



Ambulatory Healthcare Pathways for Ear, Nose, and Throat Disorders

HEAD AND NECK SURGERY STUDY QUESTIONS

The following are study questions, originally developed at the University of Washington in Seattle, brought to UCSD and extensively revised by Dr. Albert Merati, Assistant Professor and Director of Laryngology and Professional Voice, Medical College of Wisconsin, Department of Otolaryngology and Communication Sciences and published with permission of Dr. Ernie Weymuller, Chairman of Head and Neck Surgery at the University of Washington.

Some questions have single correct answers and some multiple correct answers. The questions are written to stimulate thought and discussion about simple and difficult topics in head and neck surgery.

1. A 20 year-old man with poor dentition is found to have an acute onset of a swollen, tender, board-like mass in the submental and submandibular spaces. His anterior floor of mouth rises above the level of his mandibular incisors. His airway is tenuous. He has:
 - a. Vincent's angina
 - b. Ludwig's angina
 - c. Prinzmetal's angina
 - d. parapharyngeal space abscess
 - e. no need of a tracheotomy
2. You have made the diagnosis of acute otitis media in an otherwise healthy 3 year old. Your antibiotic choice is guided by the need to cover:
 - a. *Hemophilus influenza*
 - b. *Streptococcus pneumoniae*
 - c. *Moraxella catarrhalis*
 - d. *Pseudomonas aeruginosa*
 - e. a, b, and c
3. Your Uncle John—famous within the family for his “sinus condition”—is told by his long-time local doctor that he should “go to an ENT and get some windows done.” He calls you to find out more about his problems. You:
 - a. tell him that “windows” refer to an inadequate procedure done in the past for chronic sinusitis
 - b. tell him that the standard of care for chronic sinusitis refractory to medical management is endoscopic sinus surgery

- c. reassure him that he will not need an incision on his face for endoscopic sinus surgery
 - d. get sentimental for the sound of turbulent snot
 - e. a, b, and c
4. The most common organism cultured from otitis externa is:
- a. *Staphylococcus aureus*
 - b. *Proteus sp.*
 - c. *Pseudomonas aeruginosa*
 - d. Fungal species
 - e. *Pneumocystis sp.*
5. A two year-old infant was seen in the ER last January after awakening that night with a barking cough, stridor, and dyspnea. The parents reported that the child got somewhat better in the car on the way to the ER. What was the likely diagnosis and etiologic agent?
- a. laryngomalacia, multifactorial inheritance
 - b. laryngeal web, idiopathic
 - c. epiglottitis, *H. influenza*
 - d. spasmodic croup, parainfluenza virus
 - e. spasmodic croup, parainfluenza virus pertussis (whooping cough), *B. pertussis*
6. You are a 3rd year student on the internal medicine service. One of the patients has AIDS and fever with no identifiable source. Your resident asks you to call the head and neck resident on-call to “do a biopsy” on one of the patient’s multiple palpable cervical lymph nodes. You:
- a. call general surgery instead
 - b. call as instructed because this makes sense
 - c. suggest fine needle aspiration instead
 - d. have read the head and neck literature and realize that the diagnostic accuracy of open biopsy for lymphadenopathy in patients with HIV is poor and usually non-contributory
 - e. c and d
7. A progressive conductive hearing loss in an adult with a normal appearing, mobile tympanic membrane and normal ear canal is most likely due to:
- a. serous otitis media
 - b. otosclerosis
 - c. acute otitis media
 - d. external otitis
 - e. malingering; it is easy to fake a conductive hearing loss
8. Your friend’s 65 year-old father has seen a surgeon for the evaluation of a neck mass which has been present for 2 months. The surgeon has recommended open biopsy. This

- a. is acceptable
- b. is sure to decrease survival in all patients
- c. is inappropriate without a complete head and neck exam to search for the primary malignancy if cancer is suspected
- d. is always necessary prior to definitive therapy
- e. is an operation free of complications

9. Large Larry, a professional wrestler, comes to the ER after catching a turnbuckle in the throat at the hands of Giant Jerry, the Beast of the East. Large Larry is experiencing progressively worsening stridor and air-hunger. He has subcutaneous emphysema from his mandible to his nipples. He coughs up some blood and begins to look worse. What is your next step in management?

