Dental Science, Materials and Technology

MCQ in Implant Dentistry

Mohammed Jasim Al-Juboori

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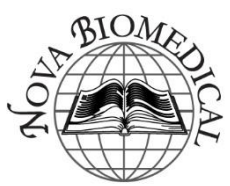

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To my beloved mother who sacrifice her life for us and
to my biggest supporters, my brother and sister

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PREFACE

Coming from the need of MCQ book related to implant dentistry that can cover from basic to clinical question. More than that the limited time of the candidate with busy schedule dentist who wants to sit for credential exams. So the aim of this book is to help the candidate for quick revision and guidance. We have tried to make this book as a reading guide for exam preparation by providing a reference for the correct answer. References is documented from high rank journal and sound research or literature review. In this book I have tried to give the necessary information that can be extracted from the questions phrase or the answers. Many universities now started the program of implant dentistry from postgraduate continuous education to master degree level, as well as the individual bodies providing fellowship and diplomat credential certificate. And most of these programs depend on MCQ type of question to assess the level of knowledge of the candidate.

How to read this book? Actually there is only one correct answer or choice for the question, sometime the choice of (e.g., all of the above, none of the above, or a&b) still considered as one correct choice. The correct answer will be at the end of each chapter. The reader should estimate the time during solving the question that may need 1.5 minutes for each question to be answered.

The questions and answers are not coming from opinion and experience but from solid and evidence based dentistry sources. This book would not replacing the text book and notes, but rather than offering a guidance and quick revision. For my knowledge this is the first MCQ book provide a suggested reading list to help the reader more.

Mohammed Jasim Al-Juboori BDS, MSc, AFAAID, FICOI, FADIA

Mohammed Jasim Al-Juboori, BDS, MSc, holds a master's degree in dental implantology, is an Associated Fellow of American Academy of Implant Dentistry, and Fellow the International Congress of Oral Implantologists and American Dental Implant Association. He was a Research Fellow in the University of Nagasaki, Japan 2014. He has published more than 25 articles in peer-reviewed journals and has lectured nationally and internationally on implant dentistry and oral surgery topics. He is editor on board in many international journals. In addition to his responsibilities teaching in Al-Rafidian College, periodontal department, Baghdad/Iraq, he is part time associated dentist in private practice limited to implant dentistry.

SECTION ONE: BASIC SCIENCE

Chapter 1

ANATOMY

1- In cases of severe bleeding and lingual hematoma during the placement of the implant in the lower incisor region, which artery do you think is injured:

a- submental
b- sublingual
c- inferior labial
d- transverse facial
e- mental

2- The path of the inferior dental canal inside the mandible is not straight and deviates from the lingual to the buccal in the area of:

a- third molar tooth
b- second molar tooth
c- second premolar tooth
d- first molar tooth
e- none of the above

3- Implant placed in front of the mental foramen should be 6 mm from the foramen to prevent the encroachment of:

a- mental foramen
b- submental artery
c- anterior loop of the inferior dental nerve
d- incisive canal
e- b&c

4- During the procedure of autogenous bone grafting harvested from the area of symphysis, dysesthesia can occur because:

a- damaging to the lower incisior teeth
b- muscle detachment during flap raise
c- incisive nerve damage
d- hematoma formation postoperatively
e- oedema formation postoperatively

5- Severe bleeding and lingual hematoma that occur during implant placement in the lower premolar area can be caused by severing the artery of:

a- lingual
b- submental artery
c- inferior alveolar artery
d- long buccal
e- none of the above

6- “Witch Chin” is a postoperative complication that occurs when a mucoperiosteal flap is raised in the symphyseal area because of:

a- injury to the orbicularis oris
b- detachment of mentalis muscle
c- incisive nerve damage
d- periosteal striping
e- detachment of the platysma muscle

7- At an early age, the mandible blood supply is central, but over time, the blood supply becomes peripheral:

a- inferior alveolar artery
b- lingual artery
c- endosteum
d- periosteum and attached muscle
e- mucosa

8- Inferior alveolar nerves are usually confined to the inferior canal but % are not confined and are distributed throughout the mandible in areas such as the plexus:

a- 20%
b- 40%
c- 60%
d- 5%
e- 80%

9- The changes that occur in the incisive canal after tooth extraction include:

a- shortening and enlargement
b- shortening and narrowing
c- elongation and enlargement
d- elongation and narrowing
e- obliteration

10- A mean distance between the mandibular canal and the inferior mandibular border measures approximately at:

a- 10 mm
b- 13mm
c- 8mm
d- 14mm
e- 6mm

11- The incisive nerve is innervate:
a- lateral and central incisor
b- canine, lateral and central incisor
c- first bicuspid, canine, lateral and central incisors
d- canine and lateral incisor
e- central incisor

12- The anterior loop of an inferior dental nerve can be predicted when the nerve comes:
a- above the mental foramen
b- below the mental foramen
c- above the mental foramen
d- same level with the mental foramen
e- disappear before the mental foramen

13- During implant placement and nerve injury, patients will feel numbness only when the injured nerve supply:
a- soft tissue
b- bony tissue
c- teeth
d- muscular tissue
e- b& c

14- Dentoalveolar innervation and the periodontal ligament area of the innervation are:
a- nerve endings with nociceptors
b- sympathetic
c- parasympathetic
d- nerve endings with mechanoreceptors
e- a&b

15- Incisions on the buccal vestibules may cause severe edema and post- operative pain due to:
a- incision on loose tissue
b- plexus of blood vessels found in the vestibule
c- incision in non keratinized tissue
d- poor lymphatic drainage in this area
e- all of the above

16- The length of the inferior alveolar nerve’s anterior loop is:
a- <3 mm
b- <5 mm
c- <6 mm
d- <7 mm
e- 8mm

17- The use of a probe to clinically identify the anterior loop has been suggested; however, the drawback of this procedure is:

a- not possible to differentiate between an anterior loop and an incisive canal
b- difficult for the probe to go full length
c- trauma to the mental nerve
d- mental foramen angulation is different from the anterior loop
e- all of the above

18- The periosteum and both the lateral wall of the maxillary sinus and its Schneiderian membrane are supplied by two arterial branches:

a- middle and posterior superior alveolar artery
b- anterior and middle superior alveolar artery
c- posterior superior alveolar artery and the infraorbital artery
d- posterior superior and greater palatin artery
e- none of the above

19- The lateral wall of the maxillary sinus hosts the superior alveolar canal:

a- branches of the posterior superior alveolar and infraorbital arteries
b- branches of posterior and middle superior alveolar arteries
c- branches of posterior superior alveolar arteries only
d- branches of middle superior and infraorbital arteries
e- branches of posterior superior and greater palatine artery

20- The inferior border of the mandible receives most of its blood supply from:

a- periosteum
b- inferior alveolar artery
c- muscle attachment
d- mucosa
e- a&d

21- The gingiva and periosteum receive their blood supply mainly through the supraperiosteal vessels, which run _____ to the long axis of the teeth:

a- angular
b- perpendicular
c- parallel
d- circular
e- a&b

22- The vascular network within the periosteum and the periodontal plexus communicate directly via:

a- Volkmann’s canals
b- Haversian canals
c- Intraseptal plexus
d- Bone marrow plexus
e- c&d

23- The human temporomandibular joint is essentially a double joint due to:
a- both joint found on the mandible
b- presence of an intra- articular disc
c- both joint innervated and function in the same time
d- has two movement (hinge and sliding)
e- a&c

24- In the temporomandibular joint, the receptors are primarily free nerve endings, and the receptors are either mechanoreceptive, detecting stretch and pressure, or nociceptive, detecting:
a- tissue damage or threat of damage
b- posture and position
c- pain
d- pressure
e- movement

25- When the temporomandibular joint is at rest, the mandible adopts the so- called rest position. The condyle occupies a _____ and _____ position in the glenoid fossae with upper and lower teeth separated:
a- central and unstrained
b- posterior and unstrained
c- anterior and unstrained
d- central and strained
e- none of the above

26- Simple jaw opening muscles, which are responsible for producing a rotation of the condylar head, include the digastric (anterior belly), mylohyoid and geniohyoid muscles. The action of these muscles can only be achieved if:
a- rotation of meniscus disc anteriorly
b- relaxation of the sling muscle (pterygomasseteric)
c- contraction of the anterior fibres of temporalis muscle
d- infrahyoid muscle stabilise the hyoid bone
e- contraction of the posterior fiber of temporalis muscle

27- translation movement of the condylar head onto the articular eminence during jaw opening is achieved through the action of:
a- anterior belly of diagastric
b- medial pterygoid muscle
c- lateral pterygoid muscle
d- geniohyoid muscle
e- omohyoid muscle

28- The middle portion of the Schneiderian membrane's blood supply from:
a- greater palatin artery
b- posterior superior alveolar artery
c- infra orbital artery
d- middle superior alveolar artery
e- none of the above

29- Nerve fibers in dentate jawbone are usually limited to:
a- periodontium
b- cortical bone
c- bone marrow
d- canceloous bone
e- b&d

30- The lingual nerve provides a sensory supply to the:
a- lingual aspect of the mucosa, mandibular incisiors, anterior 2/3 of the tongue
b- lingual aspect of the mucosa, floor of the mouth, posterior 2/3 of the tongue
c- lingual aspect of the mucosa, floor of the mouth, lateral border of the tongue
d- lingual aspect of the mucosa, floor of the mouth, anterior 2/3 of the tongue

31- The motor innervation of the mylohyoid and anterior belly of the digastric muscles through:
a- motor branch of the lingual nerve
b- motor branch of the inferior dental nerve
c- chorda tympani branch of the facial nerve
d- hypoglossal nerve
e- glossopharyngeal nerve

32- The sensory innervation of the skin and mucous membranes of the lower lip:
a- mental nerve
b- incisive nerve
c- buccal branch of the facial nerve
d- long buccal
e- b&c

33- Taste receptors are predominantly located on the dorsum of the tongue and also on:
a- soft palate
b- epiglottis
c- pharyngeal wall
d- a & c
e- all of the above

34- Taste sensation is perceived directly in the cortex, and the nerve fibers subserving the function of taste are:

a- sensory
b- sympathetic
c- parasympathetic
d- proprioceptive

35- The palatoglossus muscle enters the side and the dorsum of the tongue, acts as a retractor to the root of the tongue, and work with its partner on the other side to:

a- depress the soft palate
b- elevate the tongue
c- depress the tongue
d- narrowing the oropharyngeal opening
e- elevate the soft palate

36- Regarding the temporomandibular joint articular disc, the main loading area and the potential area of perforation are:

a- lateral aspect of the disc
b- medial aspect of the disc
c- posterior area of the disc
d- anterior area of the disc
e- none of the above

37- Regarding the temporomandibular joint articular disc, during mouth closure, the anterior part of the disc is located:

a- just anterior to the condyle
b- along the articular eminence
c- superior to the condyle
d- along the articular tubercle
e- none of the above

38- The temporomandibular (lateral) ligament is a thickened ligament on the lateral aspect of the capsule and acts as:

a- limiting the posterior movement of the articular disc
b- limiting the posterior movement of the condyle
c- limiting the protrusion movement of the mandible
d- limiting the protrusion movement of the mandible
e- a&b

39- Nasal bleeding is often due to trauma to the:

a- septal branch of the superior labial artery from the ophthalmic artery
b- septal branch of the superior labial artery from the facial artery
c- septal branch of the superior labial artery from the maxillary artery
d- external nasal artery from the maxillary artery
e- none of the above

40- The middle meatus of the middle conchae drains the following structure:
a- posterior ethmoidal sinus
b- sphenoidal sinus
c- nasolacrimal duct
d- superior conchae
e- none of the above

41- Each muscle of the soft palate has a special function; for example, the levator veli palatini muscle will act as:
a- pull the soft palate laterally
b- elevates uvula
c- elevate and pull the soft posteriorly
d- elevate the pharynx and larynx
e- a&b

42- All muscles of the soft palate innervated by pharyngeal plexus (motor part of the vagus + cranial part of the accessory nerve) except one, which is innervated by the muscular branch of the mandibular nerve. This muscle is:
a- tensor veli palatine
b- musculus uvulae
c- levator veli palatini
d- palatoglossus
e- none of the above

43- All of the following veins drain into the pterygoid plexus except:
a- inferior alveolar vein
b- sphenopalatine
c- anterior superior alveolar vein
d- lesser palatine vein
e- lingual vein

44- Some structures and veins have connections to the cavernous sinus, such as:
a- pterygoid plexus
b- facial veins (valveless)
c- submental vein
d- internal jagular
e- a&b

45- The greater palatine nerve innervates:
a- the soft palate
b- palatal gingiva from the premolars to the premaxilla
c- palatal gingiva from the posterior border of the hard palate to the first molar
d- palatal gingiva from second premolar to the canine
e- none of the above

46- A Submandibular space infection can spread into:
a- sublingual space
b- lateral pharyngeal space
c- peritonsillar space
d- retropharyngeal space
e- a&b

47- Infections in the lower molar teeth usually spread into the submandibular space due to:
a- thin lingual plate
b- the roots curved lingually
c- the roots located above the attachment of the mylohyoid muscle
d- thick cervical facial direct the infection toward the submandibular space
e- none of the above

48- An infection from the retropharyngeal space can spread into the thorax (diaphragm) through:
a- danger space
b- prevertebral space
c- carotid sheath
d- pretreacheal space
e- a&b

49- An anesthesia block to the long buccal nerve will anesthetize:
a- cheek mucosa
b- retromolar region
c- retromolar region and the buccal gingiva of the mandibular molars and premolars
d- retromolar region and the buccal gingiva of the mandibular molars
e- a&c

50- During mental nerve block anesthesia, the following structure is anesthetized:
a- buccal gingiva and mucosa from premolars to the midline
b- skin of the lower lip
c- lower anterior teeth
d- lower bicuspid teeth
e- a&b

51- 3% of the jaw has distinct lingual depressions to house the lingual gland, and perforation of the lingual plate in this area will cause severe bleeding when the implant is placed in the area:
a- between central incisor and canine
b- bicuspid
c- between lateral incisor and second premolar
d- between central incisor and first premolar
e- none of the above

52- Mandibular teeth in the natural dentition are_____ inclined in relation to the mandibular base:

a- lingually
b- buccally
c- distally
d- mesially
e- b&d

53- Based on the mandibular foramen level in the occlusal plan, the inferior alveolar block should be administered at:

a- the occlusal level
b- 6mm above the occlusal level
c- 2mm below the occlusal level
d- 2mm above the occlusal level
e- none of the above

54- During an inferior alveolar block, the molar teeth may still be symptomatic. If this is the case, lingual infiltration is recommended due to additional innervation from:

a- chorda tympani nerve
b- mylohyoid nerve
c- hypoglossal nerve
d- C2 and C3 (cutaneous coli nerve of the cervical plexus)
e- a&c

55- fFor more bone- implant engagement and better stability during the immediate implant placement period in the upper anterior teeth:

a- the palatal bone is thick and shallow palatal vault
b- the palatal bone is thin and high palatal vault
c- the palatal bone is thick and high palatal vault
d- the palatal bone is thin and shallow palatal vault

CORRECT ANSWERS

Q1
b- sublingual

Q2
d- first molar tooth

Q3
c- anterior loop of the inferior dental nerve

Q4
c- incisive nerve damage

Q5
b- submental artery

Q6
b- detachment of mentalis muscle

Q7
d- periosteum and attached muscle

Q8
b- 40% (Olivier E. The inferior dental canal and its nerve in the adult. Br Dent J. 1928 49:356 –358.)

Q9
a- shortening and enlargement

Q10
a- 10 mm

Q11
c- first bicuspid, canine, lateral and central incisors

Q12
b- below the mental foramen

Q13
a- soft tissue

Q14
c- parasympathetic (no evidence of its existence)

Q15
b- plesxus of blood vessels

Q16
a- <3 mm

Q17
a- not possible to differentiate between an anterior loop and an incisive canal

Q18
c- posterior superior alveolar artery and the infraorbital artery

Q19
a- branches of the posterior superior alveolar and infraorbital arteries

Q20
b- inferior alveolar artery

Q21
c- parallel

Q22
a- Volkmann's canals

Q23
b- presence of an intra- articular disc

Q24
a- tissue damage or threat of damage

Q25
d- infrahyoid muscle stabilise the hyoid bone

Q26
d- infrahyoid muscle stabilise the hyoid bone

Q27
c- lateral pterygoid muscle

Q28
e- none of the above (sphenopalatin artery)

Q29
a- periodontium

Q30
d- lingual aspect of the mucosa, floor of the mouth, anterior 2/3 of the tongue

Q31
b- motor branch of the inferior dental nerve

Q32
a- mental nerve

Q33
e- all of the above

Q34
c- parasympathetic

Q35
d- narrowing the oropharyngeal opening

Q36
a- lateral aspect of the disc

Q37
a- just anterior to the condyle

Q38
e- a&b

Q39
b- septal branch of the superior labial artery from the facial artery

Q40
e- none of the above (anterior ethmoidal sinus, middle ethmoidal sinus, maxillary sinus, frontal sinus)

Q41
c- elevate and pull the soft posteriorly

Q42
a- tensor veli palatine

Q43
e- lingual vein

Q44
e- a&b

Q45
e- none of the above (palatal gingiva from the posterior border of the hard palate to the first premolar)

Q46
e- a&b (continue with sublingual along the posterior border of the mylohyoid muscle)

Q47
e- none of the above (the roots located below the attachment of the mylohyoid muscle)

Q48
a- danger space (posterior to the alar fascia and anterior to the prevertebral fascia, extend from the base of the skull to the diaphragm)

Q49
d- retromolar region and the buccal gingiva of the mandibular molars

Q50
e- a&b

Q51
c- between lateral incisor and second premolar

Q52
a- lingually

Q53
b- 6mm above the occlusal level

Q54
d- C2 and C3 (cutaneous coli nerve of the cervical plexus)

Q55
a- the palatal bone is thick and shallow palatal vault

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Chapter 2

PHYSIOLOGY

1- In a fully edentulous mandible, connecting posterior implants on both sides with one prosthesis is contraindicated because of:

a- phonetic problem (limited tongue space)
b- torsion of the mandible distal to the mental foramen
c- difficult to lingulize the prosthesis, that lead to cross bit occlusion
d- path of prosthesis insertion would be impossible
e- b&c

2- During maxillary sinus augmentation, the Schneiderian membrane is susceptible to perforation during elevation, but the risk decreases when the membrane:

a- thickness 1.5 - 2mm
b- thickness 0.5- 3mm
c- thickness 0.6- 2mm
d- none of the above

3- Perforation of the Schneiderian membrane (mean thickness: 90 μm) occurs at a mean tension of:

a- 7.3 N/mm^2
b- 20.5 N/mm^2
c- 15.3 N/mm^2
d- 31.4 N/mm^2
e- none of the above

4- Patients with cardiovascular disease should be treated with:

a- supine position
b- upright position
c- semisupine position
d- none of the above

5- After tooth extraction, all of the following are true except:
a- 25% of the alveolar bone width decrease during the first year
b- bone loss in mandible is fourfold greater than maxilla
c- bone height decrease into 6 mm in the first year
d- bone loss would be more in multiple adjacent teeth extraction

6- In severe resorption of the mandible, the fate of the mental foramen is:
a- located upward near the upper border
b- obliterated
c- seclerotic
d- enlarge in size
e- c&d

7- The resting interocclusal distance (freeway space) can be affected by:
a- psychological state
b- body posture
c- fatigue
d- all of the above

8- Following speech, mastication, or swallowing, the mandible appears to return to:
a- centric occlusion
b- centric relation
c- protrosion position
d- none of the above

9- Some submucosal tissues act as a cushion during compressive loading, such as:
a- myxiod tissue
b- salivary gland
c- adipose tissue
d- all of the above

10- The touch threshold in normal natural teeth can distinguish objects within 0.2 mm, but this threshold is affected by:
a- malocclusion
b- denture wearers
c- anaesthesia
d- large force during mastication
e- all of the above

11- Lateral movement of the mandible is accompanied by lateral translation of the condyle on the same side of up to 1.4 mm. This movement is called:
a- hinge movement
b- excursion movement
c- translation movement
d- Bennett movement
e- none of the above

12- During mastication, we use the temporalis muscle for quick closure and gentle biting, while for more powerful crushing, we use:

a- medial pterygoid muscle
b- masseter muscle
c- lateral pterygoid muscle
d- infra hyoid muscles
e- a & b

13- The biting force among young people with natural teeth indicates that in the first molar, the greatest biting force is approximately:

a- 30 kilo
b- 70 kilo
c- 45 kilo
d- 100 kilo
e- none of the above

14- The temporomandibular joint is technically classified as a ginglymoarthrodial articulation, which by definition is:

a- originated from cartilagenous and membraneous type of bone
b- capable of hinge and sliding type of movement
c- articulation between the mandible and temporal bone
d- none of the above

15- The temporomandibular joint is considered a non- weight- bearing joint because of 2 factors: the force of mastication transmitted via the teeth and periodontium to the maxilla and mandible and the:

a- joint supported by sling of jaw muscles
b- high elasticity of muscle of mastication
c- long fulcrum arm of the mandible
d- force are dispersed to the buttresses and pterygoind plate
e- all of the above

16- The temporomandibular joint is supported by a sling muscle, which comprises _____ and is counteracted by _____ . This has the effect of locating the head of the condyle in a low- stress relationship with the glenoid fossa:

a- anterior belly of diagasteric muscle counteracted by pterygomasseteric complex
b- anterior fibres of temporalis muscle counteracted by pterygomasseteric complex
c- posterior fibres of temporalis muscle counteracted by pterygomasseteric complex
d- infrahyoid muscle counteracted by pterygomasseteric complex

17- In dentoalveolar gingival tissue, the direction of the blood supply is mainly from the vestibule to the gingival margin. The circulation changes that were observed suggest that flaps receive their primary blood supply from their apical aspect. The circulatory disturbance is greater when:

a- greater the ratio of flap length to base
b- greater the ratio of flap base to length
c- full thickness flap raised
d- oblique vertical incision included in the flap
e- none of the above

18- Many factors can increase ↑or decrease↓ the salivary flow rate, such as:
a- dehydration ↓, patient standing ↑, smoking ↑, sleeping ↓, darkness ↑
b- dehydration ↓, patient standing ↓, smoking ↑, sleeping ↓, darkness ↓
c- dehydration ↓, patient standing ↑, smoking ↓, sleeping ↑, darkness ↓
d- dehydration ↓, patient standing ↑, smoking ↑, sleeping ↓, darkness ↓

19- Factors affecting salivary composition, such as:
a- flow rate
b- contribution of different salivary glands
c- duration of stimulus
d- nature of stimulus
e- all of the above

20- The contributions of different salivary glands secretion into the oral cavity include:
a- parotid 20%, submandibular 65%, sublingual 7- 8%, minor glands 7- 8%
b- parotid 30%, submandibular 55%, sublingual 7- 8%, minor glands 7- 8%
c- parotid 40%, submandibular 50%, sublingual 7- 8%, minor glands 2- 3%
d- parotid 50%, submandibular 40%, sublingual 7- 8%, minor glands 2- 3%
e- none of the above

21- At a high flow rate of salivation, the following salivary gland becomes the dominant gland and contributes approximately 50% of the entire salivary secretion:

a- sublingual
b- submnadibular
c- parotid
d- palatal minor salivary gland

22- The mechanical properties in the cortical bone of the mandible are anisotropic, which is related to the orientation of:

a- osteon
b- collagen fibers
c- muscle attachment
d- trabicular bone
e- a&c

23- The modulus elasticity of the cortical bone of the mandible decrease gradually as the orientation of the load changes, and the maximum value of the modulus occurs at:

a- 0°
b- 90°
c- 45°
d- 70°
e- none of the above

24- It is important to consider anatomical aspects in the modulus elasticity of the cortical bone of the mandible because there can be a decrease or increase in the modulus value in:

a- dental foramen (decrease)
b- muscle attachment (reinforcements)
c- fossae (decrese)
d- all of the above

25- Peri- and postoperative gingival blood flow is affected by:

a- anesthesic containing a vasoconstrictor
b- smoking
c- periosteal disruption
d- all of the above

26- In the maxillary jaw, the blood supply is permanently reduced with age, which may be due to:

a- microvascular defect
b- stenotic changes
c- reduction of the intramedullary flow
d- all of the above

27- a Decreasing blood supply with age will lead to maxillary jaw atrophy through:

a- inhibition of the osteoblastic activity
b- delay in bone mineralization
c- reduction in cancellous bone
d- all of the above

28- Bones respond to physiologic stress by:

a- bone resorption
b- bone remodelling
c- bone formation
d- soft tissue formation
e- c&d

29- Osteoclast cells can cause bone resorption by dissolving the apatite crystals and digesting collagen fiber, which can be achieved by:

a- organic acids
b- metalloproteinases
c- collagenase
d- all of the above

30- at maximum smile, there will be decrease in upper lip length compared to the rest position of approximately:

a- 40%
b- 20%
c- 30%
d- 10%
e- 50%

31- The maximum tolerable temperature in the mouth ranges from:

a- 70- 80°C
b- 80- 90°C
c- 90- 100°C
d- 60- 70°C
e- none of the above

32- The area of the tongue innervated by the facial nerve fibers responds to sweet, salt and acid, while the posterior area of the oral cavity, which is innervated by fibers of the glossopharyngeal and vagus nerves, responds to the taste of:

a- acid
b- bitter
c- sweet
d- salt
e- a&c

33- The fiber types found in the muscles of mastication, which are type I, are appropriate for producing:

a- slow movement without fatiguing
b- powerful forces with easy fatiguing
c- powerful forces without fatiguing
d- fast movement with easy fatiguing
e- none of the above

34- The depression movement of the mandible occurs more rapidly than the elevation movement, which is due to:

a- type IIA and IIB muscle in the anterior belly of diagastric
b- type I muscle in the anterior belly of diagastric
c- type IIA and IIB muscle in the mylohyoid muscle
d- type IIA muscle in massetric and medial ptrygoid muscle

