



The American Academy of Oral Medicine

INTEGRATING MEDICINE AND DENTISTRY

Academic Affiliate Fellowship Practice Exam: 2019





Current History: A patient presents to your practice complaining of a “tight” feeling in her perioral tissue area. She is unable to open her mouth fully since the tissues do not stretch. She is also wearing gloves today and the weather is quite warm outside. The dental history from records sent by her previous dental office are more than three years old and she has not been seen by a dentist or hygienist since she moved from her previous city.

Medical History: The patient is 57 years old, post-menopausal, she is taking the following medications: Ranitidine 150mg for GERD, 50 mcg Synthroid, calcium 1200 mg., and multi-vitamins. She reports no prior drug

use, tobacco use and consumes alcohol on a limited basis. Hospital history has been limited to child birth.

Oral Exam: The patient reports difficulty in swallowing at times and has limited oral opening of her mouth when eating sandwiches and burgers. The lip tissue appears lighter in color and the texture is smooth but very firm and not as pliable as normal lip tissue. She has some periodontal ligament widening in selected areas and a noted loss of attached gingiva with recession.

Extra Oral Exam: Her fingers appear somewhat red at the tips of fingers and cool to touch. She tells you that she wears gloves a lot even in the summer while in air conditioned rooms. The fingers appear red at the tips and there is some distortion at the last joint of the third finger.

Final Diagnosis: Systemic Sclerosis

The following images are provided:

Image #1: Lip exam (Nancy W. Burkhart, RDH, Ed.D.)

Image #2: Fingers (Nancy W. Burkhart, RDH, Ed.D.)

1. Lip tightness and firmness (depicted in Fig#1) in scleroderma is caused by
 - a. Excessive chewing on lips due to dryness
 - b. Excessive collagen deposits of the skin/lip tissue
 - c. Excessive blood calcium levels
 - d. Decreases in collagen production

2. In figure #2, the pink/red finger tips are a result of_____.
- Restriction of blood flow to the finger tips
 - An allergic type response to a medication
 - Telangiectasia
 - Osteopenia involving the fingers
3. In figure #2, the correct term for the reddened fingertips would be:
- Telangiectasia
 - Raynaud's Phenomenon
 - Calcinosis
 - Sclerodactyly
4. Scleroderma has not been linked to which of the following.
- Pesticides
 - Viral-Parvovirus B19
 - Benzene derivatives
 - Blood dyscrasias
5. Which of the following would not be associated with scleroderma?
- Inflammation of the tissues with ulceration on fingertips
 - microstomia
 - Atrophy of nasal alae
 - Hypertrophy of taste buds

- 6.** A patient diagnosed with Scleroderma may experience all of those listed below except which one?
- a.** Rigidity of the lips
 - b.** Mask-like appearance
 - c.** Rigidity of the tongue
 - d.** Narrowing of the periodontal ligament
- 7.** The localized thickened area of skin that may appear as a knife wound related to scleroderma is:
- a.** En coup de sabre
 - b.** Leukoplakia
 - c.** CREST syndrome
 - d.** Sclerodactyly
- 8.** The resorption of the terminal phalanges related to scleroderma is called?
- a.** Sclerodactyly
 - b.** Calcinosis cutis
 - c.** Acroosteolysis
 - d.** Osteonecrosis

- 9.** The main reason that candida occurs in patients with scleroderma is because of which of the following?
- a.** Fibrosis of the salivary glands
 - b.** Lack of blood circulation
 - c.** Restriction of the tongue
 - d.** A soft diet high in carbohydrates
- 10.** Calcium channel blockers may be used in the treatment for scleroderma to promote blood vessel relaxation. This may produce which of the following:
- a.** Increase in periodontal disease
 - b.** Gingival overgrowth
 - c.** Edema with exudate
 - d.** Excessive inflammation
- 11.** The Central Giant Cell Granuloma that is aggressive can occur at any age, but is most often found in which age category?
- a.** The elderly
 - b.** Middle age
 - c.** Young adult
 - d.** Under five years of age
- 12.** Which one of the following would NOT be confused or misdiagnosed with the Central Giant Cell Granuloma?
- a.** Hyperthyroidism
 - b.** Ameloblastoma
 - c.** Cherubism
 - d.** Mucoepidermoid carcinoma