- a. depends on the result of blood gas measurements
- b. barium swallow
- c. CT scan of the larynx
- d. endotracheal intubation
- e. surgical airway

10. A brief and hastily eaten lunch during your trauma rotation features something with caraway seeds in it. You know this because one has managed to wedge itself onto the occlusal surface of a mandibular molar and is driving you crazy. You instantly appreciate the importance of good occlusion and:

- a. realize the sensitivity of temporomandibular joint proprioception
- b. understand why assessment of occlusion is critical to the evaluation of any patient with head and neck trauma
- c. understand why assessment of occlusion is critical to the pre- and post-operative evaluation of patients undergoing any facial fracture repair
- d. imagine that the assessment of occlusion would also be crucial to the evaluation of the facial plastic surgery patient
- e. all of the above

11. The most common cause of a neck mass in males over 60 years of age is:

- a. metastatic carcinoma
- b. branchial cleft cyst
- c. laryngocoele
- d. bacterial adenitis
- e. carotid aneurysm

12. When confronted with acute, complete upper airway obstruction, what are your options?
(Select as many as appropriate and know when each is appropriate)

- a. mouth-to-mouth resuscitation
- b. endotracheal intubation
- c. trans-tracheal jet ventilation
- d. cricothyrotomy
- e. formal tracheotomy

13. While on the pediatric service, your team is called to the ER to see a 3 year old girl who is just getting over a URI. She is not eating, is irritable, and is holding her neck still. Her rectal temperature is 38.5° C. Which one of the following would provide the most useful information?
- a. CBC with differential to distinguish infection from neoplasm
 - b. Physical exam of the neck (including neck flexion test) to distinguish between meningitis and retropharyngeal abscess
 - c. lateral neck film to distinguish between meningitis and retropharyngeal abscess
 - d. a history of complete childhood immunization, including *H. influenza* type B.
 - e. a history of frequent and prolonged URI
14. On rounds, you discover that the head and neck resident on-call has admitted a patient with a parapharyngeal space abscess to the service. You know that these typically occur as extensions of untreated dental or tonsillar infections. Knowing the anatomy of the parapharyngeal space, which of the following complications are you concerned about? (Select as many as appropriate)
- a. septic thrombosis of the internal jugular vein
 - b. facial nerve paralysis
 - c. mediastinitis
 - d. exsanguination due to carotid erosion
 - e. osteomyelitis of the cervical spine
15. Tonsillectomy is a very common but nonetheless controversial operation. Which of the following are accepted criteria which would justify tonsillectomy? (Select as many as appropriate)
- a. peritonsillar abscess
 - b. unilateral hypertrophy of a tonsil
 - c. bilateral non-obstructing hypertrophy
 - d. cleft palate
 - e. recurrent tonsillitis >3 episodes a year for 3 years
16. Back in the pediatric clinic, you see a 4 year old boy with coryza and cough. He has had these URI symptoms for one week. Of the following choices, which one is most likely to require antibiotic treatment?
- a. oral temperature of 38.5° C
 - b. cough

- c. rash
- d. red, bulging tympanic membrane
- e. red, injected pharynx with minimal purulence over tonsils

17. Your sister calls you. Her 4 year old has had yellowish-green “snot” coming out of her right nostril for the past month. She is otherwise healthy. You suspect:

- a. previously undiagnosed unilateral choanal atresia
- b. sinusitis
- c. foreign body
- d. atrophic rhinitis
- e. allergic rhinitis

18. Ménière’s syndrome is a symptom complex characterized by:

- a. conductive hearing loss, vertigo, and tinnitus
- b. fluctuating sensorineural hearing loss, auditory and visual hallucinations, and constant vertigo
- c. intermittent vertigo lasting several days at each attack
- d. fluctuating sensorineural hearing loss, aural fullness, tinnitus, and vertigo lasting hours to days
- e. positional vertigo lasting seconds with no auditory symptoms

19. A junior high school wrestler comes to your ER with pain and a bluish swelling over the helix following a humiliating defeat. What do you do?