35- During hard clenching of the teeth, the following muscle is active:
a- geniohyoid
b- sternocleidomastoid
c- omohyoid
d- thyrohyoid
e- a&c

36- Static force, which can be produced in the molar region, is approximately 440 N and declines to---------- N in the canine region:
a- 150N
b- 250N
c- 350N
d- 80N
e- 100 N

37- The subject has been observed to swallow approximately 600 times in 24 hour, but during sleep, the swallowing frequency drops to approximately:
a- 80 times in hour
b- 6 times in hour
c- 50 times in hour
d- 20 times in hour
e- 15 times in hour

38- Women have higher voice frequencies than men, which is related to:
a- force of expiration
b- number of the vocal cords
c- length of the vocal cords
d- thickness of the vocal cords
e- b&d

39- loudness of sound relates primarily to the:
a- force of expiration
b- lyrnx muscle strength
c- resonance in the maxillary sinus
d- bony conduction
e- none of the above

40- Any alteration in the fitting of a denture will affect in the quality of speech, particularly the sounds of:
a- ‘s’
b- ‘f’
c- ‘th’
d- ‘m’
e- a&b

41- After extraction of a tooth with thin bone phenotypes, the following changes will occur during the 8- week healing period:

a- decrease facial soft tissue thickness, mid- facial horizontal bone loss of more than 20%
b- increase facial soft tissue thickness, mid- facial vertical bone loss of more than 50%
c- increase facial soft tissue thickness, mid- facial horizontal bone loss of more than 20%
d- facial soft tissue thickness maintained, mid- facial horizontal bone loss of more than 40%

42- Immediate implant placement in the upper anterior socket with more than 1 mm labial bone thickness will lead into:

a- resorption of the labial bone occurs and a flat ridge develops
b- portion of the labial bone does not resorb and the ridge shape is maintained
c- no resorption occur and the ridge maintain the profile
d- horizantal and vertical bone resorption occur with gingival recession
e- none of the above

CORRECT ANSWERS

Q1

b- torsion of the mandible distal to the mental foramen

Q2
a- thickness 1.5 - 2mm

Q3
a- 7.3 N/mm^2

Q4
c- semisupine position

Q5
c- bone height decrease into 6 mm in the first year

Q6
a- located upward near the upper border

Q7
d- all of the above

Q8
d- none of the above (rest position)

Q9
d- all of the above

Q10
e- all of the above

Q11
d- Bennett movement

Q12
e- a & b

Q13
c- 45 kilo (other molar slightly less, premolar and incisors only one third of molar)

Q14
b- capable of hinge and sliding type of movement

Q15
a- joint supported by sling of jaw muscles

Q16
c- posterior fibres of temporalis muscle counteracted by pterygomasseteric complex

Q17
a- greater the ratio of flap length to base

Q18
d- dehydration ↓, patient standing ↑, smoking ↑, sleeping ↓, darkness ↓ (royal college)

Q19
e- all of the above

Q20
a- parotid 20%, submandibular 65%, sublingual 7- 8%, minor glands 7- 8%

Q21
c- parotid

Q22
b- collagen fibers

Q23
a- 0° (because of the mandible anisotropic properties)

Q24
d- all of the above (because of the mandible anisotropic properties)

Q25
d- all of the above

Q26
d- all of the above

Q27
d- all of the above

Q28
b- bone remodelling

Q29
d- all of the above

Q30
c- 30%

Q31
a- 70- 80°C

Q32
b- bitter

Q33
c- powerful forces without fatiguing

Q34
a- type IIA and IIB muscle in the anterior belly of diagastric

Q35
b- sternocleidomastoid

Q36
a- 150N

Q37
b- 6 times in hour

Q38
c- length of the vocal cords (shorter in women 7- 11mm in women, to 15mm in men)

Q39
a- force of expiration

Q40
e- a&b

Q41
b- increase facial soft tissue thickness, mid- facial vertical bone loss of more than 50%

Q42
b- portion of the labial bone does not resorb and the ridge shape is maintained

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Chapter 3

HISTOLOGY

1- The main differences in periodontium between natural teeth and dental implants are:
a- collagen fibers non- attached to the dental implant and run parallel to the implant surface
b- collagen fiber non- attached to the dental implant and run perpendicular to the implant surface
c- collagen fiber non- attached to the dental implant and run oblique to the implant surface
d- collagen fiber attached to the dental implant and run perpendicular to the implant surface

2- The biological width in cases with natural teeth is measured as:
a- junctional epithelium attachment 0.97mm connective tissue attachment of 1.07mm or in sum approximately 2.5 mm
b- junctional epithelium attachment 1.02mm connective tissue attachment of 1.0mm or in sum approximately 2 mm
c- junctional epithelium attachment 0.97mm, connective tissue attachment of 1.07mm or in sum approximately 2mm
d- junctional epithelium attachment 0.87mm connective tissue attachment of 1.3mm or in sum approximately 2mm

3- After tooth extraction, the buccal bone plate is subjected to dramatic resorption compared to the lingual plate due to:
a- mainly canceleous bone
b- thin plate more subjected to be fracture during extraction
c- has less blood supply
d- usually ankylosed to the tooth
e- c&d

4- The basal lamina attaches the epithelium to the underlying connective tissue through:
a- hemidesmosomes
b- desmosomes
c- microfilament
d- microtubules
e- intermediate filaments

5- The basal lamina between the epithelium and the connective tissue functions as:
a- filter the passage of the molecules
b- barrier to cell migration
c- signalling function
d- all of above

6- The main components of the basal lamina are:
a- type I collagen
b- type II collagen
c- type IV collagen
d- type III collagen

7- Motility and contractility are important during connective tissue formation and wound repair, in which the role of:
a- myofilamant
b- fibroblast cells
c- epithelial cells
d- fibrous tissue
e- collagen

8- The major producers of collagen are mesenchymal cells and their derivatives, which are:
a- fibroblast
b- osteoblast
c- chondrocyte
d- cementoblast
e- all of above

9- Bones resist forces applied along the axis of their fibrous tissue component, and therefore, bone fractures occur because:
a- tensile and slicing stresses
b- compressive forces
c- cycling forces
d- high impact forces
e- b&c

10- Bone is a mineralized connective tissue comprising collagen by weight, 28% type:
a- IV collagen
b- II collagen
c- I collagen
d- Type III collagen
e- none of the above

11- Osteon is a type of cylindrical bone comprising:
a- Haversian canal
b- bone cells lining
c- capillaries
d- all of above
e- none of the above

12- Periosteum includes an outer fibrous layer and an inner layer next to the bone surface comprising:
a- bone cells, precursors cells, blood vessels
b- fibrous tissue and blood vessels
c- bone cells and blood vessels
d- bone cells and fibrous tissue
e- dense fibrous tissue, bone cells and blood vessels

13- Osteoblasts are bone- forming cells that can synthesize:
a- collagenous bone matrix protein
b- noncollagenous bone matrix protein
c- collagenous and noncollagenous bone matrix protein
d- hadroxyapetite crystals

14- Osteoid is:
a- mainly mineral crystals that embedded inside bone scaffold
b- mainly collagen that act as a scaffold
c- collagen and blood vessels that act as a scaffold
d- combination of the collagen and mineral crystals that form the smallest unite of bone

15- Noncollagenous proteins secreted from osteoblasts regulate the mineral deposition:
a- bone sialoprotein
b- osteopontin
c- calcitonin
d- a&b
e- b&c

16- The most important hormones in bone metabolism are:
a- parathyroid hormone
b- 1,25- dihydroxyvitamine D
c- calcitonin
d- estrogen
e- all of the above

17- The number of osteoblasts that become osteocytes varies depending on:
a- rapidity of bone formation
b- bone degradation
c- bone remodeling
d- bone modelling
e- vascularity

18- Bone sclerosis means:
a- hyperminerlization and increase bone maturity
b- hypomineralization and bone death
c- hypermineralization and bone death
d- more osteon bone can be seen

19- The distance from the alveolar bone crest to the cemento- enamel junction is:
a- 1.5- 2mm
b- 3- 4mm
c- 0.5- 2mm
d- 1- 3mm

20- The increased radiopacity of the lamina dura is due to:
a- increased mineral content
b- thick bone without trabeculation
c- attachment of the sharpy's fiber
d- bone seclerosis

21- Functional plasticity of the alveolar bone is due to:
a- lining the alveolus contain all forms of bone histology
b- type I collagen can act as a caution
c- orientation of the osteon is parallel to the stress direction
d- periodntium that can absorb any direction of the force applied

22- The true periodontal ligament (PDL) blood supply is:
a- more abundant in the posterior teeth than anterior
b- greater number in the mandibular than maxillary teeth
c- many arteriovenous anastomosis
d- venous drain is through network in the apical portion
e- all of above

23- At the vermilion border, there is obvious contrast between the colors of the skin and mucosa, and deeply colored mucosa represents the effects of:

a- amount of the blood vessels
b- epithelium thickness
c- degree of keratinization
d- melanin pigment concentration
e- all of above

24- Epithelial turnover is 52 to 75 days in the skin and 4 to 14 days in the gut, while gingiva need:

a- 21- 33days
b- 72- 90 days
c- 41- 57 days
d- 120- 142 days

25- The values for insertion torque in different parts of the jawbone were higher in:

a- the mandible than maxilla
b- the anterior than posterior region
c- The maxilla than mandible
d- Posterior than anterior
e- A & b

26- Hemidesmosome- like contacts are observed in the following surfaces:

a- appetite
b- metallic
c- carbon
d- polystyrene
e- a&d

27- Increased bone modelling activity during the first 8 to 10 weeks of socket healing after extraction leads to the progressive deposition of:

a- woven bone
b- provisional matrix
c- lamellar bone
d- osteon
e- b&c

28- The events involved in osseous wound healing after implant placement:

a- bleeding, hemostasis, clot formation, fibrinolysis, angiogenesis, formation of a loose connective tissue, osteoblast recruitment, osteoblasts proliferation & differentiation, collagen matrix formation, mineralization.
b- bleeding, hemostasis, clot formation, fibrinolysis, formation of a loose connective tissue, angiogenesis, osteoblast recruitment, osteoblasts proliferation & differentiation, collagen matrix formation, mineralization.

c- bleeding, hemostasis, clot formation, fibrinolysis, formation of a loose connective tissue, angiogenesis, osteoblast recruitment, collagen matrix formation, osteoblasts proliferation & differentiation, mineralization.
d- bleeding, hemostasis, clot formation, fibrinolysis, formation of a loose connective tissue, angiogenesis, osteoblasts proliferation & differentiation, osteoblast recruitment, collagen matrix formation, mineralization.

29- The important features of the osteoblast include:
a- arise from osteoprogenitor cells of mesenchymal origin
b- osteoblasts are secretory cells
c- osteoblasts are autocrine regulatory cells
d- all of the above

30- Peri- implant tissue may have an impaired defense system due to:
a- devoid of vascular supply
b- lack of keratinized tissue
c- lack of hemi- desmosomes attachment
d- lack of perpendicular periodontium
e- b&c

31- Mucosal tissue healing and connective tissue attachment failed when the abutment is made from:
a- ceramic
b- titanium
c- gold
d- none of the above

32- To prevent vertical bone loss and inter- implant papillae between 2 adjacent implants, the minimum distance between two adjacent dental implants should be:
a- 2 mm
b- 3 mm
c- 4 mm
d- 4.5mm
e- none of the above

33- Most of the gingiva recession around dental implants occurs during the first postoperatively:
a- 3 months
b- 1 months
c- 4 months
d- 6 months
e- 6 weeks

34- The platform- switching concept utilizes a smaller diameter abutment platform to:
a- allow submerged the implant
b- allow the formation of the biological space on the remaining platform of the implant
c- allow hemidesomosomes formation
d- get longer junctional epithelium
e- a&c

35- Burnt bone syndrome refers to:
a- Bone resorption has occurred because of damage to the bone at implant placement. This is caused by failure to cool the bone during the drilling operation.
b- Bone resorption has occurred because of damage to the bone at implant placement. This is caused by over torque of the implant and pressure necrosis
c- Bone resorption has occurred because of damage to the bone at implant placement. This is caused by shredding of the bone during implant placement
d- Progressive crestal bone resorption after implant placement. This is caused by failure to cool the bone during the drilling operation

36- The minimum gap between the implant and host bone predicts a reduction in the quality and quantity of the newly formed bone when the gap:
a- 300 µm
b- 100 µm
c- 500µm
d- 200 µm
e- none of the above

37- The bone implant socket is surgically created compared to a bone wound, with heating injuries, including the death of osteocytes, extending into the host bone to:
a- 100- 200µm
b- 100- 500 µm
c- 600- 800µm
d- 1- 1.5 mm
e- none of the above

38- 3- months post- implantation, the type of bone that can be found on the surface of a Ti implant is
a- mature woven bone
b- immature woven bone
c- complete lamellar bone
d- mixture (woven and lamellar bone)

39- There is a greater discrepancy in color between the soft tissue of natural teeth and the soft tissue around the titanium implant when:
a- interdental papillae
b- attached gingiva
c- apical region
d- none of the above

40- Crestal bone loss decreases and the epithelial and connective tissue increase when the implant:
a- placed above the crestal bone
b- placed with the crestal bone
c- placed below the crestl bone (countersink)
d- with micro threads design

41- A patient with square- shaped teeth has better prognosis in the esthetic zone due to:
a- interdental papillae short and blunt
b- long proximal tooth contact
c- thin gingival tissue
d- scalloped gingival margin
e- a & b

42- A patient with conical- shaped teeth is more favorable for immediate implantation in the esthetic zone due to:
a- ample interdental bone availability
b- thin gingival biotype
c- short contact area
d- all of the above

43- In bone healing, woven bone is formed at a rate of:
a- 120 µm
b- 60µm
c- 200 µm
d- 250 µm

44- Pressure necrosis during implant placement will lead to:
a- micro bone crack
b- soft tissue formation around the implant
c- delay healing
d- bone blood vessels obliteration
e- all of the above

45- Pressure necrosis usually occurs when the implant is placed:
a- in soft bone
b- in narrow bone ridge
c- in dense hard bone
d- with angulation

46- The main difference between the biological width of a natural tooth and an implant is:

a- shorter junctional epithelium
b- thinner connective tissue
c- longer junctional epithelium
d- thicker connective tissue
e- a & b

47- Generally, the probing depth in healthy implants is greater than that in healthy natural teeth because:

a- weak attachment of the junctional epithelium
b- implant is deeper than the tooth
c- crestal bone resorption
d- all of the above

48- Inflammation and bleeding on probing around an implant are usually less than with natural teeth because:

a- less plaque accumulation
b- less blood vessels
c- dense connective tissue with type III collagen
d- sulucus lining by keratinized mucosa

49- Functionally, the oral mucosa and the underlying muscle work as one unit through:

a- interlacing of the lamina propria and muscle
b- firm attachment of the mucosa to the periosteum
c- firm attachment of the mucosa to the perimysium by collagenous
d- raphie formation between the mucosa and the muscle

50- When the distance from the contact point to the bone was 5 mm or less, papillae were present almost 100% of the time. With a distance of 6 mm, papillae were present 56% of the time, and when the distance was 7 mm or more, papillae were present:

a- 27%
b- 35%
c- 50%
d-70%

51- The most abundant cells in the connective tissue, which are responsible for the ground substance formation and play a key role in the healing process and inflammation, are:

a- fibroblast
b- mesenchymal cells
c- macrophage & neutrophil cells
d- endothelial cells

52- In the oral mucosa, unlike in skin, there is minimal scar formation. This attribute may be correlated with the origin of skin and oral mucosa fibroblasts, as skin fibroblasts originate from the mesoderm, and mucosal fibroblasts originate from:

a- neural crest
b- endoderm
c- ectoderm
d- a& b
e- b&c

53- Aging in the oral mucosa may involve:

a- epithelium reduced in thickness and mitotic activity
b- collagen fibres thickened and dense
c- fibroblast reduced in number, activity and size
d- increased of cross- linking in elastin, lead to loss of mucosal resiliency
e- all of the above

54- A Submarginal incision is often preferred when crowns and bridges are present to preserve the blood supply to the labial marginal tissues, which comes from:

a- crestal bone
b- lingual papillae
c- periodontium
d- periosteum
e- a & b

55- Postnatal stem cells in the bone marrow with a distinct population can be found:

a- hematopoietic stem cells
b- mesenchymal stem cells
c- endodermal stem cells
d- ectodermal stem cells
e- a & b

56- The linear apposition rate for human lamellar bone is:

a- 1.5 µm/day
b- 2- 3µm/day
c- 5- 7µm/day
d- 10- 12µm/day
e- none of the above

57- Lamellar bone cannot form a scaffold, such as woven bone, but rather grows by apposition on a preformed solid base, such as:

a- woven bone
b- pre- existing or pristine bone
c- implant surface
d- all of the above
e- none of the above

58- After the healing period, the implant surface adjacent to cancellous bone is covered almost completely by:

a- 100- 200µm layer of woven bone
b- 100- 200µm layer of lamellar bone
c- 300- 400µm layer of lamellar bone
d- 200- 300µm mixture layer of lamellar bone and woven bone
e- none of the above

59- Cancellous bone contributes much less to the implant primary stability than does cortical bone because of the volume density of the bone matrix in cortical bone, which is approximately 80- 90%, while in cancellous bone it is only:

a- 30- 40%
b- 10- 20%
c- 20- 25%
d- 5- 10%
e- none of the above

60- Large, multinuclear, osteoclast cells originate from:

a- monocytes
b- preosteoblast
c- macrophage
d- mature osteocytes

61- The shape of an interdental papilla is determined by:

a- The embrasure contour
b- collagen composition
c- the anatomy of its adjacent teeth
d- the distance from the contact area to the crestal bone
e- a&c

62- Keratinized tissue will be minimal in the area of:

a- maxillary first premolar tooth
b- mandibular first premolar tooth
c- mandibular first molar tooth
d- mandibular incisor teeth
e- maxillary first molar tooth

63- From a histological point of view, the keratinized tissue around dental implants is preferred over non- keratinized tissue because keratinized tissue can provide:

a- more blood supply
b- short junctional epithelium
d- more hemidesmosomes attachment
e- none of the above

64- The inner layer of the periosteum, known as the cambial region, contains:
a- connective tissue
b- fibroblast cells
c- undifferentiated mesenchymal cells
d- nerve tissue
e- a&b

65- The orientation of collagen fibers in keratinized gingiva around the implant is:
a- parallel to the implant surface and inserted into the implant surface
b- perpendicular to the implant surface but not inserted into the implant surface
c- perpendicular to the implant surface but not inserted into the implant surface
d- angled to the implant surface and inserted into the implant surface
e- perpendicular to the implant surface and inserted into the implant surface

66- An implant placed immediately into a fresh extraction socket has different biological widths, ending with:
a- apical migration of the junctional epithelium
b- increase the width of the connective tissue
c- decrease the width of the connective tissue
d- decrease sulcus depth
e- c&d

67- In a single- stage implant procedure and after the abutment placement heals, the peri-implant soft tissue maturation and junctional epithelium apical migration will be completed in:
a- 2weeks
b- 12- 24 weeks
c- 4 weeks
d- 6- 8weeks
e- none of the above

68- from a histological point of view, thick, gingival soft tissue is characterized by:
a- high volume of extracellular matrix and collagen
b- decrease vascularity that compromise wound healing
c- increased vascularity, which enhance immune response
d- connective tissue has less potential of keratinized tissue formation
e- a&c

69- in natural teeth, the depth of the gingival sulci varies enormously depending on:
a- site of the tooth
b- presence or absence of adjacent teeth
c- diastemae
d- thickness of the connective tissue in biological width
e- passive eruption

CORRECT ANSWERS

Q1
a- collagen fibers non- attached to the dental implant and run parallel to the implant surface

Q2
c- junctional epithelium attachment 0.97mm, connective tissue attachment of 1.07mm or in sum approximately 2mm

Q3
b- thin plate more subjected to be fracture during extraction

Q4
a- hemidesmosomes

Q5
d- all of above

Q6
c- type IV collagen

Q7
b- fibroblast cells

Q8
e- all of above

Q9
a- tensile and slicing stresses

Q10
c- I collagen

Q11
d- all of above

Q12
a- bone cells, precursors cells, blood vessels

Q13
c- collagenous and noncollagenous bone matrix protein

Q14
a- mainly collagen that act as a scaffold

Q15
d- a&b

Q16
e- all of the above

Q17
a- rapidity of bone formation

Q18
c- hypermineralization and bone death

Q19
a- 1.5- 2mm

Q20
b- thick bone without trabeculation

Q21
a- lining the alveolus contain all forms of bone histology

Q22
e- all of above

Q23
e- all of above

Q24
c- 41- 57 days

Q25
e- A & b

Q26
e- a, d

Q27
a- woven bone

Q28
b- bleeding, hemostasis, clot formation, fibrinolysis, formation of a loose connective tissue, angiogenesis, osteoblast recruitment, osteoblasts proliferation & differentiation, collagen matrix formation, mineralization

Q29
d- all of the above

Q30
a- devoid of vascular supply

Q31
c- gold (gold surface chemically not stable)

Q32
b- 3 mm

Q33
a- 3 months

Q34
b- allow the formation of the biological space on the remaining platform of the implant

Q35
a- bone resorption has occurred because of damage to the bone at implant placement. This is caused by failure to cool the bone during the drilling operation.

Q36
c- 500µm

Q37
b- 100- 500 µm

Q38
d- mixture (woven and lamellar bone)

Q39
none of the above (gingival margin)

Q40-
c- placed below the crestl bone (countersink)

Q41
e- a & b

Q42
a- ample interdental bone availability

Q43
b- 60µm

Q44
e- all of the above

Q45
e- in dense hard bone

Q46
c- longer junctional epithelium

Q47
a- weak attachment of the junctional epithelium

Q48
b- less blood vessels

Q49
c- firm attachment of the mucosa to the perimysium by collagenous

Q50
27% of the time or less

Q51
a- fibroblast

Q52
a- neural crest

Q53
e- all of the above

Q54
e- a & b

Q55
e- a & b

Q56
a- 1- 1.5 µm/day

Q57
d- all of the above

Q58
b- 100- 200µm layer of lamellar bone

Q59
c- 20- 25%

Q60
a- monocytes

Q61
e- a&c

Q62
b- mandibular first premolar

Q63
d- more hemidesmosomes attachment

Q64
c- undifferentiated mesenchymal cells

Q65
c- perpendicular to the implant surface but not inserted into the implant surface

Q66
a- apical migration of the junctional epithelium

Q67
d- 6- 8weeks

Q68
e- a&c

Q69
d- thickness of the connective tissue in biological width

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Chapter 4

PHARMACOLOGY

1- Some antibiotics are bacteriostatic in nature but bactericidal in high doses, such as:
a- erythromycin
b- amoxycillin
c- tetracycline
d- metronidazole
e- cephalosporin

2- Metronidazole is contraindicated in patients who:
a- epileptic
b- diabetic
c- asthmatic
d- alcoholic
e- psoriatic

3- Tegretol is used for the treatment of epilepsy and prescribed for patients suffering from trigeminal neuralgia. Patient taking this drug should have regular blood tests to check for:
a- increase of platelet
b- decrease of neutrophil
c- decrease of erythrocyte
d- decrease of T- cells
e- decrease of platelet

4- Patients allergic to penicillin have a 10% chance of cross allergies with:
a- amoxycillin
b- tetracyclin
c- cephalosporin
d- erythromycin
e- quinolone

5- The local anesthesia of choice to treat pain for a longer period postoperatively is:
a- bupivacaine
b- mepivacaine
c- prilocain
d- articaine
e- trimicaine

6- A combination of antibiotics is crucial in the treatment of peri- implantitis, and the most commonly used drugs include:
a- metronidazole and amoxicillin
b- metronidazole and clindamycin
c- metronidazole and erythromycin
d- metronidazole and cephalosporins

7- The anti- anginal drug nitroglycerin has an onset of action within:
a- 5- 10 minutes
b- 10- 15 minutes
c- 20- 30 minutes
d- 1- 3 minutes
e- none of the above

8- Beta adrenergic blocking agents have drug interactions with:
a- epinephrine
b- lidocaine
c- NSAIDs
d- all of the above

9- For better control of peri- and postoperative bleeding in patients with severe hemophilia:
a- post- operatively tranexamic acid+ pre- operative start coagulation factor+ antibiotic (augmentin)
b- preoperative start and continue post- operatively tranexamic acid+ pre- operative start coagulation factor+ combined antibiotic (metronidazole + augmentin)
c- preoperative start and continue post- operatively tranexamic acid+ pre- operative start coagulation factor
d- pre- operative start coagulation factor+ combined antibiotic (metronidazole + augmentin)

10- Erythromycin should not prescribed when the patient is taking:
a- theophylline
b- terfenadine
c- carbamazepine
d- triazolam
e- all of the above

11- Ibuprofen should not prescribed when the patient is taking:
a- oral anticoagulant
b- lithium
c- astemizole
d- amoxicycilline
e- a&b

12- Naproxen should not prescribed when the patient is taking:
a- tetracycline
b- Ca channel blocker
c- Benzodiazepines
d- antihistamine
e- none of the above

13- Epinephrine should not prescribed when the patient is taking:
a- tricyclic antidepressants
b- monoamine oxidase inhibitors
c- anticoagulant
d- angiotensin inhibitor
e- a&b

14- The following drugs should be not be prescribed for patients who consume alcohol:
a- metranidazole
b- benzodiazepines
c- opiod analgesics
d- all of the above

15- When the patient is prescribed tetracycline, he or she should avoid food products that cause drug- food interactions, such as:
a- milk and milk product
b- iron
c- high protein food
d- fruit
e- a&b

16- When the patient is prescribed erythromycin, he or she should avoid food products that cause drug- food interaction, such as:
a- fruit and fruit juices
b- tomatoes
c- pyridoxin
d- antacids
e- a&b

