammation and necrosis of gum tissue. It is caused by an overgrowth of normal oral bacteria as a consequence of poor oral hygiene combined with other factors such as poor diet and smoking. Management involves improved oral hygiene and antibiotics. Left untreated, the infection can spread, leading to complications such as osteomyelitis.

Answer: E.

Chemotherapy and radiotherapy can cause osteomyelitis as radiotherapy reduces blood supply to bone.

579. Enamel bonding in the placement of resin restoratives:

A. Greatly reduces marginal leakage.

B. Conserves tooth structure.

C. Gives complete permanency to restoration.

D. Results in a smooth surface finish with composite.

Answer: A.

580. Bevelling the enamel at the gingival cavosurface margin of a Class II cavity preparation for amalgam is:

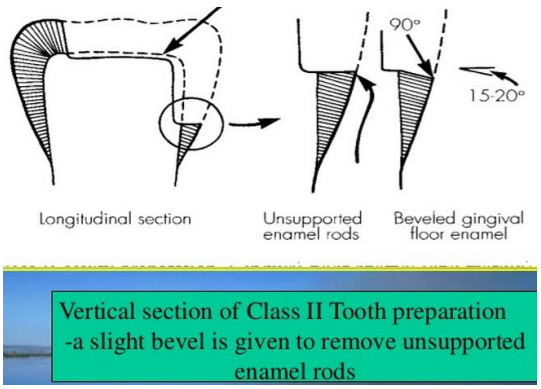
A. contraindicated because of the weak edge of amalgam.

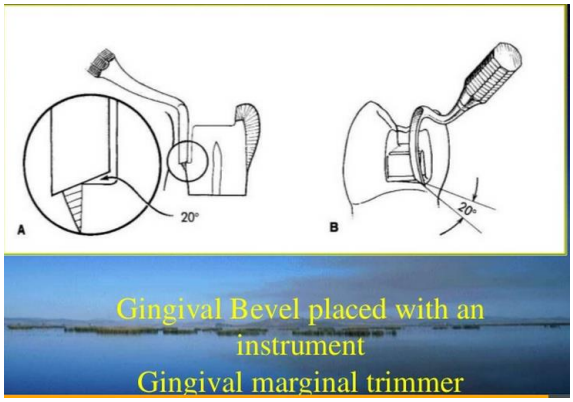
B. provided by a steep cavosurface bevel of the enamel margin.

C. unnecessary since the remaining tooth structure is strong.

D. needed to remove unsupported enamel rods.

Answer: D.





581. The enamel structures most resistant to the action of acids are:

A. cuticles.

B. lamellae.

C. rods.

D. interprismatic substances.

Answer: C.

582. (Self-made by Mohammed Fawzi) What are the indications of fissure sealants in children?

1. All Newly erupted permanent molars in low caries risk children.
2. Newly erupted permanent molars only with deep fissures in low caries risk children.
3. All permanent molars in medium or high caries risk children.
4. Permanent premolars in high caries risk children.
5. Primary molars in high caries risk children.

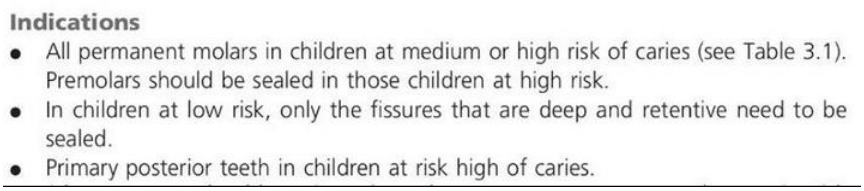
A. 1, 3.

B. 2, 3.

C. 2, 3, 4.

D. 2, 3, 4, 5.

E. 1, 3, 4, 5.



Indications

- All permanent molars in children at medium or high risk of caries (see Table 3.1). Premolars should be sealed in those children at high risk.
- In children at low risk, only the fissures that are deep and retentive need to be sealed.
- Primary posterior teeth in children at risk high of caries.

Answer: D.

583. After a tooth surface has been completely cleaned, the new mucoprotein coating which forms on the surface is called:

A. pellicle.

B. plaque.

C. materia alba.

D. primary cuticle.

E. Nasmyth's membrane.

Answer: A.

Plaque is a biofilm composed of several different kinds of bacteria and their products that develop over the enamel on a layer known as pellicle.

Materia alba also contains bacteria along with food debries and salivary proteins but lacks the organic structure of plaque.

584. Composite resin is a satisfactory core material for endodontically treated teeth provided:

A. The resin has a high contrast colour with tooth strucrue.

B. There is adequate ferrule.

C. The resin is autopolymerizing.

D. Subsequent crown margins are not located on cementum.

Answer: B.

585. An exchange of calcium ions between saliva and enamel is:

1. affected by fluoride.
2. a component of remineralization and demineralization.
3. important in maintenance of tooth structure.
4. pH dependent.

A. (1) (2) (3).

B. (1) and (3).

C. (2) and (4).

D. (4) only.

E. All of the above.

Answer: E.

586. In regard to the enamel surface:

A. It is a perfect substance for bonding.

B. It does not conform to the bonding requirements.

C. It is the most inorganic, rough part.

D. It is free from contamination and roughness.

E. None of the above.

Answer: B. (Gardner's MCQS)

Option B: enamels naturally does not conform to the bonding requirements, thats why we need to etch it first.

587. A 3 year old requires the extraction of a deciduous maxillary second molar. The local anesthetic technique of choice is:

A. a posterior superior alveolar block.

B. buccal and palatal infiltration.

C. a tuberosity block plus subperiosteal infiltration of the mesio-buccal root.

D. an infra-orbital block.

Answer: B.

588. 10 year old girl, who is going abroad in few weeks comes for regular checkup. Everything looks okay, good oral hygiene, no complains. You took OPG.

I. OPG:

A. is contraindicated below 12 years.

B. dose is less than combined 2 BW & 1 periapical X-ray.

C. gives better periapical view.

Answer: B.

II. On the OPG you can see 75 & 84 are heavily restored with amalgam including part of pulp chamber. Below these 2 elements big circular well defined radioluscency and developing premolars underneath. What is the diagnosis of 75?

A. periapical abscess.
B. dentigerous cyst.
C. Granuloma.
D. radicular cyst.

Answer: B or A. (depend on what we see on the radiograph)

III. The dentist looks at the child's old BW when age was 7 yrs. In those BW, 84 has deep distal caries till gingiva with 1/4th pulp involved & 75 has occlusal caries touching the pulp horns. The child had slight sensitivity to cold in 75 and some pain in 84 on eating or biting. What would have been the ideal treatment for 75 at that time?

