

Final Examination - D373 Principles of Periodontology I, fall, 2005

Instructions: Select the single best answer for each question and enter response onto the computer bubble sheet, onto which you also enter your name and the last 4 digits of your student number. You have 60 minutes to complete the examination. You must turn in both this examination copy and your answer sheet.

1. What is the core objective of Basic Periodontal Therapy?

- A. To restore gingival health by removing elements (microbial plaque & calculus) that provoke gingival inflammation.
- B. Pocket elimination surgery.
- C. Basic therapy is an evaluative procedure to determine the periodontal status of a patient.
- D. Strictly limited to the use of medication(s) to treat periodontal problems.

2. What is the major advantage of ultrasonic scalers over hand instruments?

- A. Disperse biofilms via cavitation
- B. Effective removal of subgingival plaque and calculus
- C. Reduced clinician fatigue
- D. All of the above represent major advantages of ultrasonic scalers

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3. The scaling stroke of the periodontal hand instrument is a:

- A. short, powerful, pull stroke used with bladed instruments.
- B. light, "feeling", stroke used with probes and explorers.
- C. moderate to light pull stroke used for smoothing.
- D. pushing motion advocated by many clinicians.

4. Which of the following instruments is preferably used to scale maxillary incisors?

- A. Gracey 1/2 curette
- B. Gracey 5/6 curette
- C. Chisel
- D. Periodontal probe

5. Which curette is designed for buccal and lingual surfaces of max/mand premolars and molars?

- A. Gracey 1/2
- B. Gracey 3/4
- C. Gracey 5/6
- D. Gracey 7/8

6. Which of the following is true regarding Gracey curette modifications?

- A. After Five has an elongated terminal shank and thinner blade for deeper pockets.
- B. Mini Five has a shortened terminal shank and thinner/shorter blade for small narrow roots and deep narrow pockets.
- C. Langer curettes combine the sickle scaler shank pattern with the Columbia curette blade.
- D. all of the above

7. Plaque Control is defined as the removal of microbial plaque and the prevention of its accumulation on teeth and adjacent gingival surfaces. Plaque control includes both the appropriate use of a toothbrush and selected tools for interdental cleansing (dental floss/triangular-shaped wood plaque removers/interdental brushes).

➤ A. Both statements are true
B. The first statement is true and the second statement is false
C. The first statement is false and the second statement is true
D. Both statements are false

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8. During routine dental examination you notice a wedge-shaped notch at the gingival margin on the facial aspect of your patient's maxillary right premolars. You could probably assume that the patient:

A. has developed an allergic reaction.
B. is grinding his teeth.
➤ C. might be applying too much force when brushing and/or using an abrasive toothpaste.
D. has lost buccal restorations in the area.

9. Supportive treatment for periodontal maintenance should according to the Axelsson study include:

A. Instruction in methods of plaque control
B. Scaling and professional tooth cleaning
C. Fluoride prophylaxis
➤ D. All of the above

10. What was the average number of new cavities over three years in young/middle-aged/older patients following controlled maintenance treatment in the Axelsson study?

A. < 1
B. 2-3
C. 4-6
D. 8-10

31 answers were accepted for 310

11. What was the average number of new cavities over three years in young/middle-aged patients following normal yearly dental care without emphasis on plaque control in the Axelsson study?

A. < 1
B. 2-3
C. 4-6
D. 8-10

31 answers were accepted for 313

12. The Lindhe and Nyman 14-year study showed that periodontal disease predictably can be arrested in patients with severely advanced chronic or aggressive periodontal disease (> 50% bone loss), provided the teeth maintain stability and the patient is included in a maintenance program with emphasis on optimal plaque control. Pyrophosphates are antiseptic, anti-plaque agents.

A. Both statements are true

- B. The first statement is true and the second statement is false
- C. The first statement is false and the second statement is true
- D. Both statements are false

13. Your patient, a 22 year-old Caucasian female presents with painful ulcers on the labial gingival surfaces and keratinized oral tissues. There is no previous history of ulcers and she has a low grade fever and cervical lymphadenopathy. Which one of the following drugs would be contraindicated for treatment of this condition?

- A. topical benadryl solution
- B. topical steroids
- C. acyclovir capsules
- D. systemic antibiotics

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14. Your patient presents with a 1.5 mm ulcer in the mucobuccal fold opposite teeth #12 and #13. Both teeth have no restorations and no evidence of caries. The patient reports previous episodes of similar ulcers in the same and other parts of the mucobuccal folds. Which one of the following would be your presumptive diagnosis?