17- When the patient is prescribed digoxin, he or she should avoid food products that cause drug- food interactions, such as:

a- chocolate
b- spinach
c- cereal grains
d- nuts
e- all of the above

18- When the patient is prescribed calcium channel blockers, he or she should avoid food products that cause drug- food interactions, such as:

a- grape fruit
b- milk
c- beans
d- coffee
e- all of the above

19- When the patient is prescribed quinolones, he or she should avoid food products that cause drug- food interactions, such as:

a- nuts
b- caffeine
c- antacids
d- egg
e- all of the above

20- Many pharmaceutical drugs can alter the sense of taste, including:

a- Antidepressants
b- diuretics
c- muscle relaxant
d- antidiabetics
e- all of the above

21- Many pharmaceutical drugs can cause dry mouth, including:

a- carbamazepine (anticonvulsant)
b- loratidine (antihistamine)
c- captopril (antihypertensive)
d- ibuprofen (NSAIDs)
e- all of the above

22- When a patient is taking zidovudine (AZT), the following antibiotic should not prescribed because it causes a drug interaction:

a- clarithromycin
b- trimethoprim
c- tetracycline
d- penicillin G
e- a&b

23- Verapamil is a calcium channel blocker drug with oral side effects:
a- dry mouth
b- gingival hyperplasia
c- oral ecchymosis
d- mouth ulcers
e- a&b

24- Tramadol hydrochloride is a centrally acting analgesia. All of the following are true about this drug except:
a- cause vertigo
b- cause drug interaction with codeine
c- the dosage should not exceed 400mg/day
d- cause drug dependence
e- cause stomatitis

25- Tiludronate disodium is used to treat Paget's disease. All of the following are true about this drug except:
a- inhibit the activity of osteoclast
b- cause dry mouth
c- interfere with bone mineralization
d- hypertension
e- interact with aspirin and indomethacin

26- Tetracycline has many side effects, including all of the following except:
a- increase yellow- brown discoloration of the teeth
b- cause softening of teeth and bone
c- interact with antacids
d- cause canker ulcer
e- cause photosensitivity

27- Quinidine sulfate is an antiarrhythmic drug, and patient on chronic drug therapy may suffer from:
a- orthostatic hypotension
b- blood dyscrasias
c- bleeding
d- poor wound healing
e- all of the above

28- Phenytoin is an anticonvulsant and antiarrhythmic drug that has drug interactions with:
a- benzodiazepines
b- doxycycline
c- metrnidazole
d- corticosteriod
e- all of the above

29- Phenytoin is an anticonvulsant and antiarrhythmic drug with oral side effects:
a- gingival hyperplasia
b- loss of test
c- stomatities
d- tongue enlargement
e- a&b

30- Omeprazole suppresses gastric acid secretion. All of the following are true about this drug except:
a- cause mucosal atrophy of the tongue
b- cause gingival hyperplasia
c- inter act with diazepam
d- when used with clarithromycin will cause tongue discoloration
e- cause candidiasis

31- Minoxidil is an antihypertensive drug that will cause:
a- blood dyscrasias
b- drug interaction with NSAIDS
c- stomatitis
d- orthostatic hypotension
e- a&b

32- Metronidazole is an antibiotic with the following adverse effect:
a- dry mouth
b- metallic test
c- furry tongue
d- stomatitis (due to overgrowth of candida)
e- all of the above

33- Methyldopa is an antihypertensive drug. All of the following are true about this drug except:
a- contraindicated in impaired renal function
b- cause drug interaction with NSAIDs
c- cause lichenoid drug reaction
d- cause “black tongue”
e- cause sialoadenitis

34- Epinephrine is an adrenergic drug and sympathomimetic drug. All of the following are true about this drug except:
a- in the area of the nose, ear and fingers should be administrated with small quantities
b- cross the placenta and blood brain barrier
c- use in the treatment anaphylactic shock and drug induce allergic reaction
d- stimulate alpha, beta- 1 and beta- 2 receptors
e- prolong the action of local anaesthetic

35- Doxycycline is in the tetracycline group of drugs. All of the following are true about this drug except:
a- slowly absorbed
b- contraindicated in pregnant and in children less than 6 years old
c- cause drug interaction with the anticoagulants
d- use for the treatment of syphilis and gonorrhea
e- used for the treatment of necrotizing ulcerative gingivostomatitis

36- Diabetic patients being treated with insulin can have drug interactions with:
a- epinephrine (↓effect of insulin)
b- corticosteriod (↓effect of insulin)
c- NSAIDs
d- anticoagulant
e- a&b

37- Cephalosporin has drug interactions with:
a- antidepressant tricyclic
b- antacids
c- bacteriostatic agents (tetracycline, erythromycin)
d- diazepam
e- a&b

38- Aspirin is an anti- inflammatory drug that can cause all of the following except:
a- anti- diabetic
b- peptic ulcer (stomach and duodenum ulcer)
c- increase thyroid hormone level
d- ↓the effect of coumarin- type drugs
e- Reye's syndrome (fatty degeneration in liver and kidney)

39- When antibiotics are used in combination, they may enhance or synergize one another. This can occur when we combine:
a- bactericidal and bactericidal
b- bactericidal and bacteriostatic
c- broad spectrum and narrow spectrum antibiotic
d- broad spectrum and broad spectrum antibiotic
e- narrow spectrum and narrow spectrum antibiotic

40- Benzodiazepine can be used for all of the following except:
a- anti anxiety
b- sedative and hypnotic
c- analgesia
d- anticonvulsant
e- muscle relaxant

41- Antihistamine drugs, such as terfenadine and astemizole, may cause cardiac arrhythmia if they interact with:
a- erythromycin
b- imidazole
c- tegretol
d- tricyclic antidepressant
e- a&b

42- The truth about chlorhexidine is:
a- causes changes in bacterial cell wall permeability
b- mainly effective against Gram- positive bacteria
c- adheres to tooth enamel, pellicle and plaque
d- can decrease the bacterial account to 10%
e- all of the above

43- The maximum safe dosage for 2% lignocaine with adrenaline for adult patients is:
a- 18 ml- 8 cartridges of 2.2ml
b- 12.5 ml- 5- 6 cartridges of 2.2ml
c- 9.5 ml- 4 cartridges of 2.2 ml
d- 22 ml- 10 cartridges of 2.2ml

44- Bisphosphonates inhibit bone resorption or destruction by:
a- enhance collagen cross reacting
b- activate bone formation through the activation of osteopontien protein
c- increase bone density by increasing the secretion of the osteopontien protein
d- inhibiting recruitment and promoting apoptosis of osteoclasts
e- all of the above

45- Bisphosphonates are used to treat:
a- paget's disease
b- osteoporosis
c- fibrous dysplasia
d- multiple myeloma
e- all of the above

46- For minor peripheral nerve trauma or pressure that may be associated with early paresthesia, the pharmacological therapy is:
a- dexamethason 2mg post- operative for one week
b- ibuprofen (600mg to 800 mg) +Vitamins B complex
c- decadron 4mg IV for 3 days
d- tegretol (200 mg) +Vitamins B complex
e- none of the above

47- For intra- operative visible nerve compression or trauma, the best pharmaceutical remedy is:

a- application of 4ml IV form of decadron directly on the nerve + oral dexamethasone post- operatively for 6 days (4mg for first 3 days, 2mg for 3 days)
b- tegretol (200 mg) +Vitamins B complex +Ibuprofen 800 mg
c- 4ml of decadron given IM or IV during surgery + oral dexamethasone post-operatively for 6 days (4mg)
d- 4ml of decadron given IV or IM during surgery + 4ml IV or IM of decadron post-operatively for 3 days
e- 4ml of decadron given IM or IV during surgery + Vitamins B complex +Ibuprofen 800 mg

48- Bone morphogenetic protein (BMP) is contraindicated for which of the following patients:

a- active malignancy
b- pregnant women
c- active infection at the surgical site
d- skeletally immature
e- all of the above

49- The following are all common side effects of bone morphogenetic protein (BMP) except:

a- facial edema
b- delay soft tissue healing
c- oral erythema
d- pain
e- rhinitis (when applied in maxillary sinus)

CORRECT ANSWERS

Q1
a- erythromycin

Q2
d- alcoholic

Q3
b- decrease of neutrophil

Q4
c- cephalosporin

Q5
a- bupivacaine

Q6
a- metronidazole and amoxicillin

Q7
d- 1- 3 minutes

Q8
d- all of the above

Q9
b- preoperative start and continue post- operatively tranexamic acid+ pre- operative start coagulation factor+ combined antibiotic (metronidazole + augmentin)

Q10
e- all of the above

Q11
e- a&b

Q12
e- none of the above

Q13
e- a&b

Q14
d- all of the above

Q15
e- a&b

Q16
e- a&b

Q17
e- all of the above

Q18
a- grape fruit

Q19
c- antacids

Q20
e- all of the above

Q21
e- all of the above

Q22
e- a&b

Q23
e- a&b

Q24
b- cause drug interaction with codeine

Q25
c- interfere with bone mineralization

Q26
d- cause canker ulcer

Q27
e- all of the above

Q28
e- all of the above

Q29
e- a&b

Q30
b- cause gingival hyperplasia

Q31
e- a&b

Q32
e- all of the above

Q33
a- contraindicated in impaired renal function

Q34
b- cross the placenta and blood brain barrier (cross only placenta)

Q35
b- contraindicated in pregnant and in children less than 6 years old (less than 8 years old)

Q36
e- a&b

Q37
c- bacteriostatic agents (tetracycline, erythromycin) (↓effect of cephalosporin)

Q38
d- ↓the effect of coumarin- type drugs

Q39
a- bactericidal and bactericidal

Q40
c- analgesia

Q41
e- a&b

Q42
e- all of the above

Q43
a- 18 ml- 8 cartridges of 2.2ml

Q44
d- inhibiting recruitment and promoting apoptosis of osteoclasts

Q45
d- all of the above

Q46
b- ibuprofen (600mg to 800 mg) +Vitamins B complex

Q47
a- application of 4ml IV form of decadron directly on the nerve + oral dexamethasone post- operatively for 6 days (4mg for first 3 days, 2mg for 3 days)

Q48
e- all of the above

Q49
b- delay soft tissue healing

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Chapter 5

BIOLOGY

1- PRP offers many advantages:

a- decreases the frequency of intraoperative and postoperative bleeding at the recipient sites

b- aids in the initial stability of the grafted tissue at the recipient sites as a result of its cohesive and adhesive nature

c- may promote rapid vascularization of the healing tissue by delivering growth factors

d- it induces soft- and hard- tissue regeneration.

e - all of above

2- Completely intact bony walls sockets will regenerate bone with almost any resorbable graft material. In cases of labial plate thickness, the material should be:

a- 1.5mm and above

b - 1mm and above

c- 2mm and above

d- 0.5 and above

e- minimum 2.5mm

3- Bone resorption is not a direct process, which means:

a- bone matrix attack before hydroxyapatite crystal

b- osteoclast get signals from the macrophage

c- osteoclast activated from the osteoblast

d- always there is external stimulation to start the resorption process

e- all of the above

4- A patient experiencing pain from the dental implant during mastication indicates that:

a- implant failure

b- implant placed adjacent to the nerve tissue

c- crestal bone loss

d- peri- implantities

e- a&c

5- For optimum healing during flap closure, the following tissues should be sutured:
a- periosteal tissue
b- epithelial tissue
c- connective fibrous tissue
d- none of the above
e- all of the above

6- Bone heating up to _____ for 1 minute is sufficient to impair bone formation:
a- 32˚C
b- 37˚C
c- 44˚C
d- 47˚C
e- none of the above

7- More than 4 abutment dis/reconnections will lead to:
a- increase vertical periimplant bone resorption
b- microgap between the implant and the abutment
c- wear of abutment screw
d- increase stress around the implant
e- a&c

8- In a patient suffering from squamous carcinoma in the lateral surface of the tongue who needs an implant in a partially edentulous area of the left maxilla, the optimal time to place the implant is:
a- before radiotherapy
b- after radiotherapy ended
c- simultaneously during ablative tumour surgery
d- a & c
e- none of the above

9- Radiation dosage during radiotherapy of head and neck cancers is crucial when the patient will be undergoing dental implant treatment. There will be impaired bone healing and implant osseointegration when the dosage exceeds:
a- 40 Gy
b- 50 Gy
c- 30 Gy
d- 20 Gy
e- c&d

10- To decrease the rate of implant failure, the required time interval between radiotherapy and implant placement should be longer than:

a- 4 months
b- 6 months
c- 24 months
d- 3 months
e- none of the above

11- Bone remodeling characterizes the last stage of osseointegration but continues for the rest of the life of the implant. This process has sequence stages for completion:

a- vascular loop formation with perivascular osteoprogenitor cells, resorption by osteoclasts (cutting cone), deposit concentric layers of lamellar bone by osteoblast
b- deposit concentric layers of lamellar bone by osteoblast, vascular loop formation with perivascular osteoprogenitor cells, resorption by osteoclasts (cutting cone)
c- resorption by osteoclasts (cutting cone), deposit concentric layers of lamellar bone by osteoblast, vascular loop formation with perivascular osteoprogenitor cells
d- resorption by osteoclasts (cutting cone), vascular loop formation with perivascular osteoprogenitor cells, deposit concentric layers of lamellar bone by osteoblast

12- Osteogenesis can be defined as:

a- Process by which viable osteoblasts and precursor cells establish regions of bone formation
b- Material surfaces act as scaffold for vascular ingrowth, cellular attachment, and osteogenesis
c- Process of transformation of recruited precursor cells into osteoblastic cells
d- Directing bone formation at local osseous sites using membrane barrier techniques

13- Osteoconduction can be defined as:

a- Process by which viable osteoblasts and precursor cells establish regions of bone formation
b- Material surfaces act as scaffold for vascular ingrowth, cellular attachment, and osteogenesis
c- Process of transformation of recruited precursor cells into osteoblastic cells
d- Directing bone formation at local osseous sites using membrane barrier techniques
e- none of the above

14- Osteoinduction can be defined as:

a- Process by which viable osteoblasts and precursor cells establish regions of bone formation
b- Material surfaces act as scaffold for vascular ingrowth, cellular attachment, and osteogenesis
c- Process of transformation of recruited precursor cells into osteoblastic cells
d- Directing bone formation at local osseous sites using membrane barrier techniques

15- Osteopromotion can be defined as:
a- directing bone formation at local osseous sites using membrane barrier techniques
b- material surfaces act as scaffold for vascular ingrowth, cellular attachment, and osteogenesis
c- process of transformation of recruited precursor cells into osteoblastic cells
d- process by which viable osteoblasts and precursor cells establish regions of bone formation

16- Collagen I is one of the matrix proteins of bone with a function of:
a- structural scaffold
b- directs mineralization
c- cell attachment
d- all of above

17- Fibronectin is one of the matrix proteins of bone with a function of:
a- structural scaffold
b- cell attachment and signalling
c- directs mineralization
d- hydroxyapatite binding

18- Osteonectin is one of the matrix proteins of bone with a function of:
a- limits cell spreading
b- binds Ca++ and hydroxyapatite
c- directs mineralization
d- a & b

19- Osteopontin is one of the matrix proteins of bone with a function of:
a- directs mineralization
b- hydroxyapatite binding
c- regulation of cell function
d- biologic control of bone turnover
e- b&c

20- Bone sialoprotein is one of the matrix proteins of bone with a function of:
a- regulation of cell function
b- binds collagen
c- directs mineralization
d- structural scaffold
e- a&b

21- Osteocalcin is one of the matrix proteins of bone with a function of:
a- biologic control of bone turnover
b- unknown
c- structural scaffold
d- cell attachment
e- a&d

22- Platelet- derived growth factor is one growth factor in a bone matrix that comes from and has functions of:

a- platelets/serum (osteoblast) and act as regulates osteogenesis
b- platelets/serum (osteoblast) and act as mitogenic, angiogenic
c- platelets/serum (osteoblast) and act as mitogenic
d- platelets/serum (osteoblast) and act as osteoinductive

23- Insulin- like growth factor is one growth factor in a bone matrix that comes from and has functions of:

a- platelets/serum (osteoblast) and act as mitogenic
b- serum, osteoblast or bone matrix and act as mitogenic
c- endothelial cells/bone matrix and act as mitogenic, angiogenic
d- osteoblast or bone matrix and act as Regulates osteogenesis

24- Fibroblastic growth factor is one growth factor in a bone matrix that comes from and has functions of:

a- platelets/serum (osteoblast) and act as mitogenic
b- endothelial cells/bone matrix and act as mitogenic, angiogenic
c- osteoblast or bone matrix and act as regulates osteogenesis
d- osteoblast or bone matrix and act as osteoinductive

25- Transforming growth factor beta is one growth factor in a bone matrix that comes from and has functions of:

a- platelets/serum (osteoblast) and act as mitogenic
b- osteoblast or bone matrix and act as osteoinductive
c- endothelial cells/bone matrix and act as mitogenic, angiogenic
d- osteoblast or bone matrix and act as regulates osteogenesis

26- Bone morphogenetic protein is one growth factor in a bone matrix that comes from and has functions of:

a- osteoblast or bone matrix and act as osteoinductive, regulates osteogenesis
b- platelets/serum (osteoblast) and act as mitogenic
c- endothelial cells/bone matrix and act as mitogenic, angiogenic
d- osteoblast or bone matrix and act as regulates osteogenesis

27- Implant surfaces are considered:

a- osteogenic surface
b- alloplastic surface
c- osteoinductive surface
d- osteopromotion surface
e- none of the above

28- All wounds heal using a combination of 3 mechanisms:
a- contraction, epithelisation and connective tissue formation
b- vascularisation, epithelisation and connective tissue formation
c- epithelisation, vascularisation and connective tissue formation
d- vascularisation, stromal tissue formation and connective tissue formation

29- All wounds heal in 4 stages, including:
a- haemostasis, inflammation, scaring and remodelling
b- haemostasis, epithelisation, proliferation and remodelling
c- bleeding, haemostasis, epithelisation and remodelling
d- haemostasis, inflammation, proliferation and remodelling

30- Dynamic excessive loads perpendicular to the implant axis have been shown to cause _____ bone loss around the marginal part of the implant:
a- horizontal
b- Vertical
c- crater- like
d- all of the above

31- Cytokines are soluble polypeptides that mediate and regulate the immune system and can also enhance bone resorption:
a- interleukin- 1 (IL- 1)
b- tumour necrosis factor- a (TNFa)
c- Prostaglandin E2 (PGE2)
d- interleukin- 6 (IL- 6)
e- a & b

32- Commercially pure (C.P.) titanium is usually recognized as the gold standard. C.P. titanium's unique biocompatibility is attributed to:
a- stable surface
b- passive oxide surface
c- corrosion resistance
d- all of the above

33- Regarding the surface topography of implants, three categories of roughness can be found:
a-minimally rough Sa 0.5–1mm, moderately rough Sa 1–2mm and rough Sa >2mm
b-minimally rough Sa 0.5–1mm, moderately rough Sa 1–2mm and rough Sa >3mm
c-minimally rough Sa 0.5–1mm, moderately rough Sa 1–3mm and rough Sa >4mm
d- minimally rough Sa 1–2mm, moderately rough Sa 2–2.5mm and rough Sa >3mm

34- Chemically and physically modified implant surfaces have different roughness, but acid etched, sandblasted and anodized surfaces can be classified under:

a- minimally rough
b- highly rough
c- rough
d- none of the above

35- Modified SLA (sandblasted, large grit, acid- etched) implant surface that are immersed in isotonic solution and N_2 protection will produce chemically active and clean surfaces due to:

a- osteoblast chemotactic
b- reduce hydrocarbon contamination
c- micro rough surface
d- macro rough surface
e- a& c

36- Hydrocarbon deposition on an implant surface will lead to:

a- increrase the thickness of TiO layer on the implant
b- increase of the chemotactic activity
c- attenuates osteoblast activity (ALP activity reduced, calcium mineralization reduced)
d- enhancing the blood clot attachment
e- a&b

37- The early marker protein of osteogenic differentiation, which is also found in high-level osteoblast cells that mineralize their matrix, is:

a- osteopontin
b- osteonectin
c- alkaline phosphatase
d- calcitonen
e- none of the above

38- Hydroxyapatite (HA) activity of the coated implant is considered:

a- osteoconductive
b- osteoinductive
c- osteogenesis
d- none of the above

39- Micropetrosis is a bone change that occurs at approximately 80 years of age and is referred to as:

a-avascular matrix with empty lacunae
b-harder and more brittle bone
c-hypermineralized bone continues to accumulate minerals
d- all of the above

40- regarding the force exerted to the bone, the bone can withstand better the ———— force but poor for _____ force

a- tensile, shear
b- compressive, shear
c- shear compressive
d- tensile compressive
e- none of the above

41- According to WOLFF'S law:

a- normal bone will adapt for any changes in the form and function
b- internal architecture or cancellous bone undergo adaptive changes (change in the orientation of the trabecular bone)
c- external structure or cortical bone adapt to stress by increase in the density
d- disuse or bone stress reduction will cause in the bone mass loss
e- all of the above

42- The main biological difference between implants and natural teeth is:

a- periodontal ligament
b- vascular blood supply
c- connective tissue
d- junctional epithelium
e- all of the above

43- After tooth extraction and obliteration of the periodontal ligament, all of the following are true except:

a- sensation
b- nutrition
c- trabicular bone
d- support
e- remodelling

44- For optimal soft tissue integration, implant therapy should be:

a- prosthetically driven
b- biologically driven
c- surgically driven
d- mechanically driven
e- anatomically driven

45- Regarding the thick gingival biotype, all of the following are true except:

a- respond to periodontal insult by recession
b- constitute approximately 85% of patients
c- characterized by thick band of keratinized gingiva
d- flat gingival appearance and lack scalloping
e- thickness >1.5mm

46- Regarding the thin gingival biotype, all of the following are false except:
a- ample keratinized gingiva
b- respond to periodontal insult by pocket
c- shorter distance between the crown contact area and crestal bone
d- found in triangular shape of teeth
e- constitute approximately 35% of patients

47- Alcohol has an adverse effect on mucosa and wound healing as it causes:
a- chemical burn
b- epithelial desquamative
c- epithelial fragility
d- wound contraction
e- all of the above

48- Cigarette and pipe smoking have adverse effects on wound healing and integrity. All of the following are true except:
a- decrease tissue perfusion and oxygen delivery
b- create intraoral positive pressure causing a deleterious effect on wound healing
c- cause delayed wound healing and peri- implant infection
d- impaired gingival bleeding
e- increase oral cavity temperature

49- The purpose of platform switching is to allow the formation of the biological space on the remaining platform of the implant, thereby decreasing crestal bone resorption. Platform switching has no effect when the implant is placed in:
a- angulation
b- subcretal
c- thin biotype
d- supracrestal
e- c&d

50- Stable gingival margins are associated with all of the following except:
a- thick gingiva rather than thin gingiva
d- crown was formed with a convexity subgingivaly
c- adequate bone on the labial surface of the implant
d- good bone levels on the adjacent teeth
e- over correction of the gingival margin at the time of placement of the final restoration

CORRECT ANSWERS

Q1
e - all of above

Q2
a- 1.5mm and above

Q3
c- osteoclast activated from the osteoblast

Q4
b- implant placed adjacent to the nerve tissue

Q5
a- periosteal tissue

Q6
d- 47˚C

Q7
a- increase vertical periimplant bone resorption

Q8
d- a & c

Q9
b- 50 Gy

Q10
c- 24 months

Q11
d- resorption by osteoclasts (cutting cone), vascular loop formation with perivascular osteoprogenitor cells, deposit concentric layers of lamellar bone by osteoblast

Q12
a- Process by which viable osteoblasts and precursor cells establish regions of bone formation

Q13
b- Material surfaces act as scaffold for vascular ingrowth, cellular attachment, and osteogenesis

Q14
c- Process of transformation of recruited precursor cells into osteoblastic cells

Q15
a- Directing bone formation at local osseous sites using membrane barrier techniques

Q16
d- All of above
17
b- Cell attachment and signalling

Q18
d- a & b

Q19
b- Hydroxyapatite binding

Q20
a- Regulation of cell function

Q21
a- Biologic control of bone turnover

Q22
c- Platelets/serum (osteoblast) and act as mitogenic

Q23
b- Serum, osteoblast or bone matrix and act as mitogenic

Q24
b- Endothelial cells/bone matrix and act as mitogenic, angiogenic

Q25
d- Osteoblast or bone matrix and act as regulates osteogenesis

Q26
a- Osteoblast or bone matrix and act as osteoinductive, regulates osteogenesis

Q27
b- alloplastic surface

Q28
a- contraction, epithelisation and connective tissue formation

Q29
d- haemostasis, inflammation, proliferation and remodelling

Q30
c- crater- like

Q31
d- a & b

Q32
d- all of the above

Q33
a- minimally rough Sa 0.5–1mm, moderately rough Sa 1–2mm and rough Sa >2mm

Q34
d- none of the above (moderately rough)

Q35
b- reduce hydrocarbon contamination

Q36
c- attenuates osteoblast activity (ALP activity reduced, calcium mineralization reduced)

Q37
c- alkaline phosphatase

Q38
a- osteoconductive

Q39
d- all of the above

Q40
b- withstand better the compressive force but poor for shear forces

Q41
e- all of the above

Q42
e- all of the above

Q43
c- trabicular bone

Q44
b- biologically driven

Q45
a- respond to periodontal insult by recession

Q46
d- found in triangular shape of teeth

Q47
e- all of the above

Q48
b- create intraoral positive pressure causing a deleterious effect on wound healing

Q49
e- c&d

Q50
d- crown was formed with a convexity subgingivaly

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Chapter 6

RADIOLOGY

1- The initial radiograph of choice in dental implantology treatment is:
a- Computerised tomography
b- periapaical radiograph
c- cone beam CT
d- orthopantamogram
e- none of the above

2- The lowest radiation dosage a patient can be exposed to is:
a- full mouth series of periapical radiographs
b- cone beam CT
c- orthopantamogram
d- Computerised tomography
e- a&c

3- The radiograph of choice for detailing of the morphology of both jaws close to the midline is:
a- lateral cephalogram
b- periapaical radiograph
c- occlusal radiograph
d- orthopantamogram
e- a& c