- 13.** The most commonly reported finding related to the aggressive form of Central Giant Cell Granuloma is:
- a. Tissue ulceration
 - b. Exudate from the area
 - c. Diversion of teeth
 - d. Discoloration of the tissue
- 14.** Taurodontism has which of the following characteristics?
- a. Dilaceration of roots
 - b. Obliterated pulp chambers
 - c. Excessive cementum on root tips
 - d. Short roots
- 15.** Xanthelasma may be an indication of which of the following?
- a. Jaundice
 - b. Amyloidosis
 - c. Kidney diseases
 - d. Atherosclerosis
- 16.** Vitamin K is involved in
- a. The synthesis of collagen
 - b. Clotting factors
 - c. Pellagra
 - d. Scurvy
- 17.** Which of the following would not be associated with Plummer-Vinson Syndrome?
- a. Koilonychia
 - b. Dysphagia
 - c. Brittle-spoon shaped nails
 - d. Hairy tongue

- 18.** A patient with Addison Disease may present with which of the following oral manifestations?
- a. Increased saliva production
 - b. Hyperpigmentation
 - c. Aphthous ulcers
 - d. Metallic taste
- 19.** The main concern related to exfoliative cheilitis is:
- a. Burning
 - b. Dryness and scaling
 - c. Squamous cell carcinoma
 - d. Basal Cell Carcinoma
- 20.** Most oral cancers involve which of the following structures?
- A. Dorsal Tongue and Gingiva
 - B. Lips
 - C. Lateral borders and base of the tongue
 - D. Palate and Salivary Glands
- 21.** Most oral cancers are which of the following cancer types?
- A. Adenoid cystic carcinoma
 - B. Squamous cell carcinoma
 - C. Mixed tumors
 - D. Mucoepidermoid carcinoma

22. When considering social determinants of health (education, income, neighborhood, workplace, etc.) low socioeconomic status has been associated with higher prevalence of which of the following?

- a. Oral Cancer
- b. Malocclusion
- c. Geographic tongue
- d. Tooth Decay

- A. a and b
- B. b and c
- C. a and d
- D. all of the above

23. Betel quid chewing, alcohol consumption and reverse smoking, as well as low socioeconomic status and low consumption of fruits and vegetables contribute to which of the following?

- A. Higher prevalence of oral cancer
- B. Higher prevalence of periodontal disease
- C. Higher prevalence of HIV/AIDS
- D. Lack of HPV immunization

24. In South and Southeast Asia, the prevalence of _____ is high and ranks as the sixth most frequent occurrence in Asia.

- A. Periodontal Disease
- B. Dental Decay
- C. HIV/AIDS
- D. Oral cancer

This case study applies to the following three questions:

A 49 year old male, your last patient of the day was referred for evaluation of a tooth ache on the mandibular right side. The patient indicated the following on his medical history:

Hypertension

History of lymphoma: in remission 3 years

Mild anxiety

Betel quid chewing: former use (quit 5 years ago)

Alcohol use: approximately 10 – 12 oz per day

Medications include: Hydrochlorothiazide 50 mg 2x daily, lorazepam 1mg 2x daily.

Upon oral examination you note the following: #30 – Mesial/Occlusal caries; Periodontal probing of 5-8 mm along the buccal aspect of #30. Erythematous lesion on his right buccal mucosa that has failed to heal over the past year with pain upon palpation.

25. Based on the patient's medical history and clinical presentation, what is the next best course of action?

- A.** Reschedule for follow up of lesion in 7-10 days
- B.** FMX, FM perio, SRP
- C.** Biopsy of lesion
- D.** Extraction of #30 followed by bone graph for future implant

26. Given this patient's medical history intake, which of the following is true?

- A.** Individuals who have had a previous cancer are at lower risk of developing a second primary oral cancer.
- B.** Individuals who have had a previous cancer are at higher risk of developing a second primary oral cancer.
- C.** Individuals who have hypertension are at a slight risk of developing a second primary oral cancer
- D.** Previous cancer(s) that have been cured have no impact on the likelihood of developing a second primary oral cancer.

27. The oral pathology report confirms squamous cell carcinoma. Upon consideration of the patient's medical history, which of the following is known for increasing risk of oral cancer?