- a. immediate application of cold compresses
- b. hot pack and antibiotics
- c. pressure dressing to prevent extension
- d. reassurance, a roll of Life Savers®, and intramuscular testosterone
- e. drainage of hematoma and application of a conforming dressing

20. Stridor is the presence of noisy breathing. Whether it occurs in the inspiratory or expiratory cycle can help reveal the site of the causative lesion. With this in mind, a patient with a normal voice and biphasic stridor (present in both inspiration and expiration) is most likely to have a lesion at the level of the:

- a. glottis
- b. supraglottis
- c. subglottis
- d. carina
- e. lungs

21. Which of the following is not usually a symptom/sign of mandibular fracture?

- a. malocclusion

- b. numbness of the lower lip
- c. ecchymoses of the floor of mouth
- d. trismus
- e. ecchymoses of the cheek

22. You have been promoted to otolaryngology resident. Your call night begins with a page to the pediatric intensive care unit. They have a 2 month-old with stridor. The PICU staff suspect laryngomalacia. If so, laryngoscopy would reveal:

- a. vocal cord paralysis
- b. no visible lesion as laryngomalacia is a neuromuscular disorder
- c. aryepiglottic fold flaccidity and an omega-shaped (Ω) epiglottis
- d. a pinhole airway at the subglottis
- e. a thin, perforate epiglottis

23. Acute epiglottitis—better named supraglottitis—is a rapidly progressive infection characterized by:

- a. high fever, infection with *H. influenza*, and inspiratory stridor
- b. high fever, infection with *H. influenza*, and expiratory stridor
- c. low grade fever and gradual airway obstruction responding to racemic epinephrine z

24. The single most common bacterial pathogen in acute otitis media is:

- a. *Hemophilus influenza*
- b. *Streptococcus pneumoniae*
- c. *Streptococcus pyogenes*
- d. *Staphylococcus aureus*
- e. *Moraxella catarrhalis*

25. Your clinic patient asks you why you hit a tuning fork on your elbow and then placed it on his forehead. You say that it is called the Weber test and that:

- a. the patient will perceive the sound loudest in the ear with a sensorineural hearing loss
- b. the patient will not “lateralize” the sound unless there is a conductive component to the hearing loss
- c. the patient will hear the sound loudest in the ear with the conductive hearing loss unless there is a significant sensorineural loss in that ear
- d. it is to test the vibratory sense of the supratrochlear branches of the trigeminal nerve
- e. it is very sensitive to where the tuning fork is placed on the skull

26. A 26 year-old Somali has chronic intermittent otorrhea and a marginal perforation in the posterosuperior quadrant of the tympanic membrane. His audiogram shows a mixed hearing loss. There is no otorrhea now. Surgery is offered to this patient in order to: (select as many as appropriate)

- a. allow binaural hearing
- b. improve hearing in that ear
- c. prevent recurrent otorrhea
- d. r/o the presence of cholesteatoma
- e. prevent the immediate and inevitable development of an otogenic brain infection

27. One of the internal medicine residents stops you in the hall and asks you about her parotid gland. She has a 2 cm mass in her parotid. The mass is painless but slowly enlarging. Her facial nerve function is intact. The outside otolaryngologist she saw recommended superficial parotidectomy. You tell her:

- a. that superficial parotidectomy is inappropriate without prior fine needle aspiration biopsy
- b. superficial parotidectomy is acceptable
- c. open biopsy is usually performed
- d. because her facial nerve is intact, she needn't worry about malignancy
- e. total parotidectomy is the treatment of choice

28. A 15 month-old girl is referred to you for evaluation. She has already had 4 bouts of documented otitis media. On exam, you notice that she has a submucous cleft palate. You recommend:

- a. adenoidectomy
- b. myringotomy and ventilating tubes
- c. palatal prosthesis
- d. a hearing aid
- e. emphasis on lip reading

29. A 54 year-old male presents with a gradually enlarging mass in the right parotid gland. The mass is painless and firm to palpation. There is an obvious facial weakness on the side of the mass. The most likely diagnosis is:

- a. benign mixed tumor (pleomorphic adenoma)
- b. sialolith of the parotid
- c. malignant tumor of the parotid
- d. lymphoma
- e. facial nerve neuroma