4- For postimplant placement peri- apical radiographs, the correct angulation is easy to verify when:
a- the thread profile is clearly seen
b- no overlapping with adjacent teeth
c- no radiolucency line between the bone and the implant thread
d- no elongation
e- all of the above

5- The difficulty with the peri- apical radiograph technique for implant registration is:
a- periapical region does not show
b- parallelism
c- elongation
d- cone cut
e- a & b

6- Peri- apical radiolucency in dental implants indicates:
a- infection
b- overheating
c- overdrilling
d- thining or perforation of the cortical plate
e- all of the above

7- The magnification of the orthopantomogram is not constant in one radiograph but varies from one anatomical site to another. This is due to:
a- position of the head of the patient
b- variable distance between the object and the film and the distance between the object and the source
c- angulation of the object
d- all of the above

8- To avoid burnout of the thin alveolar crestal bone during the assessment of periodontal status, the operator should:
a- underexposed the film
b- the film should be over exposed
c- decreasing the developing time
d- increase the exposure dose
e- a & c

9- In panoramic radiographs, the normal anatomy shadow can be divided into real and ghost shadows. The ghost shadow is:
a- orbital rim
b- nasal septum and chonchae
c- cervical vertebrae
d- zygomatic arch
e- floor of the antrum

10- Regarding the ideal quality criteria for the panoramic radiograph, all of the following are true except:
a- the whole of the mandible should be included
b- magnification in the vertical and horizontal planes should be equal
c- the right and left molar teeth should be equal in their mesiodistal dimension
d- the image of the hard palate should appear with the level of apices of the upper teeth
e- no evidence of artefactual shadows due to dentures

11- During periodontal tissue assessment, vertical bitewings are indicated when:
a- periodontal pocketing 6 mm and more
b- periodontal pocketing 8 mm and more
c- the apical region need to be shown
d- long root need to be evaluated
e- when teeth tilted lingualy

12- The main radiographic features of chronic osteomyelitis are:
a- moth- eaten area
b- sclerosis of the surrounding bone
c- radiopaque sequestra
d- involucrum
e- all of the above

13- The main radiographic features of osteoradionecrosis include all of the following except:
a- moth- eaten radiolucency
b- radiopaque sequestra
c- subperiosteal involucrum bone formation
d- undefined margin between necrotic and normal bone
e- c&d

14- The main radiographic features of bisphosphonate- related osteonecrosis are:
a- diffuse sclerosis of the bone
b- thickening of the lamina dura
c- moth- eaten
d- radiopaque sequestra
e- a&b

15- The main radiographic features of hyperthyroidism are:
a- irregularity of the cortical bone
b- teeth root resorption
c- loss of lamina dura
d- cotton wool bone appearance
e- a&b

16- The radiographic features of late- stage Paget's disease are:
a- loss of lamina dura
b- alveolar bone enlarge and distorted
c- cotton wool patches appearance
d- bone formation appear inside the sinuses
e- all of the above

17- Regarding maxillary sinuses, the best radiograph to show the floor of the sinus is:
a- periapical
b- panoramic
c- occipitomental
d- antero- postrior skull view
e- a&b

18- Regarding maxillary sinuses, the best radiograph to show the lateral wall and roof of the sinus is:
a- periapical
b- panoramic
c- occipitomental (0^o OM)
d- antero- postrior skull view
e- a&b

19- Bone saucerization around the dental implant shoulder has two dimensions (horizontal and vertical). Usually radiographs demonstrate:
a- vertical aspect, but horizontal shifted radiograph can demonstrate the horizontal aspect as well
b- horizontal aspect
c- vertical aspect
d- horizantal and vertical aspect
e- none of the above

20- Cone beam computerized tomography (CBCT) provides three- dimensional images with high resolution relative to two- dimensional image for dental implant usage. The level of detail available with CBCT may be needed for:
a- 200- 300µm
b- 300- 400 µm
c- 400- 500 µm
d- 50- 100 µm
e- 600- 800 µm

21- The advantage of using the long cone beam technique in peri- apical radiographs is:
a- decrease the exposure time
b- decrease heat generation
c- minimize cone cut error
d- decrease magnification and angulation error
e- all of the above

22- Which of the following views can be achieved with cone beam computerized tomography (CBCT):
a- periapical radiograph
b- orthopantamogram
c- cephalogram
d- tomography
e- all of the above

23- Voxel is related to:
a- surface area of the cell
b- volume of the cell in three dimensional image
c- radiation intensity
d- field of view
e- none of the above

24- Three- dimensional radiographs can be used in the fabrication of:
a- sterogram
b- prosthesis framework
c- surgical stent
d- diagnostic stent
e- all of the above

25- Peri- implant bone resorption will show as radiolucency. This radiographic changes when the bone density decreases
a- 40%
b- 10%
c- 20%
d- 5%
e- 30%

CORRECT ANSWERS

Q1
d- orthopantamogram

Q2
c- orthopantamogram

Q3
a- lateral cephalogram

Q4
a- the thread profile is clearly seen

Q5
e- a & b (implant placed below tooth apex, located beyond muscle attachment)

Q6
e- all of the above

Q7
d- all of the above

Q8
a- underexposed the film

Q9
c- cervical vertebrae

Q10
d- the image of the hard palate should appear with the level of apices of the upper teeth

Q11
a- periodontal pocketing 6 mm and more

Q12
e- all of the above

Q13
e- c&d

Q14
e- a&b

Q15
c- loss of lamina dura

Q16
e- all of the above

Q17
e- a&b

Q18
c- occipitomental (0^o OM)

Q19
b- horizontal aspect

Q20
a- 200- 300 µm

Q21
d- decrease magnification and angulation error

Q22
e- all of the above

Q23
b-volume of the cell in three dimensional image

Q24
e- all of the above

Q25
a- 40%

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Chapter 7

MISCELLANEOUS

1- The factor that can determine the alignment of teeth in a dental arch is:
a- arch shape
b- tooth size
c- eruption time
d- masticatory load
e- a&c

2- Trigeminal neuralgia manifestation is:
a- usually affecting maxillary and mandibular division nerve more than ophthalmic
b- more common in 5^{th} and 6^{th} decades of life
c- pain can be initiated by putting makeup or tooth brushing
d- treated pharmacologically with anticonvusants drugs
e- all of the above

3- A network of valveless veins allows the migration of septic thrombi from the sinus to the cavernous sinus. All of the following are true regarding the cavernous sinus thrombosis except:
a- periorbital edema due to venous congestion
b- exophthalmos
c- affects cranial nerve II
d- affects cranial nerve III
e- Ophthalmoplegia

4- Bell's palsy is unilateral facial paralysis from facial nerve damage. All of the following are true regarding Bell's palsy except:
a- during smiling the mouth draws to the affected side
b- patient cannot wink, close eyes on the affected side
c- food accumulate btween the teeth and the check in the affected side
d- hyperacusia
e- loss of taste in the anterior tongue

5- Xerostomia or dry mouth can be caused by all the following except:
a- some medication, like antihistamine, antihypertensive, antidepressant
b- diseases like, stress, Sjögren's syndrome and endocrine disorder
c- radiotherapy in head and neck area
d- citric juice consumption

6- Allergies and infections adjuvant to structural abnormalities will lead to the obstruction of the maxillary sinus ostia (opening), which can in turn lead to:
a- anoxia (decrease O_2 in sinus)
b- mucosal edema
c- mucosal fluid leakage
d- decrease mucociliary clearance
e- all of the above

7- When an emergency airway is needed, cricothyrotomy is performed by making an incision through:
a- cricothyroid muscle
b- cricothyroid membrane
c- cricothyroid cartilage
d- cricothyrpoid joint
e- none of the above

8- Attrition is the loss of tooth substance from wear due to:
a- bruxism (grinding and clenching)
b- lack of posterior support and occlusal collapse
c- citrus fruits
d- traumatic tooth brush
e- a&b

9- Hypoglycemia in diabetic patients during dental treatment can occur because of:
a- excess insulin
b- missing a meal
c- stress
d- changing insulin dose and regime
e- all of the above

10- Signs and symptoms of hypoglycemia include:
a- slow onset
b- dry skin
c- irritable behaviour
d- rapid breathing
e- c&d

11- The drug and dose of choice for unconscious hypoglycemic patients is:
a- 50 ml of 50% glucose IV
b- 1mg glucagon IM
c- 100 ml of 50% glucose IV
d- 10 mg glucagon IM
e- a & b

12- During an adrenal crisis for patient with long- term corticosteroid use, the drug of choice is:
a- 200mg hydrocortisone IV
b- 40mg prednisolone orally
c- dexamethasone 0.75mg IM
d- betamethasone 0.75mg IM
e- a&c

13- Status epilepticus in an epileptic patient means:
a- desire to sleep
b- rigid and extended body
c- jerking body movement
d- prolong or repeated fit
e- all of the above

14- Involucrum refers to:
a- occur in chronic osteomyelitis
b- new bone growth outside existing bone
c- stripping off of the periosteum
d- new bone growing from the periosteum
e- all of the above

15- According to the American College of Surgeons' wound classification, dental implant surgical wounds are under:
a- clean (infection rate <2%)
b- clean contaminated (infection rate 10- 15%)
c- contaminated (infection rate 20- 30%)
d- dirty/infected (infection rate 50%)

16- An INR of 1 indicates a healthy person. The acceptable INR for minor oral surgery for a patient taking anticoagulants is 2.5. A reading of 3.5 may still be acceptable when the patient is at high risk for stopping the anticoagulant drug, such as a patient suffering from:
a- history of cerebrovascular accident
b- myocardial infarction patient
c- proshetic heart valve
d- venous thrombosis
e- c&d

17- Which type of bacteria can inhibit osteoblast alkaline phosphatase activity and negatively affect bone formation?

a- Influenza
b- staphelo cuccus aureus
c- Prevotella intermedia(Pi)
d- strpteo cuccus mutans
e- actino bacter

18- Viral contamination could affect osteogenesis by initiating:

a- bone resorption
b- vascular injury
c- wound dehiscence
d- fibrous tissue
e- bleeding

19- A failing implant has an increase of periodontal pathogens that initiate pocketing, such as:

a- prevotella intermedia & Porphyromonas gingivalis,
b- streptococcus mutans
c- staphylococcus aureus
d- aggregatibacter actinomycetemcomitans
e- a&d

20- Factors that may affect the quantity and type of bacteria in the oral cavity are:

a- time
b- edentulous condition (complet vs partial)
c- pocket depth
d- implant neck surface
e- all of above

21- The main bacteria responsible for sinusitis infections is:

a- actino bacter
b- haemophilus influenza
c- streptococcus pneumonia
d- staphylococcus
e- b&c

22- Connective tissue destruction can be observed as early as 3 to 4 days after plaque accumulation. Cells that are mainly responsible for collagen fiber destruction include:

a- fibroblast
b- polymorphonuclear lymphocytes
c- neutrophil
d- macrophages
e- b& d

23- The C- terminal telopeptide (CTX) is used as a biomarker in the serum to measure the rate of:

a- calcium ion deposition in the bone
b- bone remodeling
c- Bone mineralization
d- alkaline phosphatase secretion
e- a&c

24- Serum levels of the C- terminal telopeptide (CTX) in healthy patients not taking bisphosphonates are usually above:

a- 100pg/ml
b- 200 pg/ml
c- 300 pg/ml
d- 150 pg/ml
e- 50 pg/ml

25- To improve the serum levels of the C- terminal telopeptide (CTX) for patient taking bisphosphonates who need bone surgery, a “drug holiday” is recommended. This means:

a- stop the drug for one year starting one month before the surgery
b- stop the drug 6 weeks before surgery and 6 weeks after
c- stop the drug 3 months before surgery and 3 months after
d- stop the drug 6 month before the surgery and continue after
e- decrease the drug dose into half

26- The international normalized ratio (INR) measures:

a- extrinsic pathway of coagulation
b- extrinsic pathway and common pathway of coagulation
c- intrinsic pathway of coagulation
d- intrinsic pathway and common pathway of coagulation
e- none of the above

27- All of the following are causes of crestal bone resorption around natural teeth except:

a- bruxeser patient
b- cervical caries
c- periodontal disease
d- fracture roots
e- maligned tooth

CORRECT ANSWERS

Q 1

d- masticatory load (masticatory load are within physiological range and act through the long axis of as many teeth in the arch as possible, royal college of surgeon)

Q2
e- all of the above

Q3
c- affects cranial nerve II (it is not the content of the cavernous sinus)

Q4
a- during smiling the mouth draws to the affected side (to the unaffected site)

Q5
d- citric juice consumption

Q6
e- all of the above

Q7
b- cricothyroid membrane

Q8
e- a&b

Q9
e- all of the above

Q10
e- c&d

Q11
e- a & b

Q12
a- 200mg hydrocortisone IV

Q13
d- prolong or repeated fit

Q14
e- all of the above

Q15
b- clean contaminated (infection rate 10- 15%)

Q16
e- c&d

Q17
c- Prevotella intermedia(Pi)

Q18
b- vascular injury

Q19
e- a&d

Q20
e- all of above

Q21
e- b&c

Q22
e- b& d

Q23
b- bone remodelling

Q24
c- 300 pg/ml

Q25
c- stop the drug 3 months before surgery and 3 months after

Q26
b- extrinsic pathway and common pathway of coagulation

Q27
a- bruxeser patient

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SECTION TWO: CLINICAL SCIENCE

Chapter 8

SURGICAL

1- The literature has shown that compared with conventional socket healing, post-extraction alveolar bone remodeling can be _____ by some alveolar ridge preservation procedures:

a- completely inhibited
b- significantly reduced, but not completely inhibited
c- significantly Increased
d- adversely affected
e- none of the above

2- Expansion techniques after tooth extraction lead to:

a- significant socket shrinkage
b- socket increase in volume
c- complete socket preservation
d- limit socket resorption
e- b&c

3- Postextraction bone volume changes occur mostly during the _____ months immediately after extraction, but it has been reported in the literature that remodeling continues for up to _____ months:

a- 1st month, 6 month
b- 2 month, 8 month
c- 6 month, 9 month
d- 3 month, 12 month
e- none of the above

4- After tooth extraction, alveolar bone resorption will be:

a- Not affected
b- Increased progressively towards the apical level
c- Same rate at the apical and coronal level
d- decreased progressively towards the apical level
e- none of the above

5- All of the following are relative contraindications for sinus floor elevation except:
a- sinus floor convolutions
b- sinus septum
c- tumor
d- transient mucosa swelling
e- narrow sinus

6- Plain cut gut is a resorbable suture material that needs _____ to resorb:
a- one week
b- 2 weeks
c- 4 weeks
d- 6 weeks
e- 8 weeks

7- Chromic cut gut is a resorbable suture material that needs _____ to resorb:
a- One week
b- 2 weeks
c- 4 weeks
d- 6 weeks
e- 8 weeks

8- Vicryl is a braded resorbable suture material that needs _____ to resorb:
a- One week
b- 2 weeks
c- 4 weeks
d- 6 weeks
e- 8 weeks

9- Nylon is a monofilament suture that is more hygienic and traumatic when used in dental implant surgery, but there are disadvantages to its use, including:
a- need skill to perform
b- need at least 5 knot to get secure knot
c- irritant to the patient
d- has memory (spring action)
e- all of above

10- Black silk is a braded suture material that is not highly recommended for use in dental implant procedures because:
a- low tensile strength
b- resorbable
c- need special skills
d- cause allergic reaction
e- none of the above

11- Polytetrafluroethylin (PTFE), or Teflon, is the most recommended suture material for use in dental implant procedures, but some operators avoid using it because:

a- flake
b- irritant to the patient
c- need long time to resorb
d- cost
e- none of the above

12- In cases of bone grafting and a GBR procedure, optimum flap closure is needed until the soft tissue is completely healed. The suture material of choice is:

a- black silk
b- Teflon
c- Vicryl
d- Chromic cut gut
e- Nylon

13- For successful implant placement, the proportion of residual BioOss material after socket preservation is:

a- 40%
b- 20%
c- 60%
d- 10%
e- 70%

14- After maxillary sinus membrane elevation, there will be membrane changes, such as:

a- membrane thinning
b- decrease blood supply
c- decrease in the ciliary and washing action
d- membrane thickening
e- c&d

15- Absolute contraindications for sinus floor elevation are maxillary sinus diseases (tumors) and:

a- smoker patient
b- destructive former sinus surgery *(like the Caldwell–Luc operation)*
c- active infection
d- narrow sinus
e- all of the above

16- Nontraumatic extraction followed by implant stabilization in the extraction socket is commonly achieved over:

a- the last 5 mm of the implant apical region
b- the last 3 mm of the implant apical region
c- the coronal half of the socket
d- apical half of the socket

17- The level of implant platform placement is:
a- prosthetically driven
b- bone driven
c- surgical driven
d- biological driven

18- The risk of placing a dental implant in HIV positive patient is from:
a- bleeding
b- infection
c- delay healing
d- all of the above

19- For flap suturing, tissue trauma may be reduced by selecting:
a- finer suture diameters
b- thicker suture diameters
c- surgical knot to make the knot
d- matress suture technique
e- c&d

20- The horizontal soft tissue incision in the posterior maxillary edentulous area should be slightly palatal, which will offer:
a- better view of the alveolar ridge
b- more keratinized gingival tissue
c- inclusion of palatine blood vessels in the wound healing process
d- all of the above

21- When the lingual artery is injured during implant placement in the lower anterior area, immediate management includes:
a- pulling the tongue outside patient mouth
b- finger pressure on the lingual side
c- clamp the artery and ligate it
d- put haemostatic agent on the lingual flap
e- b&d

22- During implant placement in the posterior maxillary area, the apex of the implant may engage the maxillary sinus floor. This will lead to:
a- decrease implant stability
b- over countersink
c- increase implant stability
d- infection
e- a&d

23- During implant placement in the posterior maxillary area, the implant may accidentally penetrate the maxillary sinus within 2 to 3 mm. The healing tissue formation around the implant could be either soft tissue formation or an infection around the apex of the implant with:

a- sinus membrane thickening
b- bone formation from bone edge and covering the implant apex
c- periostruim will grow and cover the apex
d- polyp tissue formation
e- c&d

24- When an implant is placed in the mandibular posterior area, the distance from the inferior alveolar nerve should be 2 mm because:

a- mandibular jaw angulation make the nerve nearer to the crest
b- the apex of the drill (1.5) not estimated in most implant system
c- anatomical variation
d- allow the implant to be placed with angulation
e- a&c

25- Socket stretching refers to:

a- expand the socket with expander
b- fructure the buccal plate after tooth extraction to widen the socket
c- make second hole adjacent to the primary hole drilling within 1- 2mm
d- place wide diameter implant than the socket preparation osteotomy
e- none of the above

26- The disadvantage of a tooth- supported surgical stent in a single anterior implant is:

a- not stable enough
b- no sufficient space for the drills
c- difficult to determine the drilling depth
d- obscure the adjacent anatomical teeth structures
e- b&c

27- During a single implant placement in upper anterior area, the implant apico- coronal placement should be:

a- 3mm from the ginigival margin
b- 4 from the cemento- enamel junction
c- 2mm from the cemento- enamel junction
d- 2mm from the gingival margin
e- a&c

28- The proper position of the implant during immediate placement in the upper anterior socket is:

a- palatally placed but labially angulated
b- palatelly placed but parallel to the labial wall
c- in the mid of the socket and parallel to palatal and labial walls
d- parallel and engaging the palatal wall
e- none of the above

29- When an implant will be placed in hard, dense bone, which implant should be chosen to avoid pressure necrosis:

a- wide diameter implant
b- aggressive implant design
c- regular diameter implant
d- none tapered implant (parallel wall)
e- c&d

30- After implant placement, the most significant drop in implant stability occurs after:

a- 6 weeks
b- 1 week
c- 3- 4 weeks
d- 2 weeks
e- none of the above

31- The flapless punch technique is recommended for regular- size implants when the minimum ridge width:

a- 7mm
b- 8 mm
c- 6 mm
d- 5 mm
e- none of the above

32- When the lateral widow approach is used for maxillary sinus elevation, the operator relies on a 3- mm perforation of the Schneiderian membrane. The best management approach in this situation is:

a- autogenous cortical plate should be placed before particulate bone graft
b- collagen membrane barrier place underneath the membrane
c- suturing should be done to close the opening with resorbable suture
d- stop the operation and postponed to another time until the membrane healed
e- none of the above

33- Ahigh incidence of Schneiderian membrane peroration with a lateral approach occurs during:

a- membrane elevation
b- lateral window drilling osteotomy
c- fracturing the lateral widow
d- collagen membrane placement
e- b&c

34- Simultaneous implant placement and sinus augmentation is not recommended when:

a- using xenograft as a graft material
b- regular size implant is used
c- bone height underneath the maxillary sinus is <5
d- soft bone
e- a&d

35- During a socket preservation procedure, the following should be considered:

a- no active infection
b- graft should be placed with layering
c- no condensation should be done to the graft material
d- no over grafting
e- all of the above

36- The treatment plan of choice for grossly decayed, unsolvable, upper central incisors with an optimal tissue condition is:

a- socket preservation with GBR procedure
b- the socket should be left for normal healing and delay implant placement
c- composite graft procedure needed
d- immediate implant placement with immediate crowning
e- none of the above

37- During a nonsubmerged procedure, there may be gingival overgrowth above the healing abutment during soft tissue healing. This can be treated with:

a- scalpel excision
b- laser excision
c- replace the healing abutment with longer one
d- replace the healing abutment with wider one
e- none of the above

38- Three weeks after submerged implant placement, you notice wound dehiscence and that part of the cover screw is exposed. What is the best management approach in this case?

a- no treatment need, leave it for spontaneous healing
b- GBR procedure needed
c- full exposure of the cover screw and healing abutment placed
d- resuturing and complete closure
e- none of the above

39- The main cause of cover screw exposure during the healing period is:
a- implant placed more buccally
b- crestal bone resorption
c- infection
d- thin gingival tissue
e- a&c

40- The most convenient and least traumatic scalpel that can be used in implant dentistry for narrow spaces is number:
a- 20
b- 15
c- 11
d- 12
e- none of the above

41- An osteotensor is:
a- result of the rapid accelerating phenomena (RAP)
b- bone expansion before implant placement
c- subperiosteal blade implant placement in atrophied mandible
d- bone formation underneath the periosteum
e- none of the above

42- Athorough investigation of the upper posterior edentulous area is needed to determine the bone volume availability before implant placement because:
a- difficult to determine the bone angulation in this area
b- thick gingival tissue can mask the bone volume
c- most of the time the soft tissue does not follow bone resorption
d- poor bone density can resorbed easily
e- b&c

43- One of the major problems in using internal irrigation during bone osteotomy preparation is:
a- obscure the surgical field view with irrigants before starting
b- the burs thrusted easily
c- difficult to control the amount of the irrigation
d- blockage of the irrigation holes with debris
e- none of the above

44- The implant should be submerged when:
a- poor primary implant stability
b- soft tissue grafting
c- bone grafting
d- esthetic purposes
e- all of the above

45- When collagen membrane is placed in the edentulous area adjacent to natural teeth, it should be away from the adjacent roots because:

a- cementum will enhance early membrane resorption
b- infection and contamination through the root surface
c- membrane mobility will occur
d- difficult to adapt the membrane on rounded surfaces
e- none of the above

46- The disadvantage of the punch flapless technique is:

a- kertinized tissue loss
b- blind technique
c- difficult to determine implant position in bone level implant
d- difficult to change drilling position or angulation
e- all of the above

47- The drawback of manual implant placement relative to motor placement is:

a- slow
b- contamination from the adjacent tissue
c- difficult to control implant placement angulation due to uncontrolled force
d- no irrigation during implant placement
e- none of the above

48- The operator may be unable to place the implant level with bone or countersink it because:

a- underdrilling of the implant socket
b- debris at the apical part of the socket, failed to wash out
c- crestl preparation not done for the tapered implant
d- bone taping not used in hard bone
e- all of the above

49- After the healing period, the best noninvasive method to verify secondary implant stability and osseointegration of the implant is:

a- resonance frequency analysis
b- reverse torque
c- periotest
d- implant percussion
e- all of the above

50- For a tissue- level implant with a smooth collar, it is always recommended to place the implant above the bone because:

a- to get proper biological width
b- to place implant –abutment junction away from the crestal bone
c- smooth surfaces will exert shear forces to the bone that enhance crestal bone resorption
d- to allow more soft tissue attachment to the smooth collar
e- a&b

51- To increase the primary stability of an implant placed in soft bone, which of the following should be considered:

a- undersize drilling
b- wide diameter implant
c- subcrestal placement implant
d- deep threaded implant, with the thread until the top
e- all of the above

52- To gain ridge width in the lower posterior area with minimum vertical bone resorption, all of the following procedures can be performed except:

a- bone height reduction
b- later bone augmentation
c- ridge splitting
d- nerve lateralisation

53- Factors that can prevent placement of the implant in an ideal position include:

a- bone quality
b- anatomical factor
c- occlussion factor
d- implant position in the arch
e- none of the above

54- When placing an implant immediately after tooth extraction in the upper anterior area, there will be gap distance or jumping distance between the implant surface and the labial wall of the socket. This distance should be filled by bone graft particles to prevent:

a- soft tissue formation around the implant
b- implant tilting towards the labial side
c- collapse of the labial wall of the socket in towards the implant surface
d- gingival soft tissue collapse into the socket
e- none of the above

55- According to the Lechom and Zarb classification, which type of bone needs bone taping before implant placement:

a- type I
b- type II
c- type III
d- type IV
e- a&b

56- To avoid bone overheating during drilling, the following should be considered:

a- use internal irrigation
b- use sharp drills
c- incremental drilling procedure with increasing diameter drills
d- continuous drilling
e- b&c

57- To achieve a proper emergence profile and to avoid a ridge overlap, an implant in the upper incisors should be placed bucco- lingually in:

a- underneath the cingulum
b- between the cingulum and the incisal edge
c- more palataly
d- slightly labial to the incisal edge
e- none of the above