- a. Hypertension
- b. History of lymphoma – in remission
- c. Mild anxiety
- d. History of Betel quid chewing
- e. Alcohol use

- A. a,b,d
- B. b,d,e
- C. c,d,e
- D. All of the above

28. When considering dental management of a patient with a history of Asthma, all of the following are true **except:**

- A. If anxiety or stress is known to induce an asthmatic attack, premedication with a benzodiazepine and/or nitrous oxide-oxygen inhalation sedation may be indicated.
- B. There are no specific contraindications to the use of a rubber dam in asthmatic patients.
- C. Use of a short-acting bronchodilator inhaler, such as albuterol, should be avoided on the day of scheduled dental treatment.
- D. Acute hypercapnic and hypoxic respiratory failure can occur in severe asthma.

29. If a patient is taking aspirin and/or platelet inhibitors, anticipate some excessive bleeding, but modification of drug regimen is not required.

- A. True
- B. False

30. Dental implications for patients with an Arrhythmia include all of the following **except:**

- A. Antibiotic prophylaxis is required for routine dental treatment if the patient has an implanted pacemaker or defibrillator.
- B. Limit the initial dose of a local anesthetic containing a vasoconstrictor (maximum 0.036mg of epinephrine).
- C. Patients with an implanted pacemaker or defibrillator are at low risk for possible malfunction caused by electromagnetic interference from a proximal electronic scaler.
- D. If the patient is taking warfarin (Coumadin), the INR should be assessed prior to invasive dental procedures.

31. Dental management for a patient with Diabetes Mellitus Type 1 or Type 2 taking insulin includes all of the following **except:**

- A. Have fast-acting oral carbohydrate source available during appointments.
- B. Evaluation of most recent HgA1c, preferably within the last 3-6 months.
- C. Review of the panoramic radiograph for evidence of carotid artery atheroma formation.
- D. Chairside glucose with a desired reading greater than 200.

32. Evaluation of dental patients who report HIV-positive status includes all of the following:

- A. CBC with differential
- B. CD4 count
- C. HIV viral load
- D. B only
- E. A, B and C

33. Which of the following statements is false when considering dental management of a patient diagnosed with Hypertension?

- A. Patients taking calcium channel blockers may present with drug-induced gingival hyperplasia.
- B. A 65 year old patient with diabetes and chronic kidney disease should have a goal blood pressure of < 160/90.
- C. For patients with well controlled hypertension on lisinopril and propranolol, it is advisable to limit the initial dose of a local anesthetic containing vasoconstrictor (maximum 0.036mg of epinephrine).
- D. Nitrous oxide-oxygen inhalation may be used to reduce stress and anxiety.

34. When considering dental management of a patient with Chronic Kidney Disease, all of the following are true **except:**

- A. NSAIDs may be contraindicated.
- B. For patients receiving hemodialysis, do not complete dental treatment on day of dialysis.
- C. Tetracycline antibiotics should be prescribed for prophylaxis.
- D. There is increased risk of excessive bleeding during invasive procedures.

35. Considerations for patients diagnosed with Depression, Bipolar Disorder, and Schizophrenia include all of the following **except:**

- A. Possible limitation of the initial dose of a local anesthetic containing a vasoconstrictor (maximum 0.036mg of epinephrine) due to medication interactions.
- B. Blood dyscrasias, such as thrombocytopenia and leukopenia, may occur with long-term use of psychiatric medications.
- C. Confidentiality laws prevent the disclosure of a patient's verbalized suicidal ideation to the psychiatrist.
- D. In those diagnosed with severe mental illness, consult the patient's psychiatrist to assure the patient is able to provide informed consent for treatment.

36. Which of the following Prosthetic Joint patients should receive antibiotic prophylaxis?

- A. Patients diagnosed with poorly controlled Diabetes Mellitus.
- B. Patients with previous prosthetic joint infection.
- C. Immunocompromised and/or immunosuppressed patients.
- D. Patients whose orthopedic surgeon recommends antibiotic prophylaxis.
- E. All of the above.

37. Dental management considerations for patients with Liver Disease include all of the following **except:**

- A. Excessive blood clotting results from impaired liver function secondary to chronic liver disease.
- B. Higher doses may be required to achieve adequate anesthesia in the presence of severe liver disease.
- C. CBC and CMP should be evaluated to screen for potential problems.
- D. NSAIDs, acetaminophen, and codeine should be limited or avoided.