A. indirect pulp capping & steel crown.
B. pulpotomy & steel crown.
C. pulpectomy & steel crown.
D. Extraction and spacemaintiner.
E. Ortho consultation, extraction, space maintainer.

Answer: B.

IV. Bitewing of 84, what is the treatment for 84?

A. indirect pulp capping & steel crown.
B. pulpotomy & steel crown.
C. pulpectomy & steel crown.
D. Extraction and spacemaintiner.
E. Ortho consultation, extraction, space maintainer.

Answer: D. (Cameron, 120)

Option D: no need for space maintainer because it is near to extraction of successor that is 10-11 years.

Option C: pulpectomy for primary tooth is done if there is no radiographic signs of root resorption.

V. What is your present treatment plan if the girl is going to USA in 6 months time?

A. extraction 84 & 75. Use space maintainer.
B. extract 84,75,44. Refer to oral surgeon for that.
C. refer to oral surgeon & orthodontist for extraction 84,75,44,35 plus follow up overseas.
D. restore 84 & 75 and wait.

Answer: A.

589. A healthy 4 years old with caries of primary mandibular second molar involving the pulp causing hyperemia of pulp. What is the treatment required?

A. Extraction.
B. Pulpotomy.
C. Pulpectomy.
D. indirect pulp capping.
E. direct pulp capping.

Answer: B. (Cameron, 120)

590. A 65 year old patient who has recovered from a stroke 6 months previously and has a history of endocarditis requires the extraction of a mandibular molar. The vital signs are:

- *Blood Pressure: 135/85 mmHg.*
- *Pulse: 76/min.*
- *Respiratory Rate: 16/min.*

The most appropriate immediate management of this patient is to:

A. proceed with the treatment.

B. use prophylactic antibiotics.

C. use local anesthetic with no epinephrine.

D. delay treatment for 3 months.

Answer: B.

591. Child ingested large amount of fluoride. What to do?

A. Call Australian Poison control.

B. force to drink fluids.

C. Induce vomiting.

D. give sodium bicarbonate.

Answer: A.

There is the same question among 1000 MCQS (581) but with different options. The best thing to do for any patient with fluoride poising is to give milk even before calling the poison center.

592. What is the most common reason for palatally retained maxillary central incisor with no signs of crowding or malocclusion?

A. early extraction of maxillary primary incisor.
B. retention of primary incisor.
C. early loss of upper deciduous lateral.
D. early trauma before complete formation of the root (dilaceration).
E. supernumerary tooth.

Answer: E. (Boucher, 470)

If there is any impacted tooth, we should take a periapical x-ray to check the stage of root formation. If less than half or three fourth, we expect that the delay in eruption is normal. Otherwise the presence of supernumerary tooth interfere with normal eruption followed by trauma.

593. Which 3 points on the lateral cephalometric radiograph show best the facial convexity?

A. sella , subnasal , supramental.
B. Nasion , subnasal , supramental.
C. nasion , subnasal , pogonion.

Answer: C.

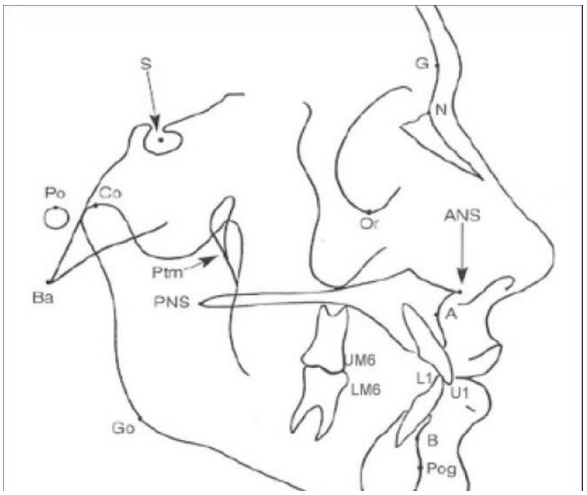


Figure 1: The reference points used in the study. Na: The most anterior point of nasofrontal suture in midsagittal plane, S: Midpoint of bony crypt of sellaturcica, Pt: Pterygo-Maxillary fissure a landmark at the 11 O'clock position of the mid-planed contour of the pterygo-mandibular fissure, Go: The bisection of the angle formed by tangents to the posterior border of the ramus and the inferior border of the mandible, Me: The most inferior point on the symphysis of the mandible, Po: The superior margin of the external auditory meatus, Or: The lowest point on the inferior margin of the orbit, Ans: Anterior nasal spine The most anterior point of palate, Pns: Posterior nasal spine Posterior tip of the palatal bone, Gn: The most anterior inferior point of the chin, A: The most concave in anterior contour of maxillary alveolar process in midsagittal plane between supradental and anterior nasal spine, B: The deepest midline point on the mandible between infradental and
pogonion, U1: The tip of the crown of the upper central incisor, L1: The tip of the crown of the central lower incisor, UM6: The tip of the mesial cusp of the upper first molar, LM6: The tip of the mesial cusp of the lower first molar

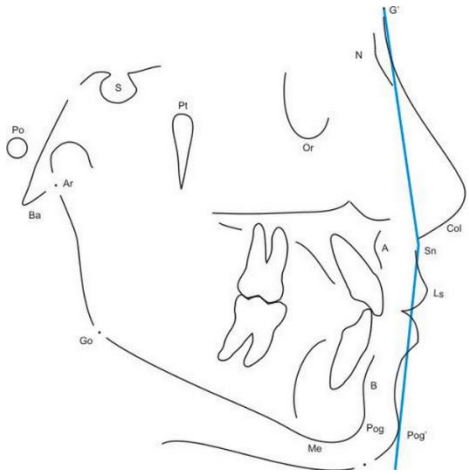
594. What are the points that determine the facial line in cephalometric points (The angle of the convex facial line)?

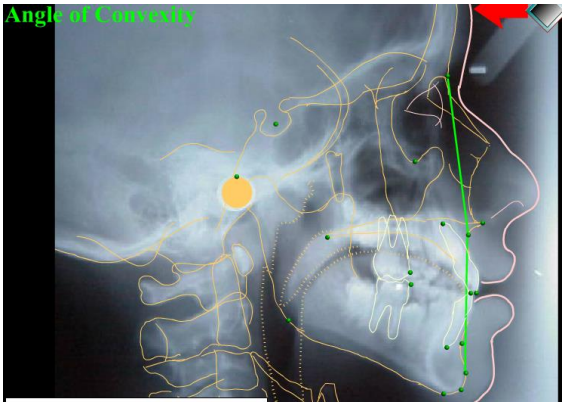
A. Nasion, subnasale, pogonion.
B. Sella, nasion, pogonion.