30. A 16 year-old patient presents with a soft fluctuant mass in the floor of his mouth. The swelling is just lateral to the lingual frenulum and the overlying mucosa is intact. Though it is gradually enlarging, it remains painless. The most likely diagnosis would be:

- a. ranula
- b. carcinoma of the floor of mouth
- c. submandibular gland cyst
- d. mucocoele

e. lymphangioma

31. In trying to determine which patients will have bleeding problems associated with tonsillectomy, the most complete and cost-effective method is:

- a. CBC, platelet count, and bleeding time
- b. platelet count
- c. bleeding time
- d. prothrombin time and partial thromboplastin time
- e. careful history

32. The most common cause of hearing loss in children is:

- a. chronic otitis media with cholesteatoma
- b. chronic or recurrent serous otitis media
- c. suppurative otitis media
- d. cerumen impaction
- e. external otitis

33. A red headed 12 year-old boy is seen with complaints of nasal obstruction and epistaxis. The demographics and symptoms are most typical of:

- a. choanal polyp
- b. juvenile nasal angiofibroma
- c. nasopharyngeal sarcoma
- d. Osler-Weber-Rendu disease
- e. cystic fibrosis

34. Which symptom is most characteristic of a trimalar (tripod) fracture?

- a. malocclusion
- b. painful chewing
- c. forehead numbness due to interruption of the temporal branch of the facial nerve
- d. profound swelling and cheek and ecchymosis on the involved side
- e. diplopia in all directions

35. A seven year-old boy comes to your office complaining of bilateral nasal obstruction since being hit on the nose with a baseball. There was no immediate epistaxis. Anterior rhinoscopy reveals a soft, compressible, non-tender, violaceous mass which completely obstructs both nasal airways and seems to arise from the septum. If untreated, the most common complication of this condition is:

- a. delayed hemorrhage
- b. cavernous sinus thrombosis
- c. septicemia
- d. osteomyelitis

e. saddle-nose deformity

36. While walking past the ER's radiology suite, you see a 5 year old boy sitting bolt upright on the gurney as though he were sniffing some odor in the air. There is drool on his shirt and he is completely oblivious to your walking by. You know better than to examine his oropharynx or larynx in the ER because you suspect:

- a. croup
- b. laryngeal blastomycosis
- c. epiglottitis
- d. vallecular cyst
- e. supraglottic tumor

37. You escort your patient to the recovery room after total thyroidectomy. Removal of the endotracheal tube is followed by severe airway obstruction and stridor. The drain is functional and the wound looks fine. The most likely diagnosis is:

- a. subglottic edema
- b. subglottic spread of cancer
- c. laryngospasm
- d. arytenoid dislocation
- e. bilateral vocal cord paralysis

38. Cholesteatoma:

- a. is a sac lined with squamous epithelium
- b. can result from skin growing into a tympanic membrane perforation
- c. has potentially life-threatening implications
- d. is a malignant tumor
- e. a, b, and c

39. You are working in a primary care clinic. A patient reports difficulty hearing and tinnitus ever since working as a gunner in Vietnam. The patient's real concern is whether or not the VA will reimburse him for his hearing aids and he is therefore requesting disability. The proper approach is:

- a. Refer him for a compensation and pension examination
- b. Obtain an audiogram
- c. Counsel the patient that this is normal for age
- d. Refer to the head and neck surgery clinic

40. Carotid artery blowout is a disastrous complication of head and neck cancer surgery. The most typical scenario occurs if:

- a. there are no neck metastases
- b. the patient has a fistula

- c. the patient is hypertensive
- d. no radiation is used
- e. the patient is diabetic

41. Indications for tympanocentesis are: (choose as many as appropriate)

- a. otitis media in the critically ill or immunocompromised child
- b. the presence of suppurative complications
- c. otitis media in a neonate
- d. serous otitis media persistent two weeks following acute otitis media
- e. recurrent acute otitis media

42. All non-operative attempts to control a patient's epistaxis have failed. The bleeding time and other indices of coagulation are normal and the patient's hypertension are controlled. You have ligated the internal maxillary artery (IMA) on the involved side via the transantral approach yet the patient continues to bleed through your pack. Why?