58- Generally, the final bone preparation socket diameter is slightly smaller than the implant diameter because:

a- 1mm
b- 0mm (same diameter)
c- 0.6mm
d- 0.2mm
e- none of the above

59- The advantage of increasing the implant length compared to increasing the diameter is:

a- bi- cortical engagement
b- more bone implant contact
c- more bone compression on soft bone
d- decrease the stress on the crestal area
e- none of the above

60- The best management for wound dehiscence after a GBR procedure and exposure of the resorbable collagen membrane to the oral cavity is:

a- antibiotic prescription, maintain good oral hygiene, special care to the exposed membrane by Chlorhexiden irrigation and removal of the plaque from the membrane
b- no management needed, just wait for wound to close spontaneously
c- remove the collagen membrane and replace by new one
d- resuturing the dehiscence with complete closure
e- none of the above

61- In cases of a GBR procedure, the best suturing technique to achieve complete closure and hold the wound in contact during soft tissue healing is:

a- figure 8
b- vertical mattress with simple interrupted suture in between
c- simple continuous
d- continuous block
e- none of the above

62- Implants placed in the mandible are exposed and loaded earlier than those in the maxilla (approximately 3 months vs. 6 months) because:

a- poor bone quality of the maxilla
b- high bone density on the mandible
c- mandibular implant engage with more cortical bone that give more support
d- bone implant contact on the mandible is higher than the maxilla
e- all of the above

63- In cases with a hybrid prosthesis in a high smile- line patient, the transitional area shows when smiling. The best management approach in such a case is:

a- upper lip lengthening
b- soft tissue augmentation to mask the transitional area
c- vertical bone augmentation and change the prosthesis into fixed prosthesis with ideal condition
d- vertical reduction of the ridge and flange can be add to prosthesis to mask the transitional area
e- c&d

64- Implants placed in the anterior of the mandible can be immediately loaded with a provisional complete prosthesis because:

a- dense bone give support to the implant
b- bi- cortical engagement
c- the implants can be splinted together
d- immediate osseointegration of the implant to the surrounding bone
e- all of the above

65- during implant placement in the upper first premolar area, special consideration should be given to:

a- curved apex of the adjacent canine
b- maxillary sinus
c- mesial curvature of the second premolar root
d- distal root angulation of the adjacent canine
e- a&d

66- Underestimating the size of the incisive foramen in the upper central area during implant placement leads to implant engagement to the foramen, which in turn leads to:

a- numbness of the gingival premaxilla
b- soft tissue formation on the surface of the implant from the foramen
c- infection may spread to the nose
d- sever bleeding
e- a&d

67- Due to limited space in the upper central area, the implant may need to be placed in the incisive foramen. The best management approach in this case is:

a- enamoplasty with orthodontic movement to adjacent teeth to create space
b- evacuation of the foramen content then implant place in the foramen
c- evacuation of the foramen content, bone grafting then implant placed after graft healing
d- place the implant more labial with labial bone grafting
e- b&c

68- When autogenous bone is needed for one implant, the intraoral harversian donor site is:

a- symphysis
b- external oblique ridge
c- tuberosity
d- exostosis
e- all of the above

69- The drawbacks of an intraoral- harvested bone graft include all of the following except:

a- more morbidity to the patient
b- need special skill and training
c- nerve and teeth injury may occur
d- need hospital admitting
e- with restriction for medically compromised and depleted patient

70- The disadvantages of the sinus lift crestal approach include all of the following except:

a- sinus my perforate without the knowledge of the operator
b- may cause vertigo
c- not advocated in medically compromised patient
d- blind procedure
e- give minimal sinus left

71- Due to sensory nerve injury, the patient will experience an oversensation of normal nerve stimulation, which is called:

a- hyperaesthesia
d- anaesthesia
c- paraesthesia
d- dysesthesia
e- none of the above

72- Structural nerve damage without complete nerve cutting is called:
a- neurotemesis
b- neuroparaxia
c- axontemesis
d- neurogenesis
e- none of the above

73- In cases of neuropraxia, the estimated recovery time is:
a- 6- 8weeks
b- 8- 16 weeks
c- 4- 6 months
d- 1- 2 weeks
e- 6- 12 months

74- A late superficial postoperative infection of soft tissues in submerged implant can be caused by:
a- retained piece of suture material
b- insufficient tightening of the cover screw, or interfere of the soft tissue between the cover screw and the implant Wound dehiscence
c- Osseointegration failed to form
d- a&b

75- To identify mobile implants at the abutment connection using a reverse- torque test, the force should not exceed:
a- 5Ncm
b- 10Ncm
c- 20Ncm
d- 25Ncm
e- none of the above

76- To decrease stress on the crestal bone, the following should be considered:
a- smooth collar implant should not place subcrestaly
b- choose wide diameter implant
c- avoid subcrestaly placed implant in dense bone, may lead to over torque the implant
d- try to avoid angulated implant placement
e- all of the above

77- A short implant should be avoided in which of the following cases:
a- dense bone
b- compromised patient
c- soft bone
d- bruxuser patient
e- c&d

78- For a patient with gingival recession on the adjacent teeth to the edentulous area, the best flap design is:
a- vestibular incision
b- papillae preservative incision
c- crestal with intrasulcular incision including the papillae
d- three sided flap including the papillae
e- none of the above

79- Immediate implant loading is determined when:
a- implant placed torque more than 35Ncm
b- implant placed in dense hard bone
c- resonance frequency analysis is 75 ISQ and above
d- when multiple implants splinted together
e- all of the above

80- The advantages of flapless punch implant placement include all of the following except:
a- indicated when limited keratinized tissue found
b- less bleeding during surgery
c- time saving
d- less pain and oedema postoperatively
e- no suture needed

81- The advantages of the nonsubmerged over the submerged technique for implant placement include all of the following except:
a- no need for second surgery
b- soft tissue maturation and formation around healing abutment
c- can be carried out with flap and flapless technique
d- more preferred in the aesthetic area
e- can transmit some of stress to the surrounding bone that enhance bone maturation

82- The following is needed in bone grafting:
a- intimate contact between the graft and the recipient site
b- blood supply
c- infection free in the grafted site
d- complete soft tissue coverage
e- all of the above

83- Graft immobilization or fixation is crucial during a bone grafting procedure because:
a- graft mobility allow soft tissue growth
b- graft mobility cause wound opening and dehiscence
c- graft mobility prevent blood vessels sprouting into the graft material
d- graft mobility enhance inflammation and interleukin- I
e- none of the above

84- During bone grafting, the blood vessels interring the graft site (angiogenesis) should only be from bone because:

a- blood vessels originated from the bone carrying the osteoblast progenitor cells
b- blood vessels originated from the bone site is growing faster than soft tissue one
c- blood vessels originated from the soft tissue usually carry osteoclast cells
d- blood vessels originated from the soft tissue is usually prevented by the collagen membrane
e- none of the above

85- For a better emergent profile of an implant placed in the upper premolar area, the implant should be placed:

a- under the central fossa
b- under the buccal cusp
c- under the palatal cusp
d- subcrestal at least 1mm
e- none of the above

86- The disadvantages of the partial thickness flap include all of the following except:

a- flap perforation during reflection
b- thinning of the flap tissue
c- delay healing
d- cause diminish blood supply to the surrounding bone
e- cause more oedema post- operatively

87- The advantage of an H- incision is:

a- can explore the anatomical area
d- good flap adaptation in soft tissue grafting
c- minimal invasive with blood supply preservation
d- provide wide surgical view
e- a&d

88- To enhance soft tissue thickening around a dental implant, the following procedure can be performed:

a- connective tissue grafting
b- subperiostel alloplast bone grafting
c- apical repositioning flap
d- alloderm grafting
e- a&d

89- A hydrophylic implant surface shortens the healing period by:

a- early attachment of the blood clot
b- act as osteoinduction
c- increase implant surface area
d- decrease the gap between implant and bone
e- b&c

90- What is the anatomical finding that increases the incidence of maxillary sinus membrane perforation during a sinus lift procedure?

a- thin lateral bony wall
b- narrow medio- lateral space of the sinus
c- scaloped shape of the sinus floor
d- sinus septae
e- a&c

91- One of the unfavorable changes for the operator after extraction of upper molars is:

a- tuberosity enlargement
b- pneumatisation
c- vertical bone resorption
d- thickening of the gingival tissue
e- all of the above

92- The following complication is expected when an implant is placed in a patient who has not yet reached puberty:

a- change implant angulation due to bone growth
b- under developed alveolar bone at implant site due to ankyloses
c- implant sinking due to bone growth
d- crown spacing
e- c&d

93- Placing an implant in soft bone is usually associate with an increased failure rate. To reduce implant failure, which of the following should be considered:

a- increase implant length and width
b- increase the number of the implant
c- cantilevers should be omitted
d- reduce implant crown height and width
e- all of the above

94- A late implant failure usually occurs because of mechanical problems or an overloaded implant. The best management approach in this case is:

a- trephine bure used to remove the implant, followed by immediate implant placement with long implant
d- trephine bure used to remove the implant, followed by complete closure of the soft tissue, fixed or removable prosthesis fabricate instead of implant after soft tissue healing
c- trephine bure used to remove the implant, followed by bone grafting with GBR procedure, late implant placement after bone grafting healing
d- trepine bure used to remove the implant, followed by immediate implant placement with wide diameter implant
e- none of the above

95- During a second- stage surgery and when the abutment connection is healing, the patient experiences pain, and there is slight implant mobility. The best management approach is:

a- submerge the implant and leave it for longer healing period
b- progressive loading with provisional crown to enhance bone density
c- remove the implant since there is mobility
d- proceed with healing abutment installation and check implant stability after soft tissue healing
e- none of the above

96- An upper left central incisor is placed too labially, and the patient presents with labial gingival recession, labial bone loss, and implant thread exposure. The best management approach is:

a- flap raised, implant surface disinfection and scaling should be done, connective tissue grafting to cover the exposed implant
b- flap raised, implant surface disinfection and scaling should be done, autogenous bone grafting with GBR procedure
c- implant should be submerged, fixed prosthesis fabricated and bonded to the adjacent teeth
d- implant removed, socket bone grafting with GBR procedure, with soft tissue grafting, late implant placed after bone grafting healing and maturation
e- none of the above

97- In a case of a congenital missing upper lateral incisor with limited mesio- distal space, the best implant design is:

a- external hex implant
b- one piece implant
c- tapered implant
d- tissue level implant
e- zirconia implant

98- In a case of a GBR procedure with nonresorbable membrane, there is wound dehiscence and membrane exposure during the healing period. The best management approach is:

a- soft tissue grafting to close the dehiscence
b- antibiotic, home care with mouth wash and membrane irrigation with chlorhexiden
c- remove the membrane
d- keep under observation until secondary intention healing achieved
e- none of the above

99- For immediate implant placement after tooth extraction in the upper anterior area, there will be gap distance or jumping distance between the implant surface and the labial wall of the socket. This distance should be filled by what type of bone graft:

a- autogenous bone graft
b- deminerlised friezed dried bone (allograft)
c- friezed dried bone (allograft)
d- alloplast bone substitutes
e- none of the above

100- To ensure a successful GBR procedure, four principles need to be meet:

a- exclusion of epithelium and connective tissue, osteoinduction stimulation, stability of the fibrin clot, infection free augmented site
b- exclusion of epithelium and connective tissue, space maintenance, stability of the fibrin clot, and primary wound closure
c- exclusion of epithelium and connective tissue, membrane fixation, no over grafting, and primary wound closure
d- exclusion of epithelium and connective tissue, space maintenance, partial thickness flap use, double layer collagen membrane
e- none of the above

101- A composite graft may be used for socket preservation after tooth extraction that comprises:

a- cancellous and cortical bone and gingival tissue harvested in one piece
b- Corticotrabecular block grafts
c- autogenous with bovine bone
d- socket bone grafting with connective tissue coverage
e- none of the above

102- Cancellous bone has more osteogenic potential than does cortical bone due to presence of hematopoietic marrow. However, cortical bone has some advantages over the cancellous bone, including:

a- provides the most bone morphogenetic protein (BMP)
b- contain high percentage of endothelial growth factor
c- rich in blood vessels that carry osteoprogenerator cells
d- impedes soft tissue ingrowth into the graft site
e- a&d

103- Xenograft/alloplast graft material is typically:

a- osteoconductive
b- osteoinductive
c- osteogenesis
d- angiogenesis
e- none of the above

104- The optimal extra- oral donor site that provides the greatest amount of bone is:
a- anterior iliac crest
b- tibial plateau
c- calivarium
d- sternum
e- none of the above

105- When an iliac bone graft is placed near the teeth roots, the following complication will occur:
a- bone graft resorption
b- root resorption
c- root ankyloses
d- soft tissue formation between the graft and the root surface
e- b&c

106- The disadvantages of xenografts include all of the following except:
a- increased risk of a host- immune response
b- high vertical and horizontal bone resorption when used as socket preservation
c- brittleness and easy migration
d- low resorption rate
e- need to mix to autogenous bone to regenerate bone

107- The barrier membrane in a GBR procedure should satisfy the following conditions except:
a- tissue adhesion without mobility
b- block soft tissue in- growth
c- resorbable
d- maintains a space
e- biocompatibility

108- The advantage of d- PTFE over e- PTFE is:
a- fast resorption
b- more applicable
c- big pore size
d- bacteria is excluded
e- a&c

109- The collagen membrane usually develops from:
a- type I collagen
b- type II collagen
c- combination of type I and III collagen
d- type IV collagen
e- a&c

110- Resorbable collagen membrane is degraded by:
a- via hydrolysis
b- the enzymatic activities of macrophages and polymorphonuclear leukocytes
c- tissue fluid
d- immune response Ag
e- none of the above

111- The disadvantages of resorbable membranes include all of the following except:
a- fast resorption when exposed to the oral cavity
b- lack space- making ability
c- polymer membrane creates an acid environment during degradation which can have a negative effect on bone formation
d- cross- linking membrane enhance sever inflammation
e- some types with faster degradation before healing

112- The cortical bone surface is usually perforated with a small, round bur prior to placing a bone graft. This procedure is called bone marrow penetration or rapid acceleratory phenomenon. The benefit of this procedure is:
a- to enhance the healing process by promoting bleeding and blood clot formation
b- to allow progenitor cells to reach the bone graft site
c- facilitate angiogenesis in the grafted site
d- to improve the physical interlocking of grafted bone and a recipient site
e- all of the above

113- Marrow penetration, or rapid acceleratory phenomenon, has some adverse effects, including:
a- additional blood loss
b- sever postoperative pain
c- increased bone loss
d- increased operative time
e- all of the above

114- Regarding the effect of different sizes of cortical perforation (rapid acceleratory phenomenon), better results and more bone formation can be achieved by:
a- 3 x 15 mm
b- 1 x 10 mm
c- 1.5 x 8 mm
d- 1.5 x 12 mm
e- 2 x 10 mm

115- Esthetic outcomes are more challenging when:
a- only central incisor tooth is missing
b- lateral and canine teeth are missing
c- two central incisors teeth are missing
d- central and incisor teeth are missing
e- none of the above

116- To achieve a more predictable outcome in the esthetic zone, the following should be considered in the treatment plan:

a- smile line
b- Biotype of the periodontium and tooth shape
c- The bony anatomy of the implant site
d- hard and soft tissue amount
e- all of the above

117- In a case of upper posterior missing teeth, only 7 mm of bone height remains under the maxillary sinus, and the patient declines a sinus lift operation. The alternative treatment plan is:

a- short and wide implant
b- crestal sinus left approach
c- mini implant
d- angulated implant
e- a&d

118- In a case of a hopeless tooth positioned ideally or apically, to position the gingival at the required level, the following should be performed:

a- connective tissue grafting
b- orthodontic extrusion
c- socket preservation
d- immediate implantation
e- none of the above

119- The thick, flat, periodontal biotype is characterized by all of the following except:

a- denser fibrotic soft tissue
b- tissue reacts to insults by pocket formation
c- the tooth associate with has contact areas located more toward the middle third of the tooth
d- ample bone located between adjacent roots teeth
e- square anatomic crowns

120- During the treatment of an implant in the esthetic zone, a diagnostic wax- up is crucial to highlight:

a- final tooth position
b- hard and soft tissue deficiencies
c- the amount of tissue augmentation required
d- type of the prosthesis needed
e- all of the above

121- The future height of interdental papillae in the esthetic zone of a single missing tooth is affected by:

a- interproximal bone height of the adjacent teeth
b-periodontal biotype
c-flap design
d-provisional crown
e- all of the above

122- Placing an implant too deep in the esthetic zone will result in the following complications:

a- poor primary implant stability
b- proximal and facial bone resorption with gingival recession
c- abutment screw loosening
d- bone formation above the implant shoulder
e- c&d

123- Bone saucerization is routinely found around the implant shoulder. The proximal bone saucerization measures _____ from the implant surface:

a- 1- 1.5 mm
b- 2- 2.5mm
c- 3- 3.5
d- 1- 3mm
e- none of the above

124- The crestal approach for a maxillary sinus lift is selected rather than the lateral window approach when the residual bone height is:

a- 4- 6mm
b- 3- 5mm
c- 7–9mm
d- 10- 12mm
e- none of the above

125- The lateral maxillary sinus lift approach, which involves bone grafting material and delayed implant placement, is recommended when the residual bone height is:

a- 3- 6mm
b- 5- 7mm
c- 7- 9mm
d- 1–3mm
e- none of the above

126- In a case with four missing upper incisors, for better esthetic outcome, the implants should be placed in the position of:

a- two implant placed in the position lateral incisors, and bridge will connect between 2 implants
b- three implant placed in the position of 2 lateral incisor and one on the position of central incisor, and bridge will connect 3 implants
c- two implants placed in the position of 2 central incisor, and bridge will connect between 2 implants and 2 lateral incisor would be cantilever crowns
d- four implant placed in the position of 2 central and 2 lateral incisors, and bridge will connect 4 implants
e- four implant placed in the position of 2 central and 2 lateral incisors, and single crown issued for each implant

127- The healing period in maxillary sinus augmentation depends on:

a- antrum width
b- amount of bone graft
c- type of bone graft
d- primary implant stability
e- all of the above

128- Ovalization of the osteotomy site occurs because:

a- Expansion- osteotomes used in soft bone
b- using drills in soft bone
c- change implant angulation during osteotomy
d- thin buccal plate left after osteotomy
e- none of the above

129- The most common drawback of an intrasulcular incision is:

a- delay healing
b- prolong gingival inflammation
c- prominent scar tissue
d- keratinized tissue loss
e- none of the above

130- The disadvantage of using a submarginal incision in the esthetic zone is:

a- recession of the marginal gingiva
b- wound dehiscence
c- prominent scar tissue
d- sever oedema
e- all of the above

131- Intrasulcular incisions should be avoided in all of the following cases except:

a- limited alveolar bone width
b- crown and bridge area
c- thin gingival biotype
d- gingival recession area
e- aesthetic zone

132- The surgical factor that might affect the gingival marginal recession is:
a- flap dehydration during surgery
b- forces to the marginal tissues during flap elevation
c- application of the haemostatic agents
d- flap tension during closure
e- all of the above

133- The resorption rate of allograft bone particles depends on:
a- particle size
b- shape of the particles
c- particle porosity
d- mineralization of the bone graft
e- all of the above

134- The best medium to preserve an autogenous bone graft block during surgery is:
a- glucose water
b- distal water
c- formaldehyde
d- normal saline
e- none of the above

135- The healing period for bone graft augmentation is affected by:
a- type of bone graft
b- the size of bone augmentation
c- the site of bone augmentation
d- soft tissue healing and wound closure
e- all of the above

136- The limitation of preoperative ridge mapping is:
a- overestimate the bone width in thick mucosa site
b- underestimation of bone width when the area is totally cancellous bone
c- not enable accurate determination of bone levels in the anterior maxilla (irregular bone resorption/remodelling in this region)
d- not single assessment method, still need for radiograph
e- all of the above

137- When a rectangular or trapezoidal flap is raised, flap perfusion is maintained until the ratio of length to width of the parallel pedicle flap equals:
a- 1:1
b- 2:1
c- 1:2
d- 1:3
e- none of the above

138- A submarginal flap should only be used when:
a- thin gingival biotype
b- thick gingival biotype
c- narrow zone of attached gingiva
d- there is a broad zone of attached gingiva
e- b&c

139- The recommended thickness of free gingival grafts is:
a- 0.5- 1mm
b- 1- 2 mm
c- 2- 3mm
d- 3- 4mm
e- none of the above

140- Points to consider in the design of a soft tissue flap for intraoral surgery include all of the following except:
a- anatomy
b- access
c- type of tissue
d- closure
e- blood supply

141- To close a three- sided flap with a crestal incision, the first sutures should be:
a- proximal- crestal sutures
b- distal side of vertical incision sutures
c- mesial side of vertical incision sutures
d- mid of the crestal incision sutures
e- none of the above

142- For a fully edentulous arch that needs multiple implants, which implant should be placed first:
a- midline implant
b- first and second from midline
c- most distal implants
d- mesial and distal to the midline
e- none of the above

143- The only structure that can be clearly identified in a radiograph and clinically and can be used as a reference during surgery is:
a- gingival margin
b- implant threads
c- top of the alveolar crest
d- cemento- enamel junction
e- none of the above

144- Tension- free flap closure can be confirmed when:
a- the suture knot does not cause any tissue bleaching
b- the flap edge can be pulled beyond the incision line by 5 mm
c- the wound edge can be approximate edge to edge
d- no wound dehiscence at the time of flap closure
e- c&d

145- From a surgical point of view, lower second molar implant placement is difficult because of all of the following except:
a- limited access
b- inferior alveolar canal is near the alveolar crest at this area
c- less dense bone
d- narrow occlusal table crown
e- high stress during occlusion

146- Horizontal relieving incisions should be made prior to onlay bone grafting or when flap tension is identified. What should be considered during a relieving incision procedure:
a- use new scalpel
b- incision should be at the base of the flap
c- depth of the incision should be more than 1mm
d- the incision should be along the flap width
e- all of the above

147- For partial edentulous treatment requiring multiple implants, which implant should be placed first:
a- most distal
b- middle
c- the longer implant can be placed
d- closest to the tooth
e- none of the above

148- Implants should never be placed in the midline of the maxilla because:
a- fracture of the nasal spine
b- expand the suture between two maxilla
c- aesthetic and phonetic complication
d- sever angulation of the implant
e- b&c

149- For a partially edentulous posterior mandibular that needs multiple implants, the mesio- distal angulation of the implant adjacent to the tooth should be:
a- parallel with the long axis of the root of adjacent tooth
b- parallel with the long axis of the crown of adjacent tooth
c- parallel with the long axis of the most distal implant
d- mesially angulation with the long axis of the of adjacent implant
e- distally angulated with the long axis of the root of adjacent tooth

150- In a complete and severe resorbed edentulous maxilla with pneumatization, the implant most distal to the canine should be placed in:
a- parallel with most anterior implant and away from the maxillary sinus
b- mesially angulated and parallel to mesial wall of the maxillary sinus
c- distally angulated and should engage the canine fossa
d- distally angulated and follow the mesial wall of the maxillary sinus
e- none of the above

151- Vertical ridge augmentation is an unpredictable procedure because:
a- limited amount of bone growing in vertical direction with long healing period
b- difficulty in the soft tissue closure of the augmented site
c- special skill and material needed to create the vertical space
d- autogenous bone is needed in this procedure, means second surgical site
e- all of the above

152- Regarding osteocondensation, all of the following are true except:
a- performed with osteotomes
b- more preferable in type II and type III bone quality
c- enhance primary implant stability
d- minimal removal of bone
e- increase the density of cancellous bone

153- Alveolar splitting and a ridge expansion osteotomy are very beneficial procedures in a narrow anterior maxillary ridge. The minimum alveolar width for alveolar splitting is:
a- 5mm
b- 1mm
c- 6mm
d- 1.5mm
e- none of the above

154- Alveolar splitting and a ridge expansion osteotomy have delayed complications, including:
a- buccal plate fracture
b- relapse of the buccal plate to the original position and implant threads exposure
c- crestal bone resorption
d- poor implant stability
e- a&c

155- A medically compromised patient with a severely resorbed lower ridge should be treated with:
a- disk implant
b- lateral and vertical bone augmentation
c- subperiosteal blade implant
d- osteodistraction
e- a&c

156- A medically compromised patient with a severely resorbed upper ridge should be treated with:

a- maxillary sinus left augmentation
b- disk implant
c- lateral and vertical bone augmentation
d- zygomatic implant
e- b&d

157- If the alveolar bone width could be precisely determined prior to surgery, the following would be possible:

a- less invasive flapless surgery
b- determine the amount of bone augmentation needed
c- chose proper implant diameter
d- predict type and position of the future prosthesis
e- all of the above

158- During implant osteotomy preparation, the best irrigation solution is:

a- normal saline
b- glucose water
c- distal water
d- glucose saline
e- none of the above

159- The anatomical landmark that should be considered during implant placement in the inter- mental foramen region for a fully edentulous denture patient is:a- facial artery

b- lingual artery
c- mental nerve
d- anterior loop of the inferior dental nerve
e- all of the above

160- Bone volume loss would be faster after tooth extraction in:

a- posterior of the mandible
b- posterior of the maxilla
c- anterior mandible
d- anterior of the maxilla
e- none of the above

161- Sufficient bone height is always available for implant placement at the site of:

a- upper canine area
b- upper incisor area
c- lower anterior area
d- lower first molar area
e- a&c

162- The most predictable area that can regenerate vertical bone is in the:
a- anterior maxilla
b- posterior mandible
c- anterior mandible
d- maxillary sinus
e- none of the above

163- For implant placement for a fully edentulous lower denture, the indications for selecting a flapless procedure rather than a full- thickness flap include all of the following except:
a- rounded and smooth alveolar ridge
b- Immediate loading
c- Insufficient crown height space
d- medical compromised patient
e- sufficient keratinized mucosa