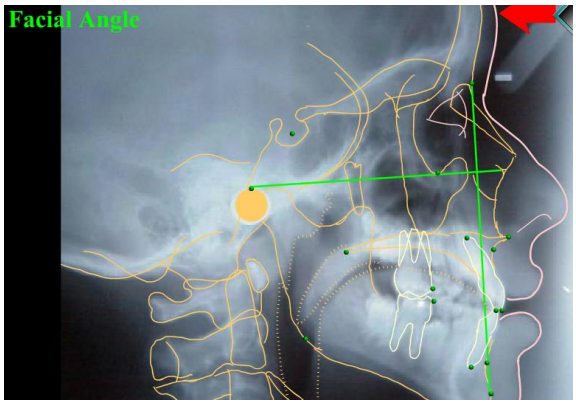
Answer: A.

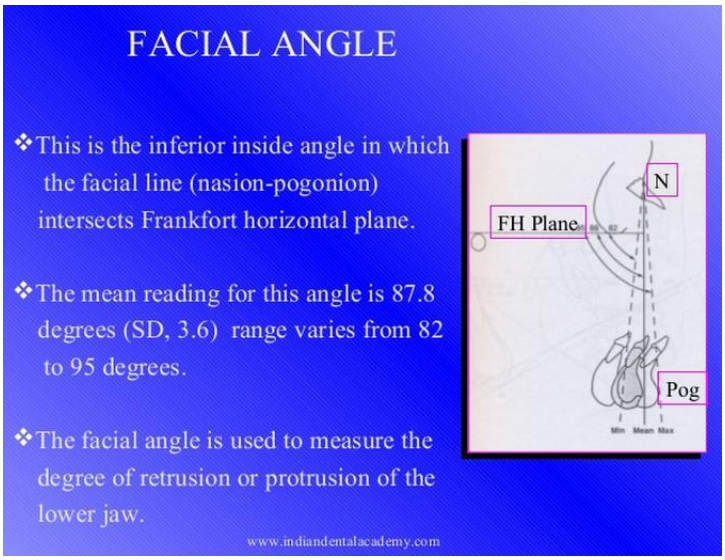
With cephalometric tracing we have soft tissue landmarks and hard tissue landmarks. To determine the convexity of the face by soft tissue landmarks, the three points included are Gl ' integumentary Glabella, Sn Subnasale, and Intertegumentary Pogonion. Or as this questions options are N soft tissue Nasion, Sn Subnasal, P soft tissue Pogonion.

While the hard tissue landmarks that are more accurate, N Nasion, A, P pogonion.









595. *One of the most widely used and accepted line for superimposing serial tracings is:*

A. Sella-nasion line.
B. Bolton point to nasion.
C. Frankfor horizontal plane.
D. Basion-nasion plane.

Answer: A.
Because sella is the most reliable point

596. *The Frankfort plane is defined by which anatomical landmarks?*

A. Porion, orbitale.
B. Sella, orbitale.
C. Nasion, Tragus.

Answer: A.

597. *The angles, SNA, SNB and ANB are often used to describe relationships of the maxilla and mandible. The reliability of interpretations based on these angles is:*

A. good because research has proven their accuracy.
B. good because these landmarks can be identified accurately on the cephalometric radiograph.
C. questionable because of variations in vertical relationships in the lower face.
D. questionable because of variations in head posture.

Answer: D.

The magnitude of the ANB angle, however, is influenced by two factors other than the anteroposterior difference in jaw position. One is the vertical height of the face. As the vertical distance between nasion and points A and B increases, the ANB angle will decrease. The second is that if the anteroposterior position of nasion is abnormal, the size of the angle will be affected (Figure 6-51). In addition, as SNA and SNB become larger and the jaws are more protrusive, even if their horizontal relationship is unchanged, it will be registered as a larger ANB angle. The validity of these criticisms has led to use of different indicators of jaw discrepancy in the later analyses presented in the following sections.

Profit says" as the distance between point N and points A &B increases it means vertical height of face NOT LOWER FACE.

598. *What is incorrect related to orthodontic anchorage?*

A. Rapid and heavy force minimize anchorage.
B. Anchorage can be reinforced using other teeth.
C. Anchorage is the resistance to the applied active force.
D. It can be gained by multiple teeth or extra orally.

Answer: A.

599. *Patient on barbiturates collapses and not responding to verbal commands in the dental surgery. What is the immediate treatment?*

A. CPR.
B. Adrenaline IM and oxygen.
C. Adrenaline IV.
D. Antihistamines.

Answer: B.

Patient on Barbiturates collapses not because of cardiac arrest so why would we need CPR. It is a type of anaphylactic reaction which is rare and collapse is due to the widespread vasodilatation and increased capillary permeability causing potentially fatal hypotension, the line of treatment would be the same as of anaphylactic reaction. So the immediate treatment would be injection of Adrenaline IM and oxygen for managing hypoventillation. But if patient doesn't respond then we give CPR. Some other suggested to use Naloxone (if the patient is not responding).

600. How many milliliters of alcohol are in 1 standard drink?

A. 10ml.
B. 20ml.
C. 25ml.
D. 50ml.

Answer: A (10 g or 12.5 % or 12.5ml).

Appendix I

Many possibilities for this question:

- Option A will be correct if the occlusion is group function.
- If the canine is going to be replaced by crown, option C will be the correct one (Shillingburg, 100)
- If canine will be the abutment, (option B will be the correct one be) and whether upper or lower canine is the abutment. If upper canine is the abutment, the problem will be encountered at the palatal reduction. It needs to reproduce the natural concavity of maxillary teeth if space is to be provided for the development of anterior guidance. Unless clearance during lateral and protrusive movements has been checked, it is very easy to end up with a crown which occludes satisfactorily in the intercuspal position, but which interferes during excursions (BDJ, 571 and figure 12 illustrates this). If the lower canine is the abutment, there will a problem with the labial reduction to provide adequate clearance with a restriction of smaller dimension of the lower canine compared to the upper canine.
- If there is cross bit at the area of canine the picture will be opposite, the difficulty will encountered with upper canine as non-conservative preparation is required to correct the malocclusion.

