

Mid-Term Examination - D573 Periodontal Therapy and Treatment Planning I, fall, 2007

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 four digits of your student number. You must turn in both this examination copy and your computer answer sheet. You have 60 minutes to complete the examination. No questions will be answered by proctors during the examination.

1. A patient presents with a newly discovered non-ulcerative, circular dark lesion on the floor of the mouth. Which of the following are applicable to the situation?
 1. The lesion should be biopsied as the first step in establishing a differential diagnosis.
 2. The lesion may be a malignant melanoma.
 3. The lesion may be a varicosity.
 4. The lesion may be traumatic in origin,

A. all of the above
B. #1, #3 and #4 only of the above
→ C. #2, #3 and #4 only of the above
D. #3 and #4 only of the above
2. Recurring multiple small round ulcerations on vestibular mucosa:
 - A. should be biopsied as soon as possible since they may be malignant.
 - B. can be treated with either topical or systemic steroids, depending on the severity of the lesions.
 - C. are likely to be secondary herpes.
 - D. none of the above
3. Allergic and autoimmune diseases can present with large painful oral ulcers. Which of the following apply to these situations?
 - A. Systemic prednisone is indicated for reduction or resolution of such lesions when they are severe.
 - B. Use of topical steroids are usually able to control severe immune-related lesions.
 - C. Ulcerative immunologic oral lesions do not mimic cancer.
 - D. all of the above
4. Which of the following apply to *Candida* vaginitis resulting from broad-spectrum systemic antibiotic therapy?
 - A. Over-the-counter anti-fungal agents may be used to prevent the condition.
 - B. Short-term Diflucan drug therapy may be used to prevent the condition.
 - C. Short-term Diflucan drug therapy may be used to treat the condition.
 - D. all of the above

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5. A 45-year old male presents to your dental office with a burning feeling of the tongue that has occurred for several weeks. Nystatin rinses and Mycelex troches temporarily improved the problem, but did not resolve it. Which of the following apply to this situation?

1. The lack of total resolution may be due to a *Candida albicans* infection deeper in tissues than superficial rinses can affect.
2. Diflucan would be a good prescription to give at this point.
3. Fungal cultures at this point would be uniformly positive for persistent *Candida albicans*.
4. Fungal cultures at this point may be negative, despite the lack of clinical resolution, due to the effects of the topical antifungal therapy.

A. #3 of the above only

→ B. #1, #2 and #4 of the above only

C. #1, #2 and #3 of the above only

D. #1 and #4 of the above only

6. A rapidly growing exophytic lesion between teeth #3 and #4 which is red, ulcerated and bleeding:

1. may be cancer
2. may be self-induced.
3. may be bacterial in origin

A. all of the above

B. #1 of the above only

→ C. #1 and #3 of the above only

D. #2 and #3 of the above only

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7. Secondary herpes lesions:

- A. affect the gingiva and palate.
- B. do not respond to anti-viral medications.
- C. tend to cause fever.
- D. all of the above

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8. Oral manifestations of viral infections:

- A. can appear as discrete nodules.
- B. may predispose to periodontitis.
- C. can coalesce and appear as large ulcerated lesions.
- D. all of the above

9. Which of the following is correct regarding phenytoin induced gingival overgrowth?

1. The incidence is about 50%, but greater in teenagers and institutionalized epileptics.
2. It generally occurs within a week of the start of drug dosing.
3. It is most severe in the maxillary molar regions.
4. The most rapid growth occurs within the first year.

- A. all of the above
→ B. #1 and #4 only of the above
C. #2 and #3 only of the above
D. #1 only of the above

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10. Which of the following does not cause drug-induced gingival enlargement?

- A. phenytoin
→ B. metronidazole
C. cyclosporin
D. nifedipine

11. Which of the following is incorrect regarding drug-induced gingival enlargement resulting from calcium channel blockers?

- A. The gingival overgrowth is decreased with drug withdrawal.
B. It is more pronounced on the anterior jaw segments.
C. Gingival changes usually begin to appear 2-3 months after initiation of drug therapy.
→ D. It occurs most with amlodipine.