164- Nerve damage during implant placement can be caused by:
a- complicated anatomic nerve path
b- poor planning design and/or surgical skill
c- decision make on 2D scan
d- the lack of using computer guided surgical guide
e- all of the above

165- Different surgical techniques can be utilized to increase the width of the keratinized soft tissue around an implant. All of the following are true about these procedures except:
a- periosteum release and coronal repositioning flap
b- apical repositioning flap
c- lingualized incision designs
d- pedicle grafts
e- connective tissue graft

166- A patient with a high- vault palate is preferred as donor for connective tissue harvesting because:
a- away form the incisive foramen
b- less adipose tissue
c- harvesting a good amount of tissue
d- reduces the risk of endangering the greater palatine artery
e- c&d

167- Free gingival grafts have been proven to be successful. However, these also have disadvantages, including all of the following except:a- two surgical sites with more morbidity
b- discrepancies in color with the surrounding mucosa
c- percentage of shrinkage should be expected
d- need at least 1mm of keratinized mucosa around implant
e- discrepancies in texture with the surrounding mucosa

168- A combination flap for alveolar splitting or a ridge expansion osteotomy in a narrow maxillary ridge should consist of:

a- split- thickness flap at the crest of the ridge, then transitioned into full- thickness along the buccal plate

b- full- thickness flap at the crest of the ridge, and periosteal scoring on the base of the flap

c- full- thickness flap at the crest of the ridge, then transitioned into a split- thickness flap along the buccal plate

d- vestibular full- thickness flap raised with double flap closure

vestibular full- thickness flap with connective tissue graft

169- The advantages of a combination flap for alveolar splitting or a ridge expansion osteotomy in a narrow maxillary ridge include all of the following except:

a- better surgical filed vision

b- prevent the buccal bone from collapse during healing period

c- better determining the positioning of the ridge splitting

d- protecting the buccal plate from full fractures during the expansion

e- preserve the blood supply to the buccal plate

170- When a bone block graft needs to harvest from a symphysis area, the following distances are needed to avoid endangering the adjacent vital structures:

a- superior osteotomy made 5 mm below the root apices and the inferior osteotomy at least 5 mm above the inferior border, lateral osteotomy 5mm from the inferior dental nerve

b- superior osteotomy made 8 mm below the root apices and the inferior osteotomy at least 7mm above the inferior border, lateral osteotomy 5mm from the mental foramen

c- superior osteotomy made 5 mm below the root apices and the inferior osteotomy at least 3 mm above the mentalis muscle, lateral osteotomy 7mm from the mental foramen

d- superior osteotomy made 3 mm below the root apices and the inferior osteotomy at least 7mm above the inferior border, lateral osteotomy 5mm from the mental foramen

e- none of the above

171- A frequent postoperative complaint when harvesting symphyseal grafts is:

a- Sensory alterations to mandibular incisors

b- wound dehiscence and food accumulation

c- lower lip numbness

d- shallowing of the labial vestibular depth

e- all of the above

172- Following symphysis bone harvesting, the patient may be concerned about a deformity of the chin contour. To avoid ptosis, the following should be performed:

a- avoid complete degloving of the chin

b- always use subcrivecular incision flap

c- no more than 1 cm bone block width, height and length should be harvested

d- periosteum scoring before flap closure to prevent tension flap closure

e- all of the above

173- To achieve a better esthetic result for an implant placed in the esthetic zone with a thin gingival biotype, the implant should be placed:

a- labial and apical

b- palatal and coronal

c- labial and coronal

d- palatal and apical

e- none of the above

174- Blood supply is an important factor in the success of a bone grafting procedure. The posterior resorbed ridge of the mandible always suffers from a diminished blood supply during bone augmentation because:

a- higher cortical bone content in this area

b- difficult to achieve tension- free primary flap closure

c- less keratinized tissue always found

d- central blood supply

e- a&b

175- a single- stage bone augmentation protocol is preferred for small- volume hard tissue defects around implant if the following is achieved:

a- adequate keratinized tissue

b- flap closure without tension

c- adequate primary implant stability

d- autogenous bone graft used

e- all of the above

176- Advantages of a single- stage bone augmentation protocol include all of the following except:

a- minimizes compression and migration of particulate graft material

b- allows the bony and soft tissue to develop around the healing abutment

c- reduce surgeries

d- give the chance of clinical recheck of bone formation

e- decrease the incidence of labial vestibule shallowing

177- The tunneling technique is feasible for lateral bone augmentation, but this procedure has drawbacks, including:

a- wound dehiscence

b- difficult to position the graft coronally

c- apical migration of graft material during healing

d- difficult to separate the periosteum during flap dissection

e- b&c

178- A common biological complication reported for zygomatic implants is:

a- sinusitis

b- soft tissue infections

c- paraesthesia

d- oroantral fistula

e- all of the above

179- The advantage of the extramaxillary surgical technique for zygomatic implants compared to the classical technique is:

a- minimized the rate of ruptures of the sinus membrane during implant insertion

b- use longer implant

c- the implant is fully embedded in the maxilla and zygomatic bone

d- implant head is more vestibular

e- a&d

180- To reduce the angle of deviation during an osteotomy, the surgical stent should have:

a- narrow guide channel

b- long guide channel

c- wide guide channel

d- labial open guide channel

e- a&d

181- Finger rest during drilling or socket preparation should be avoided because this will cause inclination of the drill and a mal- angled implant placement:

a- both statement is wrong

b- first statement is correct but the second statement is wrong

c- first statement is wrong but the second statement is correct

d- both statement is correct

182- Possible factors related to Schneiderian membrane tearing during the lateral approach technique include:

a- absence of alveolar bone

b- overfilling with the graft material with insufficient elevation of the membrane

c- previous sinus surgery

d- irregularities of the sinus floor

e- all of the above

183- In a flapless punch procedure, a soft tissue punch should be used for better peri-implant mucosa adaptation and subsequent healing:
a- diameter bigger than that of the implant
b- remove only mucosa and leave the periosteum intact
c- smaller than that of the implant
d- rotary and not manual
e- b&d

184- The iliac crest is frequently used as a bone graft donor site for major jaw reconstruction procedures. All of the following are true about this procedure except:
a- there is a significant resorption of the bone graft
b- iliac bone has same histological origin of jaw bone (membranous)
c- altered ambulation
d- need for hospitalization
e- large volume of bone graft can be obtained

185- Immediate implant placement and provisionalization is usually the preferred method if ideal pre- existing tissue conditions exist. All of the following are true except:
a- scalloped gingiva
b- presence of adequate buccal bone plate
c- thick biotype
d- appropriate gingival level
e- favourable osseous- gingival relationship

186- The advantages of the horizontal mattress suture technique include all of the following except:
a- precise flap placement with periosteal stabilization
b- avoiding suture contact with the implant material
c- resist muscle pull
d- adapt the surgical flaps to the underlying bone
e- evert the surgical flap edges

187- A 1/2- circle suture needle is used more frequently in:
a- areas of restricted space
b- suturing a soft tissue graft
c- vertical bone augmentation flap closure
d- retromolar donor flap site closure
e- a&b

188- A crestal incision is more favorable under all of the following conditions except:
a- mandible has sufficient height
b- muscle insert below the alveolar crest (mentalis and lip musculature)
c- adequate band of attached gingiva
d- knife edge ridge
e- rounded edge ridge

189- The advantages of a crestal incision include all of the following except:
a- provides excellent access to both the labial and the lingual regions
b- do not interfere with the blood supply to the flap
c- closure away from the implant material
d- preserves the vestibular depth and keratinized tissue
e- reduces the postsurgical sequelae

190- Vestibular incisions drawbacks include all of the following except:
a- more edema and patient discomfort
b- suture placement and removal are more difficult
c- dehiscence will result in implant exposure
d- flange of any transitional prosthesis will impinge on the incision line
e- vital structure damage

191- In an edentulous ridge, lingual and facial flap capillaries do not anastomose at the ridge crest. Crestal incisions could result in a loss of vascularity to the tissues of the elevated flaps.:
a- both statement is incorrect
b- first statement in is incorrect, while second statement in correct
c- both statement is correct
d- first statement is correct, while second statement in incorrect

192- In a lower posterior edentulous area, an implant placed with thin mucosa has less crestal bone resorption. Implants with a smooth transmucosal design are not favored in a thin mucosa area:
a- both statement is correct
b- first statement in is incorrect, while second statement in correct
c- first statement is correct, while second statement in incorrect
d- both statement is incorrect

193- A passive and tension- free flap closure is important and can be achieved through:
a- para- crestal incision with three sided flap
b- scoring of the periosteum
c- elevating a split thickness flap apically
d- vertical mattress suture
e- b&c

194- Evaluating gingival thickness before implant placement is crucial because it affects the selection of:
a- implant design
b- flap design
c- abutment design
d- abutment material
e- all of the above

195- Causes of flap trauma during reflection include all of the following except:
a- incomplete cutting (periosteum) full thickness flap
b- thin gingival tissue raised
c- rounded alveolar ridge
d- blunt non sharp instrument used to reflect the flap
e- presence of fibrous tissue tags

196- the drawback of the crestal approach for maxillary sinus augmentation with the alveolar bone core technique is:
a- less support to the elevated membrane by the core
b- difficult to solve the sinus membrane perforation
c- less autogenous bone displacement in the elevated sinus
d- bone core maybe removed with the trephine bur
e- all of the above

197- Muscle cutting during periosteum scoring can lead to all of the following except:
a- ecchymosis postoperatively
b- increase flap tension
c- intra- operative bleeding
d- muscle activity interruption
e- postoperative oedema

198- Chlorhexidine mouthwash is not preferred after surgery because:
a- fibrocyte toxicity
b- increase bacterial resistance
c- limited bactericidal effect
d- cause suture flake
e- b&c

199- The flap design for a lateral approach sinus lift in a fully edentulous atrophied ridge should consider all of the following except:
a- incision more palatal
b- palatine artery pathway
c- incisive nerve
d- inferior orbital nerve and vessels
e- pneumatisation extension and window position

200- To avoid scar formation in the esthetic zone, the incision technique should consider all of the following except:
a- no vertical incision in the keratinized gingiva
b- no vertical incision on the mucosa
c- use fine suture and needle
d- avoid secondary healing
e- avoid incision on the concave surface or root prominence

201- Distraction osteogenesis has some disadvantages and limitations, including all of the following except:

a- epithelialization may occurs along the device
b- need second surgery to remove the device
c- limited in the horizontal movement
d- doesn't give increase in the soft tissue volume
e- limited by the need for space above or below the moving segment

202- Distraction osteogenesis is activated at a rate of:

a- 1 mm per day (once daily)
b- 0.5 mm per day (once daily)
c- 2 mm (alternative day)
d- 1 mm per day (0.5 mm twice daily)
e- none of the above

203- During zygomatic implant placement, the raised flap should expose all of the following anatomical structure except:

a- pterygoid plate
b- infraorbital nerve and foramen
c- anterior portion of the zygomatic arch
d- medial aspect of the zygoma
e- piriform rim

204- Contraindications of zygomatic implant placement include all of the following except:

a- lateral wall of the maxilla is severely concave
b- maxillary sinus with pathological condition
c- pneumatisation or maxillary sinus expansion
d- less than 8 mm of bone in the zygomatic bone available
e- insufficient anterior bone availability for the placement of anterior implants to stabilize the restoration

205- For socket preservation with bone grafting, the graft should have all of the following characteristics except:

a- preserve the space to maintain the bone volume
b- bone graft with small particles for better condensation
c- do not transfer pathologic diseases
d- osteoconductive ability
e- convert into dense bone for better implant stability

206- The thin gingival biotype is unfavorable in the esthetic zone due to gingival recession and visible metal, the most predictable procedure to change thin gingiva into thick is:

a- connective tissue graft
b- bone graft
c- apical repositioning flap
d- collagen membrane placement
e- c&d

207- Generally, labial bone defects occur after tooth extraction, but there are cases in which palatal bone defects occur:

a- in the region of persistence deciduous tooth and missing permanent tooth
b- surgical removal of ankylosed tooth
c- palatal inclined tooth
d- tooth involved with periapical lesion
e- c&d

208- Factors that may affect the flap design for the procedure of a chin donor site include all of the following except:

a- depth of the vestibule
b- amount of keratinized tissue
c- root length of the lower anterior teeth
d- periodontal condition of the lower anterior teeth
e- gingival biotype

209- A medically compromised patient may have poor wound healing, including:

a- uncontrolled diabetes
b- chronic steroid use
c- immunocompromise
d- alcoholism
e- all of the above

210- Contraindications for immediate implant placement may be related to all of the following except:

a- purulent discharge
b- thin gingival biotype
c- gingivitis
d- patient history of poor wound healing (medical compromised patient)
e- lack of bone to stabilize an implant

211- Immediate implant placement in an intact socket wall defect will preserve alveolar bone resorption, while immediate implant placement in a compromised socket will reduce alveolar bone resorption:

a- both sentences incorrect
b- first sentence is correct while the second sentence is incorrect
c- first sentence is incorrect while the second sentence is correct
d- both sentences is correct

212- Immediate implant placement is contraindicated for a compromised anatomical shape of the socket. All of the following are true except:

a- the labial bone is extremely thin and the socket is large
b- thin palatal bone of the socket and high palatal vault
c- implant placement lead to the engagement of the palatal and proximal bone of the socket
d- proximal bone of the socket is missing and root exposure of the adjacent teeth
e- thin bone available between the root apex and the vital structure (e.g., maxillary sinus, inferior dental nerve)

213- During immediate implant placement after tooth extraction in the esthetic zone, the implant should be placed at the level of:

a- 3mm from the cemento- enamel junction of the adjacent teeth
b- 3mm from the gingival margin
c- subcrestal by 1mm
d- supracrestal by 1mm
e- subcrestal by 2mm

CORRECT ANSWERS

Q1
b- significantly reduced, but not completely inhibited

Q2
a- significant socket shrinkage

Q3
d- 3 month, 12 month

Q4
d- decreased progressively towards the apical level

Q5
c- tumor

Q6
a- one week

Q7
b- 2 weeks

Q8
c- 4 weeks

Q9
e- all of the above

Q10
e- none of the above (accumulate plaque, allow rapid bacterial colonization and are uncomfortable to remove because of ingrowth of tissue)

Q11
d- cost

Q12
b- Teflon

Q13
a- 40%

Q14
e- c&d

Q15
b- destructive former sinus surgery (like the Caldwell–Luc operation)

Q16
a- the last 5 mm of the implant apical region

Q17
a- prosthetically driven

Q18
d- all of the above (bleeding due to thrombocytopenia and drug protease inhibitor,[inection and healing due to the levelo of the CD4 T cells)

Q19
a- finer suture diameters

Q20
e- all of the above

Q21
a- pulling the tongue outside patient mouth

Q22
c- increase implant stability

Q23
b- bone formation from bone edge and covering the implant apex

Q24
b- the apex of the drill (1.5) not estimated in most implant system

Q25
c- make second hole adjacent to the primary hole drilling within 1- 2mm

Q26
d- obscure the adjacent anatomical teeth structures

Q27
e- a&c

Q28
a- palatally placed but labially angulated

Q29
e- c&d

Q30
c- 3- 4 weeks

Q31
b- 8 mm

Q32
b- collagen membrane barrier place underneath the membrane

Q33
a- membrane elevation

Q34 c- bone height underneath the maxillary sinus is <5

Q35
e- all of the above

Q36
d- immediate implant placement with immediate crowning

Q37
e- none of the above (no treatment needed, subsided by itself, advise the patient to maintain good oral hygiene)

Q38
c- full exposure of the cover screw and healing abutment placed

Q39
b- crestal bone resorption

Q40
e- none of the above (15c with small head that can go between the teeth and interdental papillae

Q41
a- result of the rapid accelerating phenomena (RAP)

Q42
e- b&c

Q43
d- blockage of the irrigation holes with debris

Q44
e- all of the above

Q45
b- infection and contamination through the root surface

Q46
e- all of the above

Q47
c- difficult to control implant placement angulation due to uncontrolled force

Q48
e- all of the above

Q49
a- resonance frequency analysis

Q50
c- smooth surfaces will exert shear forces to the bone that enhance crestal bone resorption

Q51
e- all of the above

Q52
d- nerve lateralisation

Q53
b- anatomical factor

Q54
c- collapse of the labial wall of the socket in towards the implant surface

Q55
e- a&b

Q56
e- b&c

Q57
b- between the cingulum and the incisal edge

Q58
c- 0.6mm

Q59
e- none of the above (to get more primary implant stability)

Q60
a- antibiotic prescription, maintain good oral hygiene, special care to the exposed membrane by chlorhexiden irrigation and removal of the plaque from the membrane

Q61
b- vertical mattress with simple interrupted suture in between

Q62
e- all of the above

Q63
e- c&d

Q64
e- all of the above

Q65
e- a&d

Q66
b- soft tissue formation on the surface of the implant from the foramen

Q67
e- b&c

Q68
e- all of the above

Q69
d- need hospital admitting

Q70
c- not advocated in medically compromised patient

Q71
a- hyperaesthesia

Q72
c- axontemesis

Q73
a- 6- 8weeks

Q74
e- a&b

Q75
b- 10 Ncm

Q76
e- all of the above

Q77
e- c&d

Q78
b- papillae preservative incision

Q79
e- all of the above

Q80
a- indicated when limited keratinized tissue found

Q81
d- more preferred in the aesthetic area

Q82
e- all of the above

Q83
c- graft mobility prevent blood vessels sprouting into the graft material

Q84
a- blood vessels originated from the bone carrying the osteoblast progenitor cells

Q85
b- under the buccal cusp

Q86
d- cause diminish blood supply to the surrounding bone

Q87
c- minimal invasive with blood supply preservation

Q88
e- a&d

Q89
a- early attachment of the blood clot

Q90
d- sinus septae

Q91
b- pneumatisation

Q92
e- c&d

Q93
e- all of the above

Q94
c- trephine bure used to remove the implant, followed by bone grafting with GBR procedure, late implant placement after bone grafting healing

Q95
a- submerge the implant and leave it for longer healing period

Q96
d- implant removed, socket bone grafting with GBR procedure, with soft tissue grafting, late implant placed after bone grafting healing and maturation

Q97
b- one piece implant

Q98
c- remove the membrane

Q99
e- none of the above (slowly resorbed bone substitutes, xenograft)

Q100
b- exclusion of epithelium and connective tissue, space maintenance, stability of the fibrin clot, and primary wound closure

Q101
a- cancellous and cortical bone and gingival tissue harvested in one piece

Q102
e- a&d

Q103
a- osteoconductive

Q104
e- none of the above (posterior iliac crest)

Q105
e- b&c

Q106
b- high vertical and horizontal bone resorption when used as socket preservation

Q107
c- resorbable

Q108
d- bacteria is excluded

Q109
e- a&c

Q110
b- the enzymatic activities of macrophages and polymorphonuclear leukocytes

Q111
a- fast resorption when exposed to the oral cavity

Q112
e- all of the above

Q113
e- all of the above

Q114
a- 3 x 15 mm

Q115
c- two central incisors teeth are missing

Q116
e- all of the above

Q117
e- a&d

Q118
b- orthodontic extrusion

Q119
d- ample bone located between adjacent roots teeth

Q120
e- all of the above

Q121
e- all of the above

Q122
b- proximal and facial bone resorption with gingival recession

Q123
a- 1- 1.5mm

Q124
c- 7–9mm

Q125
d- 1- 3mm

Q126
a- two implant placed in the position lateral incisors, and bridge will connect between 2 implants

Q127
e- all of the above

Q128
b- using drills in soft bone

Q129
e- none of the above (gingival margin recession)

Q130
c- prominent scar tissue

Q131
a- limited alveolar bone width

Q132
e- all of the above

Q133
e- all of the above

Q134
d- normal saline

Q135
e- all of the above

Q136
e- all of the above

Q137
b- 2:1

Q138
d- there is a broad zone of attached gingiva

Q139
b- 1- 2mm

Q140
c- type of tissue

Q141
a- proximal- crestal sutures

Q142
c- most distal implants

Q143
c- top of the alveolar crest

Q144
b- the flap edge can be pulled beyond the incision line by 5 mm

Q145
d- narrow occlusal table crown

Q146
e- all of the above

Q147
d- closest to the tooth

Q148
e- b&c

Q149
a- parallel with the long axis of the root of adjacent tooth

Q150
d- distally angulated and follow the mesial wall of the maxillary sinus

Q151
e- all of the above

Q152
b- more preferable in type II and type III bone quality

Q153
e- none of the above (3mm)

Q154
b- relapse of the buccal plate to the original position and implant threads exposure

Q155
e- a&c

Q156
e- b&d

Q157
e- all of the above

Q158
a- normal saline

Q159
e- all of the above

Q160
b- posterior of the maxilla

Q161
e- a&c

Q162
d- maxillary sinus

Q163
c- Insufficient crown height space

Q164
e- all of the above

Q165
a- periosteum release and coronal repositioning flap

Q166
e- c&d

Q167
d- need at least 1mm of keratinized mucosa around implant

Q168
c- full- thickness flap at the crest of the ridge, then transitioned into a split- thickness flap along the buccal plate

Q169
b- prevent buccal plate bone resorption during healing period

Q170
e- none of the above (superior osteotomy made 5 mm below the root apices and the inferior osteotomy at least 5 mm above the inferior border, lateral osteotomy 5mm from the mental foramen)

Q171
a- Sensory alterations to mandibular incisors

Q172
a- avoid complete degloving of the chin

Q173
d- palatal and apical

Q174
e- a&b

Q175
c- adequate primary implant stability

Q176
d- give the chance of clinical recheck of bone formation

Q177
e- b&c

Q178
e- all of the above

Q179
e- a&d

Q180
b- long guide channel

Q181
d- both statement is correct

Q182
e- all of the above

Q183
c- smaller than that of the implant

Q184
b- iliac bone has same histological origin of jaw bone (membranous)

Q185
a- scalloped gingiva

Q186
b- avoiding suture contact with the implant material

Q187
e- a&b

Q188
d- knife edge ridge

Q189
c- closure away from the implant material

Q190
c- dehiscence will result in implant exposure

Q191
d- first statement is correct, while second statement in incorrect

Q192
b- first statement in is incorrect, while second statement in correct

Q193
e- b&c

Q194
e- all of the above

Q195
c- rounded alveolar ridge

Q196
d- bone core maybe removed with the trephine bur

Q197
b- increase flap tension

Q198
a- fibrocyte toxicity

Q199
c- incisive nerve

Q200
b- no vertical incision on the mucosa

Q201
d- doesn’t give increase in the soft tissue volume

Q202
d- 1 mm per day (0.5 mm twice daily)

Q203
a- pterygoid plate

Q204
c- pneumatisation or maxillary sinus expansion

Q205
b- bone graft with small particles for better condensation

Q206
a- connective tissue graft

Q207
a- in the region of persistence deciduous tooth and missing permanent tooth

Q208
c- root length of the lower anterior teeth

Q209
e- all of the above

Q210
b- thin gingival biotype

Q211
a- both sentences incorrect

Q212
c- implant placement lead to the engagement of the palatal and proximal bone of the socket

Q213
b- 3mm from the gingival margin

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Chapter 9

PROSTHETIC

1- The lip line during smiling is divided into high, low and moderate. The percentages in each group among the general population are:

a-High 20%, low 20%, moderate 60%
b-High 30%, low 20%, moderate 50%
c-High 10%, low 20%, moderate 70%
d-High 10%, low 30%, moderate 60%
e-High 30%, low 10%, moderate 60%

2- Factors that determine the fullness of the dental papillae in the embrasure area include:

a- abutment design
b- implant diameter
c- hemidesmosomes attachment
d- the distance between the crestal bone and the crown contact area
e- all of the above

3- In a fully edentulous upper ridge, bone resorption will be:

a- centripetal
b- centrifugal
c- inward and upward direction
d- outward and upward direction
e- a& c

4- In a fully edentulous lower ridge, bone resorption will be:

a- centripetal in the anterior region and centrifugal in the posterior region
b- centrifugal in the anterior region and centripetal in the posterior region
c- centrifugal in the anterior and posterior region
d- centripetal in the anterior and posterior region

5- Pitch refers to:
a- angulation of the threads
b- the depth of the thread
c- width of the threads
d- distance between the implant threads
e- none of the above

6- Progressive implant loading is recommended for implants:
a- dense bone
b- with screw crown placed
c- placed in poor bone density
d- immediately placed
e- a&b

7- For coronal growth of the interimplant papillae, the crown surface should be:
a- convex
b- concave
c- flat
d- smooth
e- b&d

8- Interdental papillae loss between implants or between the implant and the tooth will cause:
a- phonetic problem
b- aesthetic problem
c- peri- implant gingivitis
d- increasing probing depth
e- a&b

9- Disadvantage of a ridge lab crown is:
a- difficult to maintain oral hygiene
b- difficulty of probing
c- disharmonious of the gingival margins
d- compromise the desired emergence profile
e- all of the above

10- Contact between an implant and a natural tooth is discouraged because:
a- different angulation of implant and natural teeth
b- mobility differences between implants and teeth
c- retrievability would be difficult when complication happened
d- cleaning and maintaining oral hygiene would be hard
e- none of the above

11- Splinting multiple dental implants has been recommended to reduce load risk factors. However, using a single unit allows:

a- better emergence profiles
b- retrievability would be easy in comparison to splinting implant
c- improved passive fit of the metal framework
d- better oral hygiene access
e- all of the above

12- The mean value for the axial mobility of the teeth is 25 to 100 µm, whereas the axial displacement of osseointegrated implants is:

a- 20 to 50 µm
b- 20 to 30 µm
c- 20 to 25 µm
d- 3 to 5 µm
e- none of the above

13- During lateral loading, the tooth moves at the apical third of the root, and the force is instantly dissipated from the crest of the bone along the root. By contrast, the implant moves 10 to 50 µm laterally, and the concentration of forces is at:

a- middle third
b- coronal and apical third
c- crestal bone
d- apical third
e- none of the above

14- General recommendations for occlusal morphology include:

a- flat fossa and grooves for wide freedom in centric
b- shallow occlusal anatomy
c- a narrow occlusal table
d- reduced cuspal inclination
e- all of the above