Case Study. Jimmy Phillips, an 11-year old boy, his brother, Sam, a 17-year old, and his grandfather, Harold Phillips, a 69- year old male all present for dental hygiene appointments. The Phillips family have been patients of the practice for many years. They all have lived an active life playing sports, being involved in community activities, and traveling. Harold is president of the local bank. Sam is co-captain of the lacrosse team and excited about going to college next year. Jimmy likes playing soccer and baseball. Both boys have worn mouthguards when playing sports, and converted to drinking water instead of sugary sports drinks during games. Sam was very proud that he did not get any cavities during orthodontia because he followed your caries protocol. Jimmy has had sealants placed and is caries free as well. While Harold smoked cigarettes as a teenager and up until he was 30, he did quit, and has not smoked since. He is a social drinker, but estimates that he drinks 1-2 alcoholic beverages per week. None of the Phillips men report using recreational drugs. Jimmy and Sam are not taking any medications. Harold takes Norvasc 5 mg and Crestor 20 mg. Vital signs for all three patients are within normal limits.

Jimmy and Sam present with healthy mouths; however, Harold has been followed for a white, plaque-like lesion at the base of the tongue. The lesion is painless and has been present for 3 months. The dentist initially diagnosed the lesion as candidiasis and prescribed nystatin which was used for 3 weeks. The lesion did not resolve and a second course of treatment was recommended. The lesion persisted. A course of chlorhexidine was recommended and used for one month with no change in presentation.

38. Harold's lesion most likely represents:

- a. Persistent candidiasis
- b. Leukoplakia
- c. Squamous cell carcinoma of the oral cavity
- d. Human papillomavirus- oropharyngeal carcinoma

39. The most reasonable course of action for Harold would be:

- a. Exfoliative cytology
- b. Scalpel biopsy
- c. Brush biopsy
- d. Watch and observe for another month

- 40.** Risk factors that should be considered for Harold if a differential diagnosis of squamous cell carcinoma of the oral cavity includes all of the following EXCEPT one. Which one is the EXCEPTION?
- a. Age
 - b. Alcohol intake
 - c. Bacterial infection
 - d. Smoking
- 41.** If Harold was diagnosed with HPV-OPC, the most likely virus subtype would be:
- a. 16
 - b. 18
 - c. 31
 - d. 33
- 42.** If HPV-OPC was diagnosed for Harold, the best prevention strategy for Jimmy and Sam would be:
- a. Regular comprehensive oral examinations
 - b. HPV vaccination
 - c. Taking a sexual history and providing education
 - d. All of the above
- 43.** The most effective way to screen for osteoporosis is:
- a. Plain radiographs
 - b. Blood assays for calcium, phosphorus and alkaline phosphatase
 - c. Biopsy
 - d. Dual-energy x-ray absorptiometry
- 44.** Osteoporosis is associated with all of the following **except** which one?
- a. Genetics and race
 - b. Menopause
 - c. Ageing
 - d. Stress and lack of exercise

- 45.** The greatest morbidity and mortality in osteoporosis is associated with which type of fracture?
- a. Hip
 - b. Vertebral
 - c. Distal radius
 - d. Mandible
- 46.** All of the following conditions are associated with secondary osteoporosis EXCEPT one. Which one is the EXCEPTION?
- a. Long-term glucocorticoid therapy
 - b. Alcoholism abuse and tobacco use
 - c. Malabsorption such as low calcium and Vitamin D
 - d. Paget's disease of bone
- 47.** The most common treatment for osteoporosis is:
- a. Biologic agents
 - b. Bisphosphonates
 - c. Estrogen
 - d. Strength exercises

Answer Key:

1. B. | Burket's, 12th ed. 505 & 506
2. A. | Neville 4th ed. Page 744
3. B | DeLong/Burkhart 2nd ed. Page 621
4. D | Burket's 12 ed. Page 506
5. D | DeLong/Burkhart 3rd ed. page 621 & Neville, 4th ed. Page 744 & 745
6. D | Burket's 12 ed. Page 508
7. A | Neville 4th ed. Page 746, DeLong/Burkhart 3rd ed. Page 563
8. C | Neville Page 744
9. A | Burket's 12 ed. Page 508
10. A. | Burket's 12th ed. Page 508
11. C.
12. D.
13. C.
14. D.
15. D.
16. B.
17. D.
18. B.
19. B.
20. C.
21. B.
22. C.
23. A.
24. D.
25. C.
26. B.
27. B.

- 28. C.
- 29. A.
- 30. A.
- 31. D.
- 32. E.
- 33. B.
- 34. C.
- 35. C.
- 36. E.
- 37. A.
- 38. D.
- 39. B.
- 40. C.
- 41. A.
- 42. B.
- 43. D.
- 44. D.
- 45. A.
- 46. D.
- 47. B.