Canine-Replacement Fixed Partial Dentures (Shillingburg, 100)

Fixed partial dentures replacing canines can be difficult because the canine often lies outside the interabutment axis. The prospective abutments are the lateral incisor usually the weakest tooth in the entire arch, and the first premolar, the weakest posterior tooth. A fixed partial denture replacing a maxillary canine is subjected to more stresses than that replacing a mandibular canine, since forces are transmitted outward (laibially) on the maxillary arch, against the inside of the curve (its weakest point) (Fig 7-32). On the mandibular canine the forces are directed inward (lingually), against the outside of the curve (its strongest point) (Fig 7-33). Any fixed partial denture replacing a canine should be considered a complex fixed partial denture. No fixed partial denture replacing a canine should replace more than one additional tooth. An edentulous space created by the loss of a canine and any two contiguous teeth is best restored with a removable partial denture.

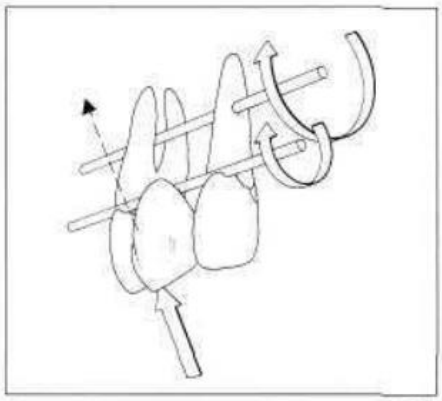


Fig 7-32 A fixed partial denture replacing a maxillary canine is subjected to more damaging stresses because ihe forces are directed outward and the pontic lies farther outside the interabutment axis.

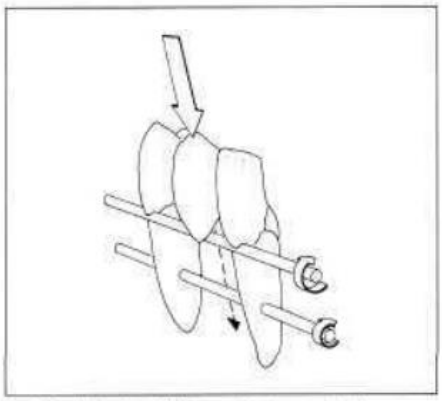


Fig 7-33 A fixed partial denture replacing a mandibular canine is more favorable because the forces are directed inward and the pontic will be closer to the interabutment axis.

Appendix II

(BDJ, 567) An in-vitro study has shown a significant increase in resistance and retention as axial walls extend from 2–3 mm in height and recommended 3 mm as the minimum preparation height. As a working rule this seems reasonable but there will be a multitude of exceptions and caveats depending on factors such as taper, cement selection and occlusal loading.
Where the preparation is over-tapered it is possible to up-right the axial walls at the base of the preparation, but this can result in a deep shoulder, excessive destruction of tooth tissue and possible compromise of pulpal health. If the bulk of remaining core or tooth tissue permits, a series of near parallel steps can be made in the over-tapered axial walls which results in a much less destructive preparation.
Other less destructive approaches of dealing with an unretentive preparation are:

- Retentive preparation features ie grooves and boxes
- Resin cements
- Surgical crown lengthening
- Pins and cross-pinning

Appendix III

Treatment Planning for Missing Maxillary Lateral Incisors

By: James Noble, BSc, DDS, MSc, FRCD(C)
2013-01-01
INTRODUCTION
Treatment planning for missing maxillary lateral incisors is a common clinical predicament encountered by orthodontists, particularly at Holland Bloorview Kids Rehabilitation Hospital where congenital absence of maxillary lateral incisors is a common feature of many of our patients afflicted by syndromal or non-syndromaloligodontia. Three main treatment options exist including: canine substitution; a tooth supported restoration; or a single tooth dental implant. Auto-transplantation and removeable partial dentures are other less common options. Deciding which option is best suited for each individual patient involves careful consideration of multiple clinical variables. An interdisciplinary approach is important throughout treatment planning, and subsequent treatment can involve dental team members such as an orthodontist, oral and maxillofacial surgeon or periodontist and restorative dentist or prosthodontist. The use of a diagnostic set-up is one of the most important aids in clinical decision-making due to the inherent Bolton discrepancy.

This article will discuss considerations involved in deciding which may be the most favoured option for a patient with missing maxillary lateral incisors, following which a case will be presented involving a unique method of substituting canines for lateral incisors using orthodontic temporary skeletal anchorage devices.

CANINE SUBSTITUTION

Canine substitution is the most convenient option for patients already committed to undergoing fixed orthodontic treatment. The final outcome for the missing space can be resolved without having to wait for completion of skeletal growth. It also saves the patient from having additional surgeries or restorative procedures, making it not only a more innocuous but also a more cost effective option.

Canine substitution for missing upper lateral incisors is more easily achieved when the orthodontist is presented with two types of dental malocclusions:

1) A Class II malocclusion with overjet and minimal lower crowding to allow for a final occlusion that finishes with a Class II molar relationship and the upper first premolars substituting for the canines in a Class I position with the lower canines.

2) A Class I malocclusion with sufficient lower crowding to allow for lower premolars to be extracted and a final occlusion that finishes in a Class I molar relationship with the upper first premolars substituting for the canines in a Class I position with the lower canines. Depending on the inter-arch tooth size discrepancy, it may be more ideal for a lower incisor to be extracted. If this is a consideration, a diagnostic set-up should be undertaken to assess the final occlusion, overjet and overbite relationship.

It is desirable that canines substituted for lateral incisors have similar colour as the central incisors. The canine should be no darker than the central incisor or it may need to be individually bleached, bonded or veneered.

It is preferable for the substituted canine to be relatively narrow at the cemento-enamel junction (CEJ) bucco-lingually and mesio-distally and for it to have a relatively flat labial surface and narrow mid-crown width bucco-lingually. The crown width at the CEJ should be evaluated during the treatment planning stages to evaluate the final emergence profile. The narrower the mesio-distal width at the CEJ of the substituted canine, the more likely it will be able to substitute easily for a lateral incisor.

Normally, a canine has a wider and more convex labial surface than a lateral incisor. Recontouring of the labial surface is contraindicated because of the risk of dentinal exposure and sensitivity. Moreover, in patients with a high smile line it becomes desirable to achieve harmonization of the gingival margins as they will be on full display during smiling. Oftentimes, however, harmonization of the gingival margin of a substituted canine with the gingival margins of the adjacent central incisor and first premolar results, because of the normally greater length of the canine crown, in a canine cusp tip that extends coronally below the smile arc. In order to obtain an ideal esthetic relationship, the extending canine cusp tip will have to be amputated, a procedure which likely would result in dentinal exposure, sensitivity and vulnerability to erosion and attrition. In the case of a short canine, where the cusp tip does not extend coronal to the smile arc, it may be sufficient to augment the mesio-incisal and/or disto-incisal edges with composite resin.