15- The proposed crown/implant ratio for a tissue- level implant is:

a- the length of anatomical crown (until the implant shoulder)/ implant length
b- the length of clinical crown (until the bone crest)/ implant length
c- the length of clinical crown (until the implant shoulder)/ implant length
d- a- the length of anatomical crown (until the bone crest)/ implant length
e- none of the above

16- Occlusal materials for an implant- supported prosthesis that transmit less force to the bone during loading include:

a- zirconia
b- acrylic
c- gold alloy
d- porcelain
e- b&c

17- Parafunctional activities have been attributed to technical and mechanical complications, including:

a- veneering porcelain chipping
b- fracture or screw loosening
c- crown decementation
d- crestal bone resorption
e- all of the above

18- When placing posterior canine implants, guidance or protection is important because the canine assists in:

a- guide the occlusion into centric occlusion
b- withstand more force during mastication
c- keep the posterior implant in contact during excursion movement
d- disclusion in eccentric movements
e- none of the above

19- In cases of posterior canine implants without guidance or protection, guidance should be replaced by:

a- anterior guidance
b- group of function occlusion
c- protrusive guidance
d- bilateral balanced occlusion
e- none of the above

20- Occlusion adjustment for an implant prosthesis is recommended to have light contact on a firm occlusion, meaning that:

a- shim stock (8–30 μm) passing through
b- cusp to fossa contact
c- no contact during excursion movement
d- shim stock dragging through
e- b&d

21- An implant placed too coronally in the esthetic zone will result in the following difficulty:

a- the crown of choice is only cemented crown
b- dark shadow appear through the marginal gingiva
c- insufficient room for the crown to emerge from the tissue
d- insufficient room for porcelain
e- a&d

22- Placing an implant too deep in the esthetic zone will result in the following difficulty:

a- negatively effect on the emergence profile
b- crown look short than the contralateral tooth
c- impression can be a difficult experience
d- screw retained restoration is the treatment of choice
e- c&d

23- For a successful immediately loaded single implant, the following should be considered:
a- primary implant stability should be achieved
b- occlusal, working, and nonworking contacts eliminated
c- no facial bone loss or dehiscence
d- adjacent teeth should not periodontaly compromised
e- all of the above

24- Occlusal prematurities normally present as:
a- the bicuspid teeth
b- second molar teeth
c- central incisor teeth
d- canine teeth
e- b&c

25- The minimum interocclusal space needed for a posterior implant crown is:
a- 5mm from the crestal bone to the opposing occlusion
b- 5mm from the gingival tissue to the opposing occlusion
c- 7mm from the gingival tissue to the opposing occlusion
d- 8mm from the gingival tissue to the opposing occlusion
e- a&c

26- For a maxillary overdenture implant prosthesis, the minimum interarch space is:
a- 14mm
b- 12mm
c- 10mm
d- 20mm
e- none of the above

27- The advantages of removable prostheses over the fixed in implant dentistry include all of the following except:
a- less number of implant needed
b- no nocturnal stress on the implant
c- preserved the bony tissue from resorption
d- better in irretrievability
e- easier in maintain the oral hygiene

28- The most common complication of a single- crown implant is:
a- implant fixture fracture
b- abutment screw fracture
c- progressive crestal bone resorption
d- abutment screw loosening
e- b&c

29- To decrease the incidence of abutment screw loosening, the following should be considered:

a- eliminate the vertical and horizontal cantilever
b- increase abutment screw length and diameter
c- eliminate later excursion contact
d- night guard for bruxiser patient
e- all of the above

30- The upper arch shape can be change from a u to a square if:

a- muliple extraction of 6 anterior teeth
d- congenital missing of 2 lateral incisors
c- early extraction of 4 incisors and persistence of canines
d- early extraction of canines and persistence of 2 laterals incisors
e- none of the above

31- In moderate occlusion, the ratio of the anterio- posterior implant distance to the cantilever length equals:

a- 1:1
b- 1:2
c- 2:1
d- 1:1.5
e- none of the above

32- For a posterior cantilevered prosthesis, the anterio- posterior implant distance is measured from:

a- the distal surface of the most distal implant to the central of the anterior implant
b- the mesial surface of the most distal implant to the central of the anterior implant
c- the distal surface of the most distal implant to the distal of the anterior implant
d- the central of the most distal implant to the central of the anterior implant
e- the mesial surface of the most distal implant to the distal of the anterior implant

33- The indication for a cemented crown is:

a- sever angulated implant
b- gingival or supragingival abutment margin
c- multiple implant with different angulation
d- palataly placed implant
e- all of the above

34- The indication for a screw crown is:

a- limited inter arch space
b- subginigval abutment margin
c- angled anterior implant
d- bruxer patient
e- a&b

35- If an implant over denture moves in a different direction, the operator determines the denture movement based on:

a- anterio- posterior distance
b- bone availability
c- number of implant
d- shape of the dental arch
e- b&c

36- Which arch shape is more favorable for a long posterior cantilever in an edentulous arch:

a- square arch shape
b- U- arch shape
c- tringular arch shape
d- tapered arch shape
e- none of the above

37- The advantage of a bar- connecting implant over an individual loaded (stud) implant in an implant overdenture is:

a- with the bar can connect different angulated implant
b- less maintenance needed
c- stress loading can be distributed on many implant
d- allow for better movement during loading
e- all of the above

38- Immediate loading of an interforamina implant placed in the lower edentulous is common, but the following should be considered:

a- implants should be connected together
b- achieve good primary implant stability
c- implant placed in dense bone
d- cantilever should minimized or eliminated
e- all of the above

39- Mechanical risk in implant dentistry refers to:

a- cantilever prosthesis
b- 1:2 implant to crown ratio
c- soft bone
d- bruxser patient
e- all of the above

40- The passive fitness of a super structure screw- retained bar can be verified through:

a- single screw method
b- fitness of the over denture
c- pain symptoms for unfitted bar
d- unfited bar show increase in the occlusal vertical dimension
e- none of the above

41- The advantage of a hex abutment is:
a- decrease subginigval cement leakage
b- provide antirotation mechanism which can decrease screw loosening
c- more precise fitness with the implant
d- decrease stress to the adjacent crestal bone
e- b&c

42- The sign of an overloaded implant is:
a- abutment screw loosening
b- crown decementation
c- progressive crestal bone resorption
d- crown porcelain chip of
e- all of the above

43- A one- piece abutment has the advantage of:
a- elimenate abutment screw loosening problem
b- can be used in direct and indirect abutment preparation
c- angled implant
d- for better emergence profile
e- all of the above

44- The advantage of an individual loaded (stud) implant over a bar- connecting implant in an implant overdenture is:
a- less cost
b- less restorative space required
c- improve hygiene access
d- doesn't needs high level of lab work
e- all of the above

45- In a case of a fully edentulous patient who needs an implant overdenture but has a limited occlusal vertical dimension, the best treatment approach is:
a- screw retained bar rather than cemented
b- open the patient vertical dimension
c- lowering the alveolar ridge by osteotomy
d- fabricate a denture over a stud
e- all of the above

46- The primary support area in the maxillary edentulous ridge is:
a- posterior ridge
b- rugae area
c- flat area of the palate
d- anterior ridge
e- a&c

47- The primary support area in the mandibular edentulous ridge is:
a- mylohyoid ridge
b- buccal shelf area
c- anterior ridge
d- posterior ridge
e- b&d

48- A tray for the upper edentulous arch should cover:
a- hamular notch
b- retromolar area
c- part of the soft palate
d- maxillary tuberosity
e- a&d

49- A tray for the lower edentulous arch should cover:
a- external oblique ridge
b- internal oblique ridge
c- retromolar pad
d- ptyrego- mandibular raphe
e- a&d

50- The mucostatic impression technique refers to:
a- taking the impression under compression
b- taking the impression with border moulding
c- to register the functional mobile tissue
d- impression taken during patient smiling and pouching
e- none of the above

51- The functional impression technique refers to:
a- impression technique of tissue under different degrees of mobility
b- impression registration the basal seat
c- impression register the implant post area
d- mucostatic impression registration
e- b&c

52- The best type of soft tissue to support a removable prosthesis is:
a- none- keratinized mucosa
b- lining mucosa
c- flappy
d- keratinized mucosa
e- none of the above

53- The goal of placing tissue stops in a customized impression tray is to:
a- create a space on the future denture
b- create adequate space for the impression material
c- prevent over seating of the tray
d- to allow registration of the basal seat more accurately
e- b&c

54- For a lower arch implant over a denture impression, the following anatomical structure should be recorded:
a- retromolar pads
b- all frena attachments
c- vestibular sulcus
d- retro mylohyoid space
e- all of the above

55- The following factor is critical when taking an impression of equigingival and subgingival abutment margins:
a- hemostasis
b- gingival retraction
c- ginigval biotype
d- abutment angulation
e- a&b

56- The single cord technique for a gingival retraction procedure is indicated when:
a- deep subgingival margin
b- equigingival and suprgingival margin
c- thick gingival tissue
d- friable tissue
e- b&d

57- A custom tray has advantages over a stock tray:
a- enable better impression–material flow
b- accurate impressions
c- less impression material
d- more comfortable for patients
e- all of the above

58- The criteria for the impression material selected for implant crown and bridge fabrication are:
a- dimensionally stable for a reasonable time needed
b- adequate working time
c- flowability
d- sufficient tear strength
e- all of the above

59- Impression material flowability is affected by:
a- impression material working time
b- surface contact angle
c- hydrophilicity and wettability
d- type of the surface
e- all of the above

60- The precision of an impression material is required to replicate:
a- 5- micron line
b- 20- micron line
c- 40- micron line
d- 50- micron line
e- 30- micron line

61- Patients with sleep bruxism have signs or symptoms of:
a- jaw pain
b- limitation mouth opening
c- headache
d- abfraction teeth
e- all of the above

62- The more favorable mouth guard design for protection of the posterior implant in a patient with sleep bruxism is one that covers the anterior teeth and may allow occlusal contact on the incisor teeth:
a- to increase the activity of the muscle of mastication
b- to increase the vertical occlusal dimension
c- to guide the patient for the new safe occlusion
d- elevator muscle activity is decreased while clenching on an anterior teeth contact only
e- b&c

63- During fabrication of a mouth guard to protect the posterior implant in a patient with sleep bruxism, the following should be checked:
a- bite registration
b- ensure that with all excursive movements the incisors remain in contact with the occluding
c- maximum protrusive distance
d- vertical measurement
e- all of the above

64- A soft mouth guard is not recommended for a patient with sleep bruxism because:
a- difficult to fit precisely
b- dimensional change in hot and cold
c- may increase bruxism
d- fructure easily
e- all of the above

65- The type and design of a prosthesis for an upper edentulous arch are affected by:
a- number of the implant
b- lip line
c- vertical occlusal distance
d- bone availability
e- all of the above

66- The type and design of a prosthesis for a lower edentulous arch are affected by:
a- interforaminal distance
b- anterio- posterior implant distance
c- vertical occlusal distance
d- bone availability
e- all of the above

67- The gingival zenith of the upper lateral incisor is located:
a- below canine and with the same level of the central incisor
b- below canine and central incisor
c- above central incisor and with same level of canine
d- above central incisor and canine
e- none of the above

68- The gingival zenith position for the lateral incisors shows a mean average of 0.4 mm. The canine tooth group demonstrates almost no deviations of the zenith position from the midline of the tooth, while for the central incisors:
a- 1 mm distal from the vertical mid line
b- no deviation from the mid line
c- 0.2mm mesial from the vertical mid line
d- 1 mm mesial from the vertical mid line
e- none of the above

69- A provisional fixed restoration in a dental implant has all of the following advantages except:
a- guides peri- implant soft- tissue healing
b- patient aesthetic satisfaction
c- enhance implant stability and osseointegration
d- improve patient adaptation for the new prosthesis
e- reduce the treatment period and surgeries

70- Using the patient's existing removable complete denture prosthesis to fabricate the immediate fixed provisional restoration will provide:
a- prevent over loading of the implant
b- occlusal contacts and vertical dimension guidance
c- consume time
d- maintain patient aesthetic

71- Repeated abutment dis/reconnections at short intervals will cause:
a- abutment screw disfigurement
b- compromise the mucosal barrier
c- gap creation between the abutment and implant shoulder
d- crestal bone level changes
e- b&d

72- A major advantage of zirconium dioxide over conventional Ti abutments is:
a- casting fitness
b- strength
c- aesthetic benefits
d- reduced bacterial adhesion
e- c&d

73- Undetected cement excess during cementation will be affected by:
a- crown shape
b- abutment angulation
c- abutment design
d- the marginal level of the abutment
e- all of the above

74- To reduce the dimensional changes during an impression procedure, the following impression material is recommended:
a- alginate
b- zinc phosphate
c- additional silicone
d- condensation silicone
e- polyether

75- To reduce the dimensional changes during a cast fabrication procedure, the following material is recommended:
a- die type I
b- die type II
c- die type III
d- die type IV
e- epoxy

76- The purpose of the buccal groove on a solid abutment is:
a- act as a crown resistance measure
b- to accommodate the excess cement
c- to prevent mesio- distal crown dislodgment
d- is to prevent bucco- lingual crown dislodgment

77- Which of the following can decrease the stress and resorption on crestal bone:
a- cemented crown
b- screw crown
c- one piece abutment
d- mutiple piece abutment
e- a&c

78- The advantage of a distal cantilever in a fully edentulous arch is:
a- reduce expenses
b- reduce treatment time
c- avoid extensive surgical procedures
d- avoid vital anatomical structures
e- all of the above

79- A poor fit between the framework and the implant has been shown to cause mechanical and biological complications, including:
a- loosening of the framework prosthetic and abutment screws
b- marginal bone loss
c- fracture of the various prosthetic components
d- pain and tenderness
e- all of the above

80- Factors that affect prosthetic framework distortion include:
a- implant level
b- impression technique
c- abutment type
d- increase the length of the prosthesis
e- all of the above

81- For a lower overdenture prosthesis on 2 implants, the implant position should be:
a- premolar area
b- canine area
c- lateral incisors
d- central incisors
e- one on canine and another one on lateral incisor area

82- An overdenture prosthesis is not recommended in young patients because:
a- aesthetically unpleasant
b- continuous bone resorption
c- adaptation would be difficult
d- lack of sufficient occlusal vertical dimension
e- all of the above

83- The attachment for a Hader bar requires _____ space between it and the adjacent implant:
a- 4mm
b- 6mm
c- 3mm
d- 2mm
e- none of the above

84- The highest force exerted during occlusion occurs when a dental implant opposes:
a- natural teeth
b- removable denture
c- dental implant
d- fixed prosthesis
e- none of the above

85- According to the normal occlusal scheme, the only teeth subjected to angulated loading during closure are:
a- lower anterior teeth
b- upper premolars
c- lower premolars
d- lower first molar
e- none of the above

86- Regarding the subperiosteal implant, all of the following are true except:
a- indicated only in the complete edentulous ridges
b- more predictable in the mandible
c- indicated in lower square arch form
d- extend to the ramus for primary support
e- eliminate cantilevers in the posterior of prosthesis

87- An increase or decrease in the occlusal vertical dimension in a fully edentulous patient can affect:
a- patient face profile
b- direction of occlusal force
c- mandibular- maxillary jaw relationship
d- patient speech
e- all of the above

88- To increase the crown height space in an implant site, the following can be performed:
a- enameloplasty of the opposing tooth
b- alveoloplasty at the time of surgery
c- soft tissue reduction for the thick gingival tissue
d- subgingival crown margin and/or subcrestal implant placement
e- all of the above

89- factor that can determine the length of a posterior cantilever section on a fully edentulous prosthesis include:

a- parafumction patient occlusion

b- bone density

c- increase in crown height space

d- opposing arch

e- all of the above

90- For a fully upper edentulous patient with reduced ridge height and a high smile line, the best treatment approach is:

a- hybrid prosthesis with pink porcelain

b- bone graft augmentation in width and height dimension and place implant in optimum condition

c- porcelain fused to metal bridge on implant with long crowns

d- acrylic over denture on implant

e- b&d

91- A temporization plan for a fully edentulous patient can be implemented by using:

a- remaining natural teeth (before extraction) as transitional abutment

b- over denture on mini implant

c- conventional denture

d- immediate denture on implant (additional implant placed for immediate loading, while the rest is submerged)

e- all of the above

92- The cantilever in a posterior partial edentulous bridge should follow the principle of:

a- cantilever placed anterior rather than posterior

b- the distance of the cantilever should be less than the distance between 2 adjacent implant

c- no parafunctional occlusion

d- all of the above

e- none of the above

93- To increase the mobility of a mandibular implant overdenture, the following should be used:

a- bar with clip attachment

b- independent O- ring attachment

c- attachment placed in angle to the bath of movement

d- use golden attachment

e- a&c

94- To decrease the mobility for of a mandibular implant overdenture, the following should be used:
a- bar with clip attachment
b- independent O- ring attachment
c- attachment placed in angle to the bath of movement
d- bar with O- ring attachment
e- a&c

95- To increase the vertical movement of a mandibular implant overdenture, the following should be used:
a- dolder bar with spacer
b- hader bar with O- ring
c- independent O- ring
d- hader bar with clip attachment
e- b&c

96- Increasing the mobility of a mandibular implant overdenture is recommended when:
a- sufficent number of implant
b- tapered arch form
c- insufficient posterior ridge support
d- sufficient posterior ridge support
e- a&b

97- Factors that might affect the movement of a removable implant overdenture include:
a- type of attachment
b- type and shape of the posterior ridge
c- direction of the clip attachment
d- number of implant and implant position
e- all of the above

98- To reduce the stress on the implant in a lower fully edentulous patient treated with an implant overdenture, the following should be considered:
a- the implant should be connected to a bar
b- allow more denture movement and rotation
c- loading with long axis of the implant
d- allow soft tissue support and minimise cantilever
e- all of the above

99- The disadvantages of a bar super structure compared to the independent stud or O-ring overdenture implant in a fully edentulous ridge include all of the following except:
a- increase stress on the individual implant
b- need more crown height space
c- gingival over growth under the bar and difficult to clean
d- higher cost
e- technique sensitive and difficult to achieve passive fitness

100- The advantage of a Hader bar is:
a- allow denture vertical movement
b- allow more denture movement and rotation
c- need less crown height space
d- more flexible
e- a&d

101- The indication for a direct impression technique (abutment level) is:
a- in customised abutment case
b- implant overdenture
c- supra gingival level abutment
d- for esthetic need
e- all of the above

102- Factors that affect the superstructure bar design (O- ring vs. clip attachment) include:
a- number of implant
b- crown height space
c- type and amount of denture movement
d- type of bar system
e- b&c

103- The muscle that is responsible for the mandible torque movement during closure is:
a- medial pterygoid muscle
b- masseter muscle
c- lateral pterygoid muscle
d- temporalis muscle
e- a&d

104- For an anterior cantilever estimate in a fully edentulous maxillary ridge, the AP distance is measured from _____ to _____:
a- the posterior aspect of the most distal implant to the anterior aspect of the most anterior implant
b- the center of the most distal implant to the center of the most anterior implant
c- the center of the most distal implant to the anterior aspect of the most anterior implant
d- the anterior aspect of the most distal implant to the anterior aspect of the most anterior implant
e- the posterior aspect of the most distal implant to the posterior aspect of the most anterior implant

105- The most favorable arch form in the anterior cantilever of an upper edentulous ridge with less stress is:

a- square arch form
b- tapered arch form
c- oval arch form
d- triangular
e- a&b

106- Placing the implant in the premaxillary edentulous area (Kennedy class IV) has the following risk:

a- palatal placed implant
b- increase in the crown height space
c- soft bone and thin buccal plate
d- corwn would be subjected to angulated force
e- all of the above

107- In pronunciation the linguoalveolar letter is:

a- V
b- N
c- J
d- T
e- G

108- To determine the relationship between the upper lip level during resting and the upper anterior teeth, the following tooth should be used as a guide:

a- first premolar
b- central incisor
c- canine
d- lateral incisor
e- d&b

109- The guide for positioning the upper central incisor in an edentulous maxilla is its relationship to the incisive foramen, which is:

a- 12.5mm from the posterior border
b- 12 from the anterior border
c- 10 mm form the anterior border
d- 13 from the anterior border
e- 10mm from the posterior border

110- Reverse smile occurs when:

a- lateral incisor does not show during maximum smiling
b- lateral incisor occupied more space than the canine during smiling
c- lateral incisor occupied more space than central incisor during smiling
d- central incisor occupied more space than lateral incisor during smiling
e- canine occupied more space than central incisor during smiling

111- Camper's line refers to:
a- line drawn between two hamular notch
b- ala- tragal line in the orthognathic profile patient
c- inter pupil line
d- line drawn from the tip of the lower canine to the retromolar area
e- none of the above

112- At the time of implant restoration, which of the following criteria should exist:
a- implant ridgidity
b- keratinized tissue collar
c- probing depth should be less than 4mm
d- the distance between the crestal bone and abutment shoulder is within 1.5mm
e- all of the above

113- All of the following should be consider during the prosthetic stage for an implant in the esthetic zone except:
a- esthetic abutment
b- start with provisional crown before the definite for gingival growth enhancement
c- anatomical customized abutment
d- abutment level impression after abutment preparation
e- subginival crown margin

114- Prosthetic preventive measures to decrease abutment screw loosening include all of the following except:
a- screw stretching (repeated tighten and loosening)
b- bone level implant should be chosen
c- abutment screw should be long and large
d- hex abutment should be chosen
e- prevent angulated force

115- The advantages of a single- tooth implant replacement over other prosthetic options include all of the following except:
a- patient can maintain better oral hygiene
b- enhance the efficacy of mastication of the posterior teeth
c- less invasive and time consuming
d- preserve bone from resorption
e- preserve tooth structure of the adjacent sound teeth

116- For a posterior single implant, the abutment of choice is:
a- hex 2 pieces abutment
b- non hex 2 pieces abutment
c- one piece abutment
d- zirconia abutment
e- UCLA abutment

117- The midline in an edentulous patient should be:
a- in the mid of the philtrum
b- mid of the incisive papillae
c- achieve parallelism with long axis of the face
d- perpendicular to the incisal plane
e- all of the above

118- An implant in the esthetic zone may be placed more palatally because:
a- narrow bone ridge
b- cemented retained crown
c- achieve the emergence profile
d- screw retained crown
e- a&d

119- The drawback of shallow implant placement (less than 3 mm from the marginal gingiva) in the esthetic zone is:
a- crestal bone resorption
b- sever emergence profile angle
c- ridge lab crown
d- gingival recession
e- all of the above

120- The drawbacks of deep implant placement (more than 3 mm from the marginal gingiva) in esthetic zone include all of the following except:
a- increase sulcular depth
b- crestal bone resorption
c- short emergence profile distance
d- gingival recession
e- increase crown length

121- According to Kois, the five diagnostic elements required before immediate placement of an implant in the esthetic zone include all of the following except:
a- tooth position
b- level of the alveolar crest before extraction
c- tooth shape
d- root shape
e- gingival biotype

122- The drawback of immediate implant placement in the esthetic zone is:
a- perforation of the palatal plate during implant osteotomy and implant placement
b- implant would not be placed in the optimum position
c- unstable gingival margin end with recession
d- always need for bone grafting to maintain the buccal plate
e- all of the above

123- The advantages of immediate implant placement in the esthetic zone include all of the following except:

a- palatal implant position enhance emergence profile of the crown
b- prevent bone and soft tissue from collapse
c- consume the time and cost
d- decrease the chance of hard and soft tissue augmentation in the future
e- more conservative and none invasive surgery (flapless)

124- Factors affecting abutment selection in the esthetic zone include:

a- gingival biotype
b- implant position
c- smile line
d- implant angulation
e- all of the above

125- The disadvantage of an anatomical abutment design is:

a- does not provide enough space for emergence profile
b- abutment flaring widely above implant
c- same diameter as implant
d- provide less surface for abutment preparation
e- a&d

126- In the esthetic zone, knife- edge abutment preparation can be performed in the following case:

a- thick gingival tissue
b- thin gingival tissue
c- facial placed implant
d- palatal placed implant
e- a&d

127- The following measure can help reduce the chance of subgingival existence of cement material during crown cementation:

a- placement of the retraction cord before cementation
b- gingival and supragingival margin of abutment is recommended
c- chamfer abutment finish line provide more space
d- less hard cement material (none resin cement)
e- all of the above

128- The indication for a one- piece abutment is:

a- when anatomical abutment needed
b- sever implant angulation
c- multiple unite implants
d- single implant
e- b&c

129- The advantage of a one- piece implant is:
a- better fitting to the implant shoulder
b- give more space for preparation
c- engage to the implant hexagon
d- more compatible with lab work
e- a&b

130- The abutment surface and design should avoid the following:
a- flat surfaces
b- rounded and tapered design
c- smooth surfaces
d- limiting the path of insertion of crown
e- b&c

131- The disadvantage of the direct impression technique (abutment level) is:
a- precise registration of the abutment margin in 360^0 is mandatory
b- difficult to register the subginigval margin abutment
c- risk of abutment break during the removal of the impression from the cast
d- impression material may extend beyond the abutment margin
e- all of the above

132- The selection of the cement material for a cemented crown depends on:
a- number of unite need to be cemented
b- type of abutment material
c- prosthetic design
d- easy of excess removal and working time
e- all of the above

133- The abutment screw loosens because:
a- screw factor (design, size, length, pretourque)
b- prosthetic factor (fitness of the prosthesis, design, cantilever, crown height space)
c- force factor (direction, magnitude, cycle)
d- implant factor (width, annulus design, hex or none, number)
e- all of the above

134- Cemented and screw crown prostheses are fabricated at the level of:
a- cemented at the level of abutment while screw is at the level of implant
b- both of them at the level of the implant
c- both of them at the level of abutment
d- cemented at the level of implant while screw is at the level of abutment
e- none of the above