- A. recurrent herpes simplex
- B. minor apthae
- C. major apthae
- D. HIV-P

15. Which of the following is not consistent with a diagnosis of acute necrotizing ulcerative gingivitis?

- A. stress and anxiety
- B. localized necrosis and exposure of alveolar bone, with bone loss
- C. interproximal soft gingival tissue ulceration
- D. presence of a pseudo membrane

16. Which of the following would be included in the treatment of acute necrotizing ulcerative gingivitis?

- A. scaling and root planing
- B. systemic acyclovir drug therapy
- C. surgical resection of exposed necrotic alveolar bone
- D. connective tissue graft

17. Which of the following symptoms would not be consistent with a diagnosis of an acute periodontal abscess?

- A. tooth feels "high" in the socket
- B. pain
- C. necrotic pulp
- D. localized deep probing depth

18. Herpetic whitlock is best described by which of the following?

- A. Spread of herpes virus and lesion from the oral cavity to the eye.
- B. Spread of herpes virus and lesions from the oral cavity to the genitalia.
- C. Spread of herpes virus and lesions to the finger tips.
- D. all of the above

19. Neutrophil chemotaxis in gingival tissues involves:

- A. migration through vascular walls.
- B. secretion of lysosomal enzymes
- C. ingestion of individual plaque bacteria
- D. movement to particles (antigens)

20. Acute inflammation in gingival tissues:

- A. is a type of non-specific barrier defense.
- B. occurs in response only to specific infectious agents.
- C. involves situations where non-specific host barriers are penetrated.
- D. none of the above

21. In situations where a property of the dental plaque microbial flora benefits the host is an example of a:

- A. diapedesis effect.
- B. cellular barrier
- C. microbial barrier
- D. none of the above

22. PMN's play a pivotal role in host response against dental plaque bacteria. When PMN functions are compromised, the risk for Aggressive Periodontitis is significantly increased.

- A. The first statement is true and the second is false
- B. The first statement is false and the second is true
- C. Both statements are false
- D. Both statements are true

23. Numerous different environments within the oral cavity dictate the microbial barrier function of the immune response. These environmental factors include:

- A. Oxygen and/or anaerobic conditions
- B. pH
- C. Nutrient factors
- D. All of the above

24. A sixteen year old African-American female patient is sitting in your dental chair without a remarkable health history. Your clinical findings include bone loss around the first molars and incisor teeth with pocket formation around the same teeth. Your presumptive diagnosis is:

- A. Aggressive Periodontitis-Localized Juvenile type
- B. Periodontitis associated with Systemic Disease
- C. Chronic Periodontitis
- D. None of the above

25. Twin studies implicating genetic factors as important in periodontal disease find:

- A. the periodontal disease concordance rate is higher in monozygous twins as compared to dizygous twins.
- B. the periodontal disease concordance rate is higher in dizygous twins as compared to monozygous twins.
- C. non-aggregation of periodontitis within family units.
- D. none of the above

26. Which of the following is the best example of a single gene disorder predisposing to periodontitis?

- A. interleukin-1 polymorphism
- B. mutation of the cathepsin C gene on chromosome 11
- C. CD14-260T/T genotype polymorphism
- D. tumor necrosis factor- α

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27. IL-1 gene polymorphisms:

- A. regulate anti-inflammatory cytokine secretion from host cells.
- B. lead to 4x less IL-1 release from monocytes and macrophages in genotype positive subjects as compared to genotype negative individuals in response to the same bacterial challenge.
- C. are not significantly associated with periodontitis in smokers.
- D. none of the above

28. Shortcomings of current genetic testing in periodontics includes:

- A. no data indicating how best to alter a periodontal treatment plan if a patient is genotype positive for a particular genetic marker.
- B. the very high sensitivity and specificity of several genetic markers for identification of periodontitis risk in individual patients.
- C. the abundance of prospective research data conclusively demonstrating that predetermination of a genotype in healthy subjects leads to a higher risk of subsequent periodontitis development.
- D. all of the above

29. Which of the following genetic polymorphisms have been shown to be significantly associated with severe periodontitis in non-smoking adult patients who are culture-negative for both *Porphyromonas gingivalis* and *Actinobacillus actinomycetemcomitans*?

- A. CD14-260 and TLR3 gene polymorphisms
- B. IL-1 and CD14-260 gene polymorphisms
- C. Fc receptor and Vitamin D gene polymorphisms
- D. all of the above

30. Red complex microorganisms in subgingival dental plaque include:

- A. *Peptostreptococcus micros*, *Prevotella intermedia*, *Centipeda periodontii*
- B. *Porphyromonas loeschii*, *Fusobacterium nucleatum*, *Actinobacillus actinomycetes*

- C. *Tannerella forsythensis*, *Treponema denticola*, *Porphyromonas gingivalis*
D. *Capnocytophaga gingivalis*, *Selenomonas noxia*, *Entamoeba gingivalis*

31. Which of the following is highly associated with aggressive periodontitis?

- A. *Campylobacter rectus*
B. *Streptococcus constellatus*
C. *Moribacterium timidum*
➤ D. *Actinobacillus actinomycetemcomitans*

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32. The highest proportions of spirochetes in subgingival dental plaque are found in:

- A. periodontal healthy situations.
B. chronic gingivitis
➤ C. untreated severe chronic periodontitis
D. successfully treated chronic periodontitis

33. Which of the following best describes the situation where "Certain dental plaque microorganisms are preferentially selected & increase as a result of changes in local oral environment which adversely alters normal protective microbial homeostatic mechanisms":

- A. the non-specific plaque hypothesis
B. the specific plaque hypothesis
➤ C. the ecological plaque hypothesis
D. none of the above

34. After resolution of acute symptoms, the final treatment for pericoronitis often involves the extraction of the involved tooth.

- A. The statement is true.
B. The statement is false.