When the gingival margin is positioned at the same level or higher than the central incisor gingival margin, or when the canine eminence is prominent, canine substitution is more acceptable in patients with low smile lines.

Canine substitution is usually contraindicated in patients missing a single maxillary lateral incisor due to difficulty in creating restorative symmetry between the substituted canine and the contralateral lateral incisor which often has a smaller mesio-distal width.

Canine substitution is also difficult in patients with a deep overbite, as the bite tends to deepen with space closure. It is also difficult in patients with a minimal overjet, in which case the orthodontist must consider methods to create overjet while closing maxillary anterior space such as interproximal reduction of the lower arch or the extraction of lower premolars or a lower incisor.

If, on balance, substitution of a canine for a missing lateral incisor is deemed ill-advised, the orthodontist can consider a tooth supported restoration or dental implant, in which a Class I molar and canine relationship is typically achieved.

POSITIONING TEETH TO FACILITATE A TOOTH SUPPORTED RESTORATION

An anterior tooth supported restoration is preferable in situations where it is difficult to obtain the proper space for a dental implant intercornally and interradicularly. It is a more cost-effective option for patients but can have a poorer long-term survival rate. It may necessitate sacrifice of usually healthy adjacent tooth structure, but it does not need ridge augmentation in cases where there is not enough bone for a dental implant.

RESIN BONDED BRIDGES

Resin bonded bridges require less preparation of adjacent teeth but have a reduced survivial rate usually as a result of failure due to debonding. The greater the area of coverage of the upper central incisor and canine with a resin-bonded bridge retainer, the greater the retention and likelihood of long-term success.

A resin bonded bridge supported by teeth that are relatively upright with minimal overbitewill have a greater chance of success because they experience more vertical as opposed to lateral forces.

ANTERIOR CONVENTIONAL BRIDGES

This is the least conservative of all options but a consideration if the patient presents with previously endodontically treated anterior teeth, significant restorations, or fractured incisors and canines that require restoration. If failure occurs, it is usually due to fracture or cement washout and caries.

SINGLE-TOOTH DENTAL IMPLANTS

The advantage of using dental implants to replace maxillary lateral incisors lies in excellent success and survival rates, and the lack of need to involve adjacent teeth in a fixed restoration. Dental implants, however, have increased costs and the need for at least one surgery. The quantity and quality of bone must be adequate or the patient may need a separate surgical procedure for ridge augmentation. Typically, there should be a minimum of 10mm of inciso-gingival bone and a minimum of 6.0mm of facial-lingual bone. An aid to assess the height and width of bone is the use of a cone beam CT x-ray. Guiding eruption of the permanent maxillary canine to into the missing lateral incisor position, and then distalizing it orthodontically is a strategy that can often be used to encourage the development of a robust alveolar process in the wake of the distalized canine, thus minimizing the need for ridge augmentation surgery prior to dental implant placement.

Appendix IV

Here is a summary (not an exhaustive list) of the main types of crown available:

- All metal crowns. These require only a very minimum amount of the tooth to be prepared preserving the core for maximum strength and retention. They very rarely chip or fracture, don’t wear opposing teeth and look as good as the day they were put in. One disadvantage is color unless you like your gold. They can be made of precious metal (i.e. gold) semi-precious (a combination of gold and other metals) or non-precious (a mix of lower cost metals). A good choice where space is minimal on molars you cannot see and if you have severe habits of clenching or grinding teeth.

- Gold crowns. The higher the percentage of gold the better (over 75%)- this is often mixed with other metals such as, silver or copper and palladium. As the price of gold sky rockets so obviously does the price of the gold crown. The larger the crown, the more gold will be needed and the more you will pay. Gold is the most durable, predictable and best tolerated of all the crown materials- it's just the issue of the colour.

- Base metal alloys such as nickel – chromium (sometimes with beryllium), titanium. These have been developed as a cheaper alternative to the gold crown. They do not have the same fit and wear characteristics, as gold.

- All ceramics crowns. All ceramic crowns now have far superior properties to those of the porcelain jacket crowns of a decade ago which were so prone to fracture. They look very good and natural. Without the metal substructure (underneath) of a Porcelain fused to metal (VMK) crown, most have improved optical qualities- the way light passes through the tooth. They keep their aesthetics better in the long term and are also good for patients who have allergies to particular metals used in other types of crowns. The major risk with porcelain is fracture which will lead to failure and the slightly deeper preparations that are required for sufficient thickness of porcelain for the crown to have strength (not zirconia crowns which are super strong in thin section).

- Zirconia crowns. Zirconia is a very popular material currently, some crowns are made purely of zirconia making them very hard, even abrasive if not polished properly. The whole crown can be milled from a single block and in this case it is harder to get a really excellent shade match (as the block is a more uniform colour). The advantage here is that you don't need to remove much tooth at all since the material is very strong in thin sections. Zirconia can also be used for the first part of the crown (that sits over the teeth) and standard porcelain built up on top to mimic the natural tooth more closely, not just in its looks but in its characteristics too. Because zirconia is so hard it is not possible to etch the porcelain and so, a good long lasting crown relies on the retention of the preparation and the cement. See successful crowns for more information.

- Other porcelain crowns (aluminous). E.g. Empress and emax. A big advantage of these types of crowns is that the porcelain is a little more porous than zirconia so it can actually be etched with acid (in the same way as a composite filling). This makes it possible to create a chemical bond between the crown and the tooth making it very strong. This is the property that makes this type of crown ideal for use in inlays and onlays. These crowns are also the most aesthetic crown and so are used in areas of the mouth where the appearance is very important.

- Porcelain fused to metal crowns. These have been the staple of the crown world for many years and with good reason. They look good and are very strong. They have a proven track record for success for both front and back teeth. They are sometimes called PFM's which means porcelain fused to metal or VMK which stands for Veneered metal crowns – don't ask why it is not VMC! The front and top part of the teeth require a similar amount of tooth filing to a porcelain crown to make way both the metal substructure and porcelain on top. The inside area of the tooth can have the margin left in metal and can be thin, thus preserving the strength of the core. They are great for use in bridges and incorporating features such as 'rest seats' if you wear a partial denture. The porcelain can sometimes fracture off, exposing the metal core. This is pretty rare and often only an aesthetic problem, but it can cause concern for some patients. It is usually found in patients with a grinding habit. Another more common problem to do with 'the look' is that over many years the dark line of the metal underneath can begin to show as the gum shrinks down. The metal surface can also be treated underneath to help enhance the bond of the cement with the tooth. Sometimes it may be appropriate to place an all porcelain collar on the crown which may help avoid this cosmetic problem.