135- An unfit abutment leads to a gap between the abutment and implant that may cause:
a- crestal bone resorption
b- accumulation of bacteria
c- abutment screw loosening
d- fructure of the abutment or its screw
e- all of the above

136- The advantage of a cemented prosthesis over a screw- retained prosthesis is:
a- more esthetic for crown in the esthetic zone
b- can fit more passively
c- less lab technique sensitive
d- provisional crown with anatomical abutment can enhance soft tissue contouring
e- all of the above

137- The advantages of a screw- retained prosthesis over cemented one include all of the following except:
a- can be fabricated with less crown height space
b- easier in retrievability
c- more safe for the adjacent soft tissue
d- decrease stress to the underlying abutment
e- eliminate the problem of unfitted crown on the abutment due to cement factor

138- When replacing a fully edentulous upper with an implant opposing natural teeth, the occlusion scheme is:
a- regenerative occlusion
b- compensating occlusion
c- related occlusion
d- follow occlusion
e- none of the above

139- The occlusion rehabilitation in an implant patient differs from natural teeth occlusion, even in a normal occlusion patient, because:
a- limited crown height space
b- implant- bone relation
c- bone resorption
d- implant angulation
e- c&d

140- For the occlusion of a single posterior implant, all of the following should be considered except:
a- health and mobility of the adjacent teeth
b- cusp to fossa relation of the adjacent teeth and implant
c- compensating curve
d- canine guidance
e- surface anatomy of the implant crown

141- For the occlusion of an upper anterior single implant, all of the following should be considered except:
a- group of function occlusion
b- over bite
c- incisal guidance
d- canine guidance
e- cingulum position in centric occlusion for the implant crown

142- In a case of a single upper canine replacement, the occlusal scheme should consider all of the following except:
a- no contact on protrusive
b- no contact on excusive movement
c- contact on centric occlusion
d- screw retained crown
e- premolar and lateral incisor will contact during excursive movement instead of canine

143- For a partially edentulous posterior replaced with an implant with missing canine guidance, the solution for excursion movement is:
a- incisal guidance
b- anterior guidance
c- centric occlusion
d- group of function
e- a&c

144- When replacing a fully edentulous upper with a fixed hybrid prosthesis with implants opposing natural teeth, the occlusion contact should be on:
a- shim stock stop on posterior teeth
b- shim stock pass through the anterior teeth
c- shim stock dragging on premolar region
d- cusp to fossa relation in the posterior teeth
e- all of the above

145- Factors that may affect the occlusion of a dental implant include all of the following except:
a- patient occlusion in centric and parafunction
b- implant angulation
c- type of agonist teeth (natural teeth, denture, implant)
d- position of the implant (anterior vs posterior)
e- type of prosthesis (movable, fixed, cantilever, partial, complet)

146- The criteria for an upper molar crown implant include all of the following except:
a- reduce the lingual contour to prevent offset load
b- central fossa placed above the implant
c- buccal cusp should be above the implant for better emergence profile
d- buccal should in in line with adjacent teeth for hygiene and esthetic purpose
e- occlusion contact on the central fossa

147- For immediately loaded implants the prosthetic design should consider all of the following except:

a- eliminate any cantilever

b- night guard for parafunctional forces

c- loading only with the long axis of the implant

d- wider occlusal table

e- cross arch connecting implants

148- The advantage of the concept of "one time one abutment" is:

a- enhance the stability of the soft tissue around implant

b- prevent crestal bone resorption

c- achieve better hemidesmosomes attachment between the abutment and surrounding attached gingival tissue

d- with provisional crown modification can shape marginal gingiva and inter- implant papillae

e- all of the above

149- Regarding a compensating curve in a fully edentulous occlusion, all of the following are true except:

a- mimics the curve of Spee in natural teeth

b- mimics curve of Wilson in natural teeth

c- can achieve bilateral balance occlusion

d- the greater the incisal guidance the shallow the compensating curve

e- a&c

150- Regarding an upper removable fully edentulous denture that opposes an implant prosthesis, all of the following should be considered except:

a- compensating curve in the posterior teeth

b- in excursion movement, anterior and posterior teeth should be in contact

c- during protrusive movement posterior teeth should be separate away and only anterior teeth come in contact

d- palatal cusp only come in contact in the central fossa of lower teeth

e- no anterior teeth contact in centric occlusion

151- To decrease the steepness of the incisal guidance in an upper removable denture opposing an implant prosthesis, the following guidelines should be followed:

a- increase the overjet and decrease the overbite

b- decrease the overjet and increase the overbite

c- decrease the overjet only

d- increase the overbite only

e- none of the above

152- A patient who underwent a replacement of six upper anterior teeth with an implant with a fixed bridge crossing the arch returned complaining of pain in the implant and a headache. This complication and symptoms are due to:

a- miss fit of the bridge
b- pontic impinge on the soft tissue
c- nasal floor perforation
d- impede the flexion of the mid- palatal suture, that impedes the flexion of the other cranial bones (cranial rhythm)
e- none of the above

153- The reasons for using temporary cement before permanent cement for definite crown and bridge prostheses on implants include all of the following except:

a- for any pain and discomfort after prosthesis issue visit
b- to choose the proper permanent type of cement in the future
c- to avoid stress on implant on the early stage
d- for aesthetic purpose (patient desire to change the color and tooth shape)
e- any occlusion discrepancies can be readjusted in the future

154- Prosthodontists prefer keratinized mucosa over non- keratinized mucosa around dental implants because:

a- colour harmony
b- can mask the metal shadow of abutment
c- abutment margin can be precisely located
d- give more support and can be retracted during impression procedure
e- c&d

155- In cases of an implant overdenture, the prosthetic overstructure may decrease the freeway space and lead to:

a- phonetic problem
b- aesthetic problem
c- functional problem
d- occlusal problem
e- all of the above

156- Abutment screw loosening is a common complication and has been reported with a single crown in:

a- premolar
b- canine
c- incisors
d- molar
e- a&d

157- An ill- fitting implant framework may lead to biological complications, include all of the following except:

a- abutment screw loosening
b- marginal bone loss
c- loss of integration
d- tenderness
e- pain

158- Excess cement on the implant or the surrounding soft tissues may cause a peri-implant infection or inflammation. The etiology may be:

a- acidic content of the cement
b- rough surface of the cement that retained bacteria
c- mechanical irritant of the surrounding periodontal tissue
d- excess cement will leave crown open margin that accumulate bacteria
e- none of the above

159- The advantages of a cement- retained prosthesis over a screw- retained prosthesis include:

a- better marginal fit
b- no adverse tissue reaction
c- lower bleeding index
d- less peri- implant bone loss
e- c&d

160- The advantages of a digital impression over a conventional one include all of the following except:

a- minimize distortion of impression materials
b- cost and time consuming
c- register the intraoral situation at early stages of osseointegration without disturbing the implant component
d- can scan the transmucosal abutment part
e- need less skill and experience

161- Advocate for keeping teeth vs extracting and placing implants because teeth provide:

a- proprioception
b- more resistance to oral pathology
c- adaptation under mechanical forces
d- esthetic
e- a&c

162- Advocate for extracting teeth and placing implants when all of the following are true except:

a- poor tooth prognosis
b- poor oral hygiene patient
c- loss of function
d- cost to maintain the tooth
e- sever traumatized tooth

163- Factors influencing the decision to preserve or extract teeth include all of the following except:

a- patient habit
b- patient medical condition
c- restorative factor
d- periodontal disease severity
e- endodontic factor

164- Strategic teeth in prosthodontics include:

a- first molar
b- second molar
c- central incisor
d- canine tooth
e- a&d

165- A concave transmucosal design (negative transmucosal profile) for implant abutments made entirely of biocompatible materials will induces include all of the following except:

a- increase thickness of soft tissue
b- more coronaly placed junctional epithelium
c- immobilizes the soft tissues
d- creating a mucosal O- ring that nonsurgically improves the biotype
e- allows more volume for the three dimensional biological space

166- A slightly overcontoured crown may have temporarily effects, with an ischemic reaction (white soft tissue) for approximately _____ . After this, the soft tissue should returned to its pink color

a- 10 to 15 minutes
b- 2 to 3 hours
c- 6 to 12 hours
d- 24 to 36 hours
e- 40 to 60 minutes

167- Factors affecting abutment selection in the nonesthetic zone include:
a- healing abutment diameter
b- implant diameter
c- gingival thickness
d- gingival height
e- a&d

168- The failure of complete seating of the crown during cementation is caused by:
a- tight proximal contact
b- inadequate cement space
c- inadequate pressure application while seating the crown
d- not following cement manufacturer's recommendations setting time
e- all of the above

169- Tissue conditioners are more resilient than soft liners, but soft liners are preferred because:
a- reduces the transmitted forces on the underlying tissues by 20% to 40%
b- no need for denture relief
c- serve for several weeks
d- acting as a cushion
e- all of the above

170- The overdenture thickness should be a minimum of _____ to ensure that enough denture material exists to accommodate the attachment and housing complex (LOCATOR)
a- 3mm
b- 6mm
c- 4mm
d- 8mm
e- none of the above

171- In multiple implant placements, the implant depth differences can be handled by using abutments of different lengths. The depth difference should be limited to:
a- 4mm
b- 5mm
c- 3.5mm
d- 2mm
e- none of the above

172- For a fixed restoration in a fully edentulous maxilla, the implants must be placed directly under the teeth. For a bar- retained prosthesis, the implants must be placed more palatally because more space is needed for the bar:

a- both sentences are correct

b- first sentence is correct while the second is incorrect

c- first sentence is incorrect and the second one is correct

d- both sentences are incorrect

173- When a dual- scan method is planned for an existing, well- fitted denture, the following should be performed:

a- acrylic denture impregnated with 10% to 20% barium sulfate

b- the denture is duplicated in clear acrylic

c- radiopaque markers in the labial and palatal flanges

d- radiopaque markers in the labial flange only

e- b&c

174- For bar overdenture in a fully edentulous maxilla, from prosthetic point of view, the reason for not placing an implant in the central incisor area is:

a- decrease anterior- posterior distance

b- avoid excessive bar bulk under the anterior maxilla

c- decrease occlusal vertical dimension

d- end with protrusive teeth

e- all of the above

175- For a bar overdenture in a fully edentulous maxilla, the factors that may lead to frequent denture fractures include all of the following except:

a- occluding against natural teeth

b- when the implant are placed more palatal

c- insufficient space for the acrylic material

d- occluding against implant supported prosthesis

e- when the denture teeth are protrusive

176- proposed bar overdenture has been recommended for a patient with a fully edentulous maxilla. However, due to financial limitations, the patient wishes to have a fixed prosthesis. Based on this, how should the implants be placed:

a- underneath the teeth

b- more palatal

c- avoid embrasure

d- submerged technique

e- a&c

177- The angled implant is not favorable from a mechanical point of view during loading but can still offer some advantages, including all of the following except:

a- eliminates the need for distal cantilevers
b- allow load distribution throughout the arch
c- less stress on the crestal bone
d- can use long implant that engage more cortical bone
e- viable alternative to bone grafting procedure

178- Zygomatic implants should be connected rigidly to the anterior implants shortly after exposure because:

a- probably integrate only zygomatic bone and not the palatal bone
b- to eliminate the anterior cantilever
c- sever angulation of the zygomatic implant
d- probably integrate only palatal bone and not the zygomatic bone
e- b&c

179- An implant placed in a vertical height diminished ridge will end with all of the following except:

a- short implant
b- narrow implant
c- long crown
d- less keratinized tissue and more movable soft tissue
e- vertical cantilever is increased

CORRECT ANSWER

Q 1
a- High 20%, low 20%, moderate 60%

Q2
d- the distance between the crestal bone and the crown contact area

Q3
a- centripetal

Q4
a- centripetal in the anterior region and centrifugal in the posterior region

Q5
d- distance between the implant threads

Q6
c- placed in poor bone density

Q7
e- b&d

Q8
e- a&b

Q9
e- all of the above

Q10
b- mobility differences between implants and teeth

Q11
e- all of the above

Q12
d- 3 to 5 µm

Q13
c- crestal bone

Q14
e- all of the above

Q15
a- the length of anatomical crown (until the implant shoulder)/ implant length

Q16
e- b&c

Q17
e- all of the above

Q18
d- disclusion in eccentric movements

Q19
b- Group of function occlusion

Q20
a- shim stock (8–30 µm) passing through

Q21
c- insufficient room for the crown to emerge from the tissue

Q22
e- c&d

Q23
e- all of the above

Q24
a- the bicuspid teeth

Q25
b- 5mm from the gingival tissue to the opposing occlusion

Q26
a- 14mm

Q27
c- preserved the bony tissue from resorption

Q28
d- abutment screw loosening

Q29
e- all of the above

Q30
c- early extraction of 4 incisors and persistence of canines

Q31
d- 1:1.5

Q32
a- the distal surface of the most distal implant to the central of the anterior implant

Q33
e- all of the above

Q34
e- a&b

Q35
e- b&c

Q36
d- tapered arch shape

Q37
e- all of the above

Q38
e- all of the above

Q39
e- all of the above

Q40
a- single screw method

Q41
e- b&c

Q42
e- all of the above

Q43
a- elimenate abutment screw loosening problem

Q44
e- all of the above

Q45
e- all of the above

Q46
e- a&c

Q47
e- b&d

Q48
e- a&d

Q49
c- retromolar pad

Q50
e- none of the above (impression technique of undisturbed and uncompressed tissue)

Q51
a- impression technique of tissue under different degrees of mobility

Q52
d- keratinized mucosa

Q53
e- b&c

Q54
e- all of the above

Q55
e- a&b

Q56
e- b&d

Q57
e- all of the above

Q58
e- all of the above

Q59
e- all of the above

Q60
b- 20- micron line

Q61
e- all of the above

Q62
d- elevator muscle activity is decreased while clenching on an anterior teeth contact only

Q63
e- all of the above

Q64
c- may increase bruxism

Q65
e- all of the above

Q66
e- all of the above

Q67
b- below canine and central incisor

Q68
a- 1 mm distal from the vertical mid line

Q69
c- enhance implant stability and osseointegration

Q70
b- occlusal contacts and vertical dimension guidance

Q71
e- b&d

Q72
e- c&d

Q73
d- the marginal level of the abutment

Q74
c- additional silicone

Q75
d- die type IV

Q76
c- to prevent mesio- distal crown dislodgment

Q77
e- a&c

Q78
e- all of the above

Q79
e- all of the above

Q80
d- increase the length of the prosthesis

Q81
a- premolar area

Q82
b- continuous bone resorption

Q83
b- 6mm

Q84
c- dental implant

Q85
e- none of the above (upper anterior teeth)

Q86
a- indicated only in the complete edentulous ridges

Q87
e- all of the above

Q88
e- all of the above

Q89
e- all of the above

Q90
e- b&d

Q91
e- all of the above

Q92
e- all of the above

Q93
b- independent O- ring attachment

Q94
e- a&c

Q95
a- dolder bar with spacer

Q96
c- insufficient posterior ridge support

Q97
e- all of the above

Q98
e- all of the above

Q99
a- increase stress on the individual implant

Q100
c- need less crown height space

Q101
d- for esthetic need

Q102
e- b&c

Q103
b- masseter muscle

Q104
c- the center of the most distal implant to the anterior aspect of the most anterior implant

Q105
a- square arch form

Q106
e- all of the above

Q107
d- T

Q108
c- canine

Q109
a- 12.5mm from the posterior border

Q110
c- lateral incisor occupied more space than central incisor during smiling

Q111
b- ala- tragal line in the orthognathic profile patient

Q112
e- all of the above

Q113
d- abutment level impression after abutment preparation

Q114
b- bone level implant should be chosen

Q115
c- less invasive and time consuming

Q116
a- hex 2 pieces abutment

Q117
e- all of the above

Q118
e- a&d

Q119
b- sever emergence profile angle

Q120
c- short emergence profile distance

Q121
d- root shape

Q122
b- implant would not be placed in the optimum position

Q123
a- palatal implant position enhance emergence profile of the crown

Q124
e- all of the above

Q125
b- abutment flaring widely above implant

Q126
e- a&d

Q127
e- all of the above

Q128
c- multiple unite implants

Q129
e- a&b

Q130
e- b&c

Q131
e- all of the above

Q132
e- all of the above

Q133
e- all of the above

Q134
a- cemented at the level of abutment while screw is at the level of implant

Q135
e- all of the above

Q136
e- all of the above

Q137
d- decrease stress to the underlying abutment

Q138
c- related occlusion

Q139
b- implant- bone relation

Q140
c- compensating curve

Q141
a- group of function occlusion

Q142
d- screw retained crown

Q143
d- group of function

Q144
e- all of the above

Q145
b- implant angulation

Q146
c- buccal cusp should be above the implant for better emergence profile

Q147
d- wider occlusal table

Q148
e- all of the above

Q149
e- a&c

Q150
c- during protrusive movement posterior teeth should be separate away and only anterior teeth come in contact

Q151
a- increase the overjet and decrease the overbite

Q152
d- impede the flexion of the mid- palatal suture, that impedes the flexion of the other cranial bones (cranial rhythm)

Q153
c- to avoid stress on implant on the early stage

Q154
e- c&d

Q155
e- all of the above

Q156
e- a&d

Q157
a- abutment screw loosening

Q158
b- rough surface of the cement that retained bacteria

Q159
e- c&d

Q160
d- can scan the transmucosal abutment part

Q161
e- a&c

Q162
b- poor oral hygiene patient

Q163
a- patient habit

Q164
e- a&d

Q165
b- more coronaly placed junctional epithelium

Q166
a- 10 to 15 minutes

Q167
e- a&d

Q168
e- all of the above

Q169
c- serve for several weeks

Q170
b- 6mm

Q171
d- 2mm

Q172
a- both sentences are correct

Q173
e- b&c

Q174
b- avoid excessive bar bulk under the anterior maxilla

Q175
b- when the implant are placed more palatal

Q176
e- a&c

Q177
c- less stress on the crestal bone

Q178
a- probably integrate only zygomatic bone and not the palatal bone

Q179
b- narrow implant

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Chapter 10

MAINTENANCE

1- Failing implant are characterized clinically by:
a- increased mobility, periimplant radioluceny, probing depth more than 6 mm
b- increased mobility, periimplant radioluceny, probing depth more than 4 mm
c- increased mobility, peri- implant gingival swelling, probing depth more than 5 mm
d- increased mobility, sinus discharge, probing depth more than 5 mm
e- none of the above

2- Long- term studies have shown that peri- implantitis occurs more frequently in patients who are:
a-periodontally compromised
b-diabetic
c-cigarette smokers
d-implant covered with non- keratinized mucosa
e-a&c

3- The non invasive method to detect crestal bone resorption on lingual and buccal side of the implant by using:
a- probing
b- periapical radiograph
c- resonance frequency analysis
d- surgical exposure
e- none of the above

4- The annual bone loss after the first year of implant function should be no more than:
a- 0.05mm
b- 0.2mm
c- 0.5mm
d- 0.8mm
e- 1mm

5- The drawback of placing implant too labial in the upper anterior area (aesthetic zone), all true except:

a- labial bone resorption
b- gingival recession
c- metal show and darkening the gingival margin
d- ridge lab crown needed
e- crown limited to cemented crown

6- The disadvantage of hydroxyapatite coating surface implant is:

a- surface detachment with high torque implant placement
b- high surface roughness prevent osteoblast attachment
c- surface coating resorption in acidic media
d- functional surface area reduced
e- a&c

7- To avoid scratching and roughening the titanium implant abutment surface, the scaling instruments should be made of:

a- diamond
b- hard plastic
c- stainless steel
d- titanium
e- b&d

8- Progressive marginal bone loss or ‘Saucerization’ because of:

a- peri- implantitis
b- using wide diameter implant
c- overloading of the implant
d- coronal microthread implant design
e- a&c

9- Implantogingival and dentogingival tissues had a similar reaction to plaque formation, except:

a- inflammatory cells
b- collagen density
c- density of fibroblasts
d- epithelial proliferation
e- none of the above

10- Fistula tract lesions have been found mostly at the level of the implant/abutment connection, the cause of these lesions is:

a- loose or fractured abutment screw
b- crestal bone resorption
c- crown decemtation
d- implant failurity
e- b&d

11- After one year of loading, implant failure should be attributed to:
a- surgical failure
b- overloading
c- peri- implantitis
d- osseointegration failure to achieve
e- b&c

12- Implant failure that occurs during the first 3–6 months of loading, because of:
a- mechanical loading
b- failure to establish osseointegration
c- surgical cause
d- peri- implant gingivitis
e- a&c

13- Patient education and home care after prosthesis delivery for dentate and edentulous patient should focus on:
a- hygiene of the natural teeth and/or implant
b- hygiene of the surrounding tissue
c- hygiene of prosthesis
d- all of the above

14- The accuracy of the probing measurement can be affected by:
a- prosthetic design
b- implant angulation
c- gingival hyperplasia
d- loss of reference point
e- all of the above

15- The purpose of gingival probing during implant follow up is to evaluate:
a- bleeding
b- exudate
c- tissue consistency
d- pocket depth
e- all of the above

16- Which of the following has high percentage of denture related stomatitis:
a- conventional acrylic denture
b- conventional chrome- cobalt denture
c- bar- retained overdenture
d- stud- retained over denture
e- none of the above

17- Bar over denture on implant has cleaning difficulty during the maintenance period, because of:

a- gingival overgrowth under the bar
b- bar roughness
c- lingualized placed bar
d- limited space between implant abutment
e- all of the above

18- Implant need to be removed when the mobility is more than:

a- 0.05mm
b- 0.1mm
c- 0.3mm
d- 0.5mm
e- none of the above

19- Pain and patient discomfort with dental implant can be related to:

a- nerve encroachment by implant
b- soft tissue entrapped between the implant body and abutment
c- mobile implant
d- overloaded implant
e- all of the above

20- keratinized mucosa is preferred over non- keratinized mucosa around dental implant because of:

a- resist abrasion
b- resist gum recession
c- decrease probing depth
d- can fill the interdental papillae
e- all of the above

21- When bone resorption around implant occurs the thick gingival tissue will:

a- form a pocket
b- recessed following the bone
c- will remain stable and healthy
d- over grow
e- none of the above

22- Periodontal involved tooth adjacent to dental implant may has adverse effect on the dental implant through:

a- increase the crown length
b- implant solely loaded
c- infection may spread to the implant
d- all of the above

23- The non- surgical therapy for the treatment of peri- implantities may be rendered ineffective because of:

a- cause damage to the implant surface
b- adverse tissue reaction
c- limit access to infected sites
d- need skill and special instruments
e- all of the above

24- Decontamination methods used to decontaminate the implant surface involved with peri- implantities, all true except:

a- air- powder abrasion
b- collagen membrane
c- citric- acid application
d- laser therapy
e- peroxide treatment

25- The treatment of choice in peri- implantities case is:

a- open surgery, debridement, bone grafting and collagen membrane
b- laser decontamination
c- conservative debridement (non surgical)
d- open surgery and collagen membrane
e- none of the above

26- The type of bacteria in peri- implant lesions are similar to deep periodontal pockets, but peri- implantitis treatment prognosis is much less predictable, because of:

a- less blood supply
b- unknown anatomy
c- none well- defined surface structure
d- limited access to the site
e- b&c

27- The early signs of peri- implantities (mucositis) is:

a- purulence
b- oedem and bleeding on probing
c- bone loss
d- gingival recession
e- all of the above

28- Triple therapy is recommended in the case of peri- implant mucosities, which is:

a- mechanical debridement + chlorhexidine (0.12%) irrigation + 2% tetracycline gel, repeated one times within a two- week period
b- mechanical debridement + chlorhexidine (0.12%) irrigation + 2% minocycline gel, repeated 4 times within a 4- week period
c- mechanical debridment + chlorhexidine (0.12%) irrigation + 2% tetracycline gel, repeated three times within a four- week period

d- mechanical debridement + chlorhexidine (0.2%) irrigation + 2% minocycline gel, repeated 3 times within a two- week period
e- mechanical debridement + chlorhexidine (0.12%) irrigation + 2% minocycline gel, repeated 3 times within one month period

29- The following should be considered to avoid peri- implant infection and inflammation:
a- occlusion should be checked and adjusted
b- adequate buccal bone thickness
c- careful use of cement material
d- proper prosthesis design for better patient maintenance
e- all of the above

30- Peri- implantities has many etiological factors one of these is the implant itself, like:
a- implant design
b- implant surface
c- implant position
d- implant annulus
e- all of the above

31- peri- implantities has many etiological factors one of these is the patient himself, like:
a- periodontal disease
b- bone volume
c- bone density
d- soft tissue
e- all of the above

32- peri- implantities has many etiological factors one of these is the foreign body reaction, like:
a- bioactive implant surface
b- inert implant surface
c- provesional crown
d- excess cement
e- all of the above

CORRECT ANSWERS

Q1
a- increased mobility, periimplant radioluceny, probing depth more than 6 mm

Q2
e- a&c

Q3
a- probing

Q4
b- 0.2mm

Q5
d- ridge lab crown needed

Q6
e- a&c

Q7
e- b&d

Q8
e- a&c

Q9
c- density of fibroblasts (there is decreases in the fibroblast density in inflamed dentogingival tissues, while the density around the implants the same as that found around healthy implant tissues)

Q10
a- loose or fractured abutment screw

Q11
e- b&c

Q12
b- failure to establish osseointegration

Q13
d- all of the above

Q14
e- all of the above

Q15
e- all of the above

Q16
c- bar- retained overdenture

Q17
a- gingival overgrowth under the bar

Q18
d- 0.5mm

Q19
e- all of the above

Q20
e- all of the above

Q21
a- form a pocket

Q22
d- all of the above

Q23
c- limit access to infected sites

Q24
b- collagen membrane

Q25
a- open surgery, debridement, bone grafting and collagen membrane

Q26
e- b&c

Q27
b- oedem and bleeding on probing

Q28
d- mechanical debridement + chlorhexidine (0.2%) irrigation + 2% minocycline gel, repeated 3 times within a two- week period

Q29
e- all of the above

Q30
b- implant surface

Q31
e- all of the above

Q32
d- excess cement

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