12. Risk factors for drug-induced gingival overgrowth include:

1. age
2. gender
3. drug dose and duration
4. concomitant medications

- A. all of the above
B. #1, #2 and #3 only of the above
C. #1 and #3 only of the above
D. #3 only of the above

13. Phenytoin, cyclosporin, and nifedipine are all metabolized in the liver by:

- A. COX 2
B. collagenase
→ C. cytochrome P450
D. prostaglandin 2

14. Treatment of phenytoin-induced gingival enlargement may include:

1. gingivectomy
2. laser surgery
3. improved oral hygiene
4. topical vitamin B-12

- A. all of the above
B. #1 and #2 only of the above
→ C. #1, #2 and #3 only of the above
D. #1, #2 and #4 only of the above

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15. In a patient undergoing organ transplant surgery, which of the following HLA (human lymphocyte antigen) phenotypes is more susceptible to immunosuppressant drug-induced gingival enlargement?

- A. HLA-DR1
→ B. HLA-DR2
C. HLA 450
D. none of the above

16. The cutting edge to be sharpened on a periodontal curette is located at:

- A. the angle between the instrument face and shank.
B. the interface where the instrument shank and toe come together.
→ C. the angular junction between the instrument face and lateral surface.
D. the angular junction between the instrument face and toe.

17. In sharpening a periodontal instrument, how do you avoid creation of a wire edge along the sharpened cutting edge?

- A. Finish with a downstroke on the sharpening stone with the periodontal instrument toe directed towards the floor.
→ B. Finish with a stroke of the sharpening stone towards the instrument cutting edge.
C. Finish with an upstroke on the sharpening stone with the periodontal instrument toe directed towards the ceiling.
D. Finish with a stroke across the instrument face where it is oriented at a 100-110 degree angle to the sharpening stone.

18. The build-up of a sludge-like material on the face of the periodontal instrument when you move it along the surface of the sharpening stone indicates which of the following?

- A. Too much lubricant oil is on the surface of the sharpening stone.
B. A less course sharpening stone needs to be used.
C. Too much heavy pressure is being placed on the instrument as you press it against the sharpening stone.
→ D. Sharpening of the periodontal instrument cutting edge is nearly complete.

19. You reach into your instrument cart and remove a fine natural Arkansas sharpening stone to sharpen your periodontal instruments during a clinical patient care session. Which of the following should you do next?
 - A. Examine the cutting edge of the stone under magnification with a bright light.
 - B. Place a Columbia universal curette at a 90° angle to the stone surface and initiate sharpening without a lubricant being placed onto the stone.
 - C. Apply a lubricant oil onto the stone.
 - D. Apply water onto the surface of the stone as a lubricant.

20. You look at your periodontal instrument under a magnifying lens and a bright light. Which of the following indicates a need to sharpen your instrument based upon what you see under magnification?
 - A. A black line is seen along the entire length of the junction between the instrument face and its lateral surface.
 - B. A blue hue is seen when the surface of the instrument face is examined.
 - C. An obtuse angle is seen along the length of the cutting edge.
 - D. A white line is noted along the length of the angular junction between the instrument face and its lateral surface.

21. During the course of periodontal scaling on a patient, you adapt your scaling instrument to the surface of a sterile plastic stick similar to the way a tooth surface is treated, and the instrument bites into the surface of the plastic stick. What does this tell you?
 - A. The instrument needs to be sharpened.
 - B. You can continue to treat the patient with the instrument as it is.
 - C. The instrument needs to be re-sterilized.
 - D. Additional subgingival calculus is present on the tooth root surfaces you are treating.

22. When using a ceramic stone for periodontal instrument sharpening, water:
 - A. is applied to the instrument blade prior to sharpening.
 - B. is not applied to the stone.
 - C. is applied to the stone prior to sharpening.
 - D. is applied to the stone after sharpening.

23. When using a casual (non-fasting) plasma glucose analysis to diagnose diabetes mellitus:
 - A. a value of ≥ 200 mg/dl on only one day, and with or without clinical symptoms, is needed to diagnose presence of the disease.
 - B. a value of ≥ 200 mg/dl on at least two separate days plus clinical symptoms is needed to diagnose presence of the disease.
 - C. a value of ≤ 200 mg/dl on at least two separate days plus clinical symptoms is needed to diagnose presence of the disease.
 - D. a value of $\geq 7\%$ on at least two separate days plus clinical symptoms is needed to diagnose presence of the disease.