All-ceramic dental crowns.**What are they?**

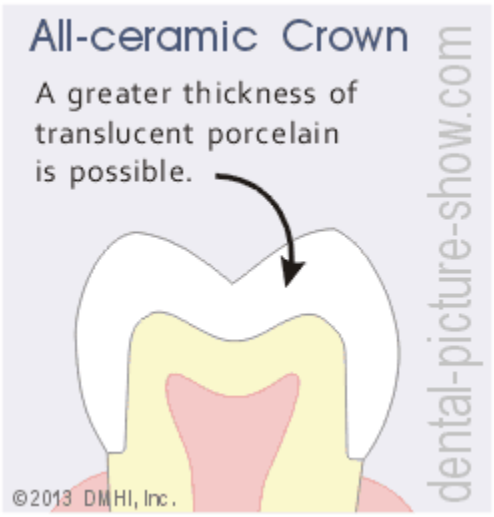
Just as their name implies, all-ceramic crowns are fabricated entirely out of a glass-like compound such as porcelain.

Advantages.

a) Superior aesthetics.

The single biggest advantage of all-ceramics, as compared to their porcelain-fused-to-metal ("PFM") counterparts, is their (typically) more lifelike appearance.

This characteristic can be attributed to the fact that a greater percentage of the overall thickness of this type of crown can be made using relatively more-translucent porcelain. (The type of porcelain that most closely mimics the light-handling characteristics of tooth enamel and therefore gives a very lifelike look.)



In comparison, PFM crowns have a metal substructure that must be masked using a layer of opaque (chalky-white) porcelain.

This reduces the extent of the crown's total thickness that can be composed of translucent materials and therefore makes it more of a challenge (at least in theory) to create as natural a look.

b) There's no metal edge.

Beyond the obstacle just described, the metal substructure of a PFM crown also creates a second difficulty. Its edge lies right at the base of the crown. (Use this link for more details.)

Dentists do have techniques they can use to hide or mask it. But the great advantage of an all-ceramic is that this issue is never a concern, either initially or if gum recession occurs later on.

c) Biocompatibility.

All-ceramic crowns offer some advantages in regard to biocompatibility.

- The types of ceramics their made of are typically no more abrasive than dental enamel itself (gold crownsfeature this characteristic too).

  In comparison, the porcelain used to make PFM crowns (especially if it's not polished or glazed appropriately) can be very abrasive to opposing teeth and dental restorations and cause significant wear.

- While relatively rare, some people are allergic to some of the types of metals that are sometimes used to make PFM crowns.

d) Single-visit placement may be possible.

Some dentists have milling units that can be programmed to grind crowns out of ceramic blocks. Some of the brand names associated with this technology are: Cerec®, ProCad®, Vitablocs® and Paradigm®.

This technique allows for single-visit crown placement. After preparing the patient's tooth, its crown can be milled immediately (it takes about 20 to 30 minutes) and then cemented into place.

This is in contrast to the customary two-visit process used with traditional technique, where the crown is made by a dental technician who typically requires a turn-around time of about two weeks.

Disadvantages of all-ceramic crowns.

a) Longevity issues.

No type of crown offers more advantages in terms of longevity and durability than an all-metal one. And in those applications where the appearance of one would not be acceptable, porcelain-fused-to-metal crowns also have an established track record of delivering lasting service.

In comparison, all-ceramic crowns, even those made from the most modern materials, can generally be considered to have relatively inferior physical characteristics (strength, hardness, brittleness, resistance to fracture, etc...).

That doesn't necessarily mean that they can't make a good choice, or even the best choice for some applications. But this is an issue that should be considered and discussed with your dentist (see below).

b) The appearance of milled ceramic crowns may just be mediocre.

In the case of milled all-ceramics, since the crown is cut out of a uniform block of material, it can't possess the same degree of color characterization as one hand-constructed by a dental technician. As a result, a milled crown may not look as natural as other types of all-ceramics.

This issue may not be much of a concern for teeth that don't show prominently. But for upper front teeth, this issue may be of significant importance.

(Note: Milled crowns can be characterized by "staining and glazing" them. But this is a surface treatment and doesn't generate the same enamel-like luster as discussed above.)

When does an all-ceramic make the best choice?

In those situations where the cosmetic appearance of a tooth is of utmost concern (like a front one), some types of all-ceramics can make an excellent choice.

However, since their physical characteristics are typically inferior to other types of crowns, the prudence of placing one on a back tooth where cosmetic appearance is less of a factor (especially one that requires strengthening following root canal treatment) could certainly be a point of debate.

Types of all-ceramic dental crowns.

Porcelain-jackets.

The first type of all-ceramic crown (introduced over 100 years ago) was the "porcelain jacket." And as you might expect, it offered superior cosmetic appearance, at the expense of strength. Porcelain-jackets were typically only placed on front teeth where cosmetic appearance was of utmost concern.

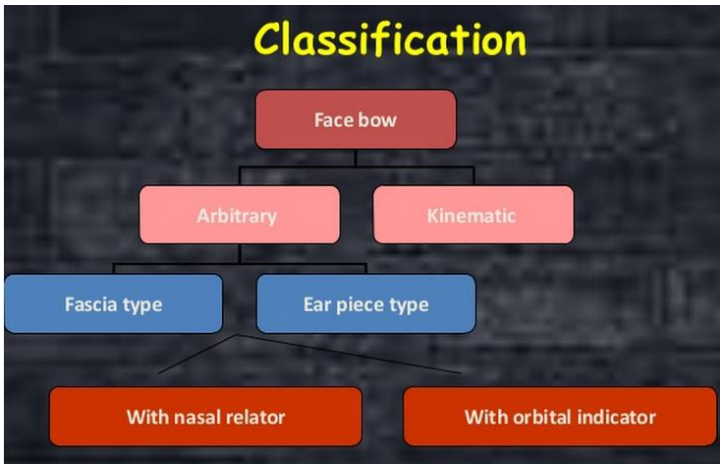
Modern ceramics.

In recent decades, a number of companies have developed new processes and materials for fabricating all-ceramic crowns.

With some, the emphasis has been placed on ways to create crowns that have the same beauty as porcelain jackets, yet offer greater strength. With others, as mentioned above, the emphasis has been focused on new technologies and materials used to fabricate same-visit milled crowns.

Some of the brand names associated with these newer products are: Dicor, Cerapearl, Optec, Empress, Vitadur, Hyceram, Cerestore, Procera, Inceram, Cerec, ProCad, Vitablocs and Paradigm.

Appendix V



The occlusal plane or the wax rim is related to the TMJ by using a horizontal plane and this relationship is transferred to the articulator using a facebow register the GLENO MAXILLARY.

Relationship in three plane of:

- Anterio-posterior sagital plane
- Transvers or frontal
- Vertically

The maxilla is related to a horizontal plane usually formed by 3 points of references.

Two posterior points of reference

One anterior point of reference

1- Kinematic face-bow (Mandibular).

- The hinge axis face-bow with adjustable caliper ends that locates the exact axis of rotation of the condyles.
- Hinge axis of the mandible can be determined by a clutch i.e., a segmented impression tray like device attached onto the mandibular teeth with a suitable rigid material such as impression plaster.

2- Arbitrary (Maxillary) face-bows.

Relates the maxilla to the exact or arbitrary position of the condylar axis and transfers this relationship to the articulator

Classification:

The exact terminal hinge axis location determination

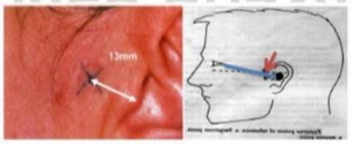
1.Exact hinge axis:

Accurate method using "kinematic" hinge axis locator (mandibular) face bow.

2.Arbitrary hinge axis: based on anatomic averages:

A. Beyron's point 13 mm from tragus

The condylar axis lies nearly 13mm anterior to the posterior margin of the tragus of the ear on a line from the center of tragus extending to the corner of the eye.



B. Palpate condylar pole.

C. Earbow (no need to locate the THA, it is already designed according to average position of condyles to the ears).

Appendix VI

What is allergy and anaphylaxis?

Over the last decade, allergy and risk of anaphylaxis has become an increasing health burden. Common causes of anaphylaxis include foods, insect stings and medications. Effective strategies for primary prevention of allergy are currently limited and secondary prevention is restricted to strategies to prevent exposure to known allergens.

1.1 Allergen sensitization: Allergen sensitisation is a process in which a normally harmless protein (allergen) leads to the production of a specific type of allergy antibody (IgE). IgE antibodies are produced by plasma cells (mature B cells) in response to exposure to the allergen. IgE attaches to tissue mast cells in the skin, gastrointestinal tract, and/or respiratory system and peripheral blood basophils. In the absence of further contact with the allergen, binding of IgE to mast cell receptors produces no symptoms.

1.2 Mechanisms of an allergic reaction: Subsequent exposure to the allergen with cross-linking of IgE antibodies can cause rapid mast cell activation in some individuals. This results in the release of histamine and other inflammatory mediators. Multiple inflammatory mediators cause increased vascular permeability, smooth muscle spasm, mucosal oedema and inflammation. This results in clinical effects such as urticaria, angioedema, bronchospasm and anaphylaxis.

1.3 Definition of anaphylaxis: Anaphylaxis is the most severe form of allergic reaction requiring urgent medical treatment. There are a plethora of definitions for anaphylaxis within the literature. For the purposes of recognition and emergency treatment, ASCIA defines anaphylaxis as: Any acute onset illness with typical skin features (urticarial rash or erythema/flushing, and/or angioedema), PLUS involvement of respiratory and/or cardiovascular and/or persistent severe gastrointestinal symptoms. OR Any acute onset of hypotension or bronchospasm or upper airway obstruction where anaphylaxis is considered possible, even if typical skin features are not present.

1.4 Signs and symptoms of allergic reactions: The following signs and symptoms are as stated on the ASCIA Action Plans:

A. Mild or moderate reaction:
- Swelling of lips, face, eyes.
- Hives or welts.
- Tingling mouth.
- Abdominal pain, vomiting (these are signs of a severe allergic reaction to insects)

B. Anaphylaxis: Watch for any one of the following signs of anaphylaxis:
- Difficult/noisy breathing.
- Swelling of tongue.
- Swelling/tightness in throat.
- Difficulty talking and/or hoarse voice.
- Wheeze or persistent cough.
- Persistent dizziness or collapse.
- Pale and floppy (young children).

NOTE: Urticaria, erythema and angioedema may be transient, subtle and easily overlooked. In 1 out of 6 fatal food induced anaphylaxis cases, severe cardiovascular symptoms developed without skin or respiratory symptoms.

Acute Management of Anaphylaxis

1. Remove allergen (if still present).
2. Call for assistance. Do not leave patient alone.
3. Lay the patient flat. Do not allow patient to stand or walk. If breathing is difficult allow the patient to sit.
4. Give 1:1000 adrenaline intramuscularly into the lateral mid-thigh without delay (0.01mg/kg – maximum dose 0.5mg). Repeat doses every five minutes as needed. If multiple doses required, contact emergency specialist for advice.
5. Call ambulance.
6. Provide supportive management when skills and equipment are available:
   - Monitor pulse, blood pressure, respiratory rate, pulse oximetry.
   - Give high flow oxygen and airway support if needed.
   - Obtain intravenous access in adults and in hypotensive children.
   - If hypotensive, give intravenous normal saline (20mL/kg rapidly) and consider additional wide bore intravenous access.

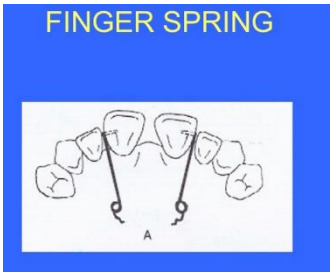
Note: It is important not to give food or drink to an individual experiencing anaphylaxis in case they vomit and aspirate.

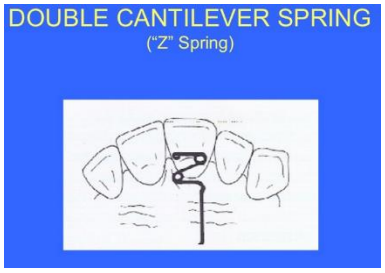
It is important to note that antihistamines have no role in treating or preventing respiratory or cardiovascular symptoms of anaphylaxis. Oral non-sedating antihistamines may be given to treat itch and urticaria. Oral sedating antihistamines are not recommended as side effects (drowsiness) may be similar to signs of anaphylaxis. Injectable promethazine should not be used in anaphylaxis as it can worsen hypotension and cause muscle necrosis.

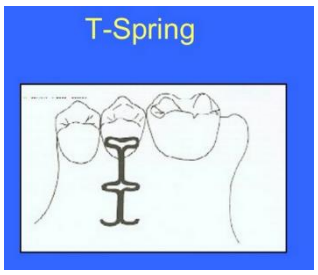
Appendix VII

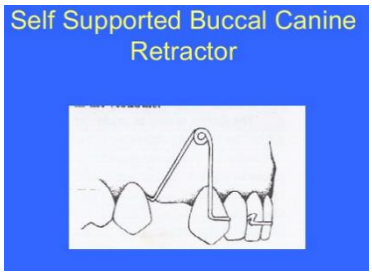
a)For buccal or labial movement:
-Z spring
-T spring
b) For lingual movement:
-Canine & premolar spring
-Molar spring
-Soldered auxillary spring
c) For mesial & distal movement:
-Finger spring
-Expansion screw
-Canine retractors

d) Spring for expansion:
-Coffin spring
-Screw appliance
e)Extrusion & intrusion of teeth:
-Anterior bite plane
-Posterior bite plane
-Inclined plane
f) Habit breaking appliances:
-Tongue spikes,cribs for tongue thrust.
-Lip bumper for lip sucking.
-Oral screen for mouth breathing.









Appendix VIII

The word **curettage** is used in periodontics to mean the scraping of the gingival wall of a periodontal pocket to separate diseased soft tissue. **Scaling** raters to the removal of deposits from the root surface, whereas **planning** means smoothing the root to remove infected and necrotic tooth substance.

Curettage

A differentiation has been made between **gingival** and **subgingival** curettage.

- Gingival curettage: consists of the removal of the inflamed soft tissue. Lateral to the pocket wall.
- Subgingival curettage: refers to the procedure that is performed apical to the epithelial attachment, severing the connective tissue attachment down to the osseous crest.

Important: Curettage does not eliminate the causes of inflammation (i.e., bacterial plaque and deposits). Therefore, curettage should always be preceded by scaling and root planning.

Note: Gingival curettage always requires some type of local anesthesia.

Indications for curettage are very limited**.** It can be used after scaling and root planning for the following purposes:

1. Curettage can be performed as part of new attachment attempts in moderately deep intrabony pockets located in accessible areas where a type of ”closed" surgery is deemed advisable.
2. Curettage can be done as a nondefinitive procedure to reduce inflammation before using other methods for pocket elimination or when more aggressive surgical techniques *(e.g., flaps)* are contraindicated.
3. Curettage is also frequently performed on recall visits as a method of maintenance treatment for areas of recurrent inflammation and pocket depth.

The curette is selected so that the cutting edge will be against the tissue *(e.g., Gracey #13-14 for distal surfaces, Gracey #11-12 for mesial surfaces).* Curettage can also be performed with a 4R-4L Columbia Universal curette.

Contraindications of gingival curettage as a definitive procedure include:

- Acute periodontal inflammation.
- Firm, fibrotic tissue.
- Intrabony pockets.
- Mucogingival involvements.
- When the lateral gingival wall is extremely thin.

1. Patients with edematous and granulomatous inflammation **respond better** to curettage **than do those** with conditions of fibrous hyperplasia.
2. For a **new attachment** to occur:
   (1) An adequate number of undifferentiated mesenchymal cells must be present.
   (2) Complete removal of junctional and pocket epithelium must be accomplished.
   (3) The complete removal of calculus and/or altered cementum must be accomplished.

Scaling and root planing

The major objective of scaling and root planning is to remove etiologic agents that promote gingival inflammation in the periodontal tissues. Removal of plaque, calculus, and endotoxins results in a subsequent shift from disease-associated, gram-negative anaerobes to health-associated, gram-positive, facultative microorganims.

Important: By providing smooth root surfaces, there will be a reduced potential for bacterial accumulation, which is done in an attempt to achieve soft-tissue reattachment.

Scaling and root planning are techniques of instrumentation applied to the root surface to divest it of plaque, calcified deposits, and softened or roughened cementum. When thoroughly performed, techniques produce a smooth, clean, hard polished root surface. Scaling with root planning is the primary treatment for periodontal inflammation. In simple cases, this treatment is useful in reducing shallow pockets and reducing the number of bacteria within these shallow pockets and may be the only treatment necessary. In severely advanced periodontal disease where surgery may not be possible, scaling with root planning is the only treatment feasible.

Since the removal of plaque and deposits is the definitive treatment for periodontal inflammation, scaling with root planning is more frequently used than any other type of therapy.

The most effective instrument for subgingival scaling and root planning is a sharp curette. They are generally smaller than scalers and are designed to permit atraumatic entry to the subgingival space. The tactile sensitivity of most curettes is greater than scalers, and, as such, curettes are well suited for subgingival calculus detection, calculus removal, and root planning. Each working end has a cutting edge on both sides of the blade and a rounded toe.

There are two basic types of curettes: universal and area-specific *(Gracey curettes).*

Appendix IX

Permanent teeth index:
Decayed-Missing-Filled Index (DMF) which was introduced by Klein, Palmer and Knutson in 1938 and modified by WHO:
1-DMF teeth index (DMFT) which measures the prevalence of dental caries/Teeth (population).
2- DMF surfaces index (DMFS) which measures the severity of dental caries (individual).
Principle and rules in recoding:
DMFT:

- A tooth may have several restorations but it counted as one tooth, F.
- A tooth may have restoration on one surface and caries on the other, it should be counted as decayed D.
- No tooth must be counted more than once, D M F or sound.

DMFS:

- Each tooth was recorded scored as 4 surfaces for anterior teeth and 5 surfaces for posterior teeth.
- Retained root was recorded as 4 D for anterior teeth, 5 D for posterior teeth.
- Missing tooth was recorded as 4 M for anterior teeth, 5 M for posterior teeth.
- Tooth with crown was recorded as 4 F for anterior teeth, 5 F for posterior teeth.

Appendix X

Mucositis is an inflammatory reaction of the mucous lining of the upper gastrointestinal tract from mouth to stomach (mouth, lips, throat) and surrounding soft tissues.

- Stomatitis refers to inflammation in the mouth.
- Esophagitis refers to inflammation of esophagus.
- Mucositis refers to all mucous linings.

Signs and symptoms of mucositis include:

- Red, shiny, or swollen mouth and gums.
- Blood in the mouth.
- Sores in the mouth or on the gums or tongue.
- Soreness or pain in the mouth or throat.
- Difficulty swallowing or talking.
- Feeling of dryness, mild burning, or pain when eating food.
- Soft, whitish patches or pus in the mouth or on the tongue.
- Increased mucus or thicker saliva in the mouth.
- Many patients complain of a metallic taste in the mouth.
- Food may taste unusual or unpleasant.