- a. you failed to get proximal control of the external carotid artery
- b. you failed to get proximal control of the internal jugular vein
- c. transantral IMA ligation is not a useful procedure for epistaxis
- d. you failed to ligate the ethmoid branches of the internal carotid artery
- e. you failed to ligate the contralateral IMA

43. A 39 year-old male has been involved in a motor vehicle accident. He was comatose for 2 days. On awakening, you note complete anacusis AS, horizontal nystagmus to the right, nausea, and vertigo. The external auditory canals (EAC) are normal but there is a left hemotympanum. Associated with this, 40 to 50% of patients with this injury will also have:

- a. facial nerve paralysis
- b. CSF rhinorrhea
- c. hemiparesis
- d. ossicular discontinuity
- e. parotid hematoma

44. A 3 month-old has a soft, multiloculated mass that extends from the mastoid tip to the clavicle on the right. There are no cranial nerve palsies or limitation of neck motion. The overlying skin is unremarkable and the child is otherwise healthy and doing well. This most likely diagnosis is:

- a. Bezold's abscess
- b. tubercular abscess
- c. lymphoma
- d. branchial cleft cyst
- e. cystic hygroma

45. A 22 year-old clerk has a 3 week history of an enlarging mass over the mid portion of the sternocleidomastoid muscle. It is soft, cystic, and does not appear inflamed. It measures 4 cm. What is the most likely diagnosis?
- metastatic epidermoid carcinoma from a skin primary
 - thyroglossal duct cyst
 - cystic hygroma
 - dermoid cyst
 - branchial cleft cyst
46. A patient has a negative Rinne at 256 Hz AS. At 512 and 1024Hz it is positive as well as for all three frequencies AD. The Weber lateralizes to the left. He hears a soft whisper AD and a soft-to-medium whisper AS. Which of the following is most compatible with these findings?
- a 35 dB sensorineural hearing loss (SNHL) AD
 - a 35 dB conductive hearing loss (CHL) AS
 - a 60 dB CHL AS
 - a 60 dB SNHL AD
 - a 35 dB SNHL AS
47. Otosclerosis:
- is a rare degenerative disorder with no treatment
 - has predominantly vestibular symptoms
 - is present histologically in up to 10% of temporal bones
 - cannot be treated with any modality other than surgery
 - develops rapidly during childhood and proceeds to near total hearing loss by age 16
48. Grave's disease:
- is an autoimmune disorder of the thymus
 - is an autoimmune disorder of the thyroid
 - is an autoimmune disorder of the thyroid and parathyroid
 - is a disease with poorly understood pathophysiology
 - is best treated with thyroidectomy
49. Match the following brainstem nuclei with their corresponding autonomic ganglia:
- | | |
|--------------------|---------------------------------|
| a. otic | _____ superior salivary nucleus |
| b. ciliary | _____ inferior salivary nucleus |
| c. not autonomic | _____ nucleus ambiguus |
| d. pterygopalatine | _____ Edinger-Westphal |
50. A 50 year-old man has progressive unilateral hearing loss. He also complains that loud sounds are more unpleasant to his poor ear than to his good one. This is an example of:
- congenital tardive syphilis
 - functional hearing loss

- c. recruitment
- d. labyrinthitis
- e. tensor tympani paralysis

51. The stapedius muscle

- a. is of third arch origin and is thus innervated by the third cranial nerve
- b. is of second arch origin and is thus innervated by the seventh cranial nerve
- c. is of pre-optic somite origin, like the extraocular muscles, and is thus innervated by the third cranial nerve
- d. is vestigial and rarely present in humans
- e. is derived from the first branchial pouch, consistent with its position in the middle ear space

52. A 70 year-old man, recently retired from his job at the smelting plant, comes to you complaining of “sinusitis.” History and exam reveals loose maxillary teeth, persistent facial pain, and a bloody unilateral nasal discharge. You suspect:

- a. mucormycosis
- b. staphylococcal sinusitis
- c. mucocoele
- d. mucopyocoele
- e. carcinoma