24. Which of the following persons would be suspected of having diabetes mellitus?

- A. Person A has a glycated hemoglobin test value of 5.5%
- B. Person B has a fasting plasma glucose value of 122 mg/dl
- C. Person C has a 2 hour post-prandial glucose value of 222 mg/dl
- D. all of the above

25. "Poor" glycemic control in a diabetic patient is indicated by a:

- A. HbA1c value of > 10%
- B. HbA1c value of < 7.5%
- C. HbA1c value of ≥ 200 mg/dl
- D. none of the above

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26. In treating periodontitis in patients with diabetes mellitus:

- A. the same clinical outcomes are found in both diabetic and non-diabetic patients, without regard to diabetic control.
- B. both poorly-controlled and well-controlled diabetics respond less favorably to periodontal treatment as compared to non-diabetics.
- C. well-controlled diabetics respond more favorably to periodontal treatment as compared to non-diabetics.
- D. poorly-controlled diabetics respond less favorably to periodontal treatment as compared to non-diabetics.

27. Which of the following situations is the risk of hypoglycemia is greatest?

- A. Your insulin-dependent diabetic patient comes to the periodontal appointment without eating breakfast, but also did not take their insulin medication that morning.
- B. Your insulin-dependent diabetic patient comes to the periodontal appointment after eating breakfast, and also took their normal dose of ultralene one hour prior to the appointment.
- C. Your insulin-dependent diabetic patient comes to the periodontal appointment after eating breakfast, and also took their normal dose of regular insulin one hour prior to the appointment.
- D. Your insulin-dependent diabetic patient comes to the periodontal appointment without eating breakfast, and also took their normal dose of lispro one hour prior to the appointment.

28. Which of the following is not a sign or symptom of hypoglycemia to be looked for when providing periodontal therapy on diabetic patients?

- A. excessive sweating
- B. tremors
- C. itching
- D. rapid heart beat

29. Your periodontal patient exhibits a fasting plasma glucose level of 140 mg/dl on two separate occasions. In light of this, you should:
- A. obtain a medical consultation for diabetic management.
 - B. proceed with the needed periodontal therapy without concern about diabetes.
 - C. avoid 1/100,000 epinephrine in local anesthetics.
 - D. prescribe a long-acting insulin medication.
30. On periodontitis patients with diabetes, the addition of a systemic antibiotic regimen to use of conventional mechanical forms of periodontal therapy (i.e., scaling and root planing, plaque control) has been shown to:
- A. have not effect on significantly altering serum HbA_{1c} levels.
 - B. both reduces local signs and symptoms of periodontitis, and contributes to an improved diabetic status by providing an approximately 10% serum HbA_{1c} reduction at 3 months post-treatment.
 - C. markedly increases the risk of hypoglycemia during treatment sessions.
 - D. can be used even when epinephrine concentrations greater than 1:100,000 in local anesthetic are administered.
31. Which of the following can be performed to increase the length of the clinical crown?
- A. Distraction osteogenesis and orthodontic tooth eruption
 - B. Gingivectomy and bone graft
 - C. Resective periodontal surgery and orthodontic intrusion
 - D. Resective periodontal surgery and orthodontic tooth eruption
32. The average human "biologic width" is approximately:
- A. 2 mm coronal to the alveolar bone crest adjacent to the tooth surface.
 - B. 2 mm in a buccal-lingual dimension.
 - C. 2 mm in an apical-coronal dimension from the CEJ.
 - D. 3 mm between the most apical extent of the gingival sulcus and the alveolar bone crest.
33. Which periodontal fiber group on a tooth are severed when performing a supracrestal fiberotomy procedure as part of rapid tooth extrusion to lengthen a tooth's clinical crown?
- A. alveolar crest group
 - B. horizontal group
 - C. oblique group
 - D. apical group
34. Cyclosporin-induced gingival overgrowths share similar clinical and histopathological features with gingival overgrowths caused by phenytoin or calcium channel blockers, except that there is an increased area of connective tissue matrix with cyclosporin-induced gingival overgrowths.
- A. The statement is true
 - B. The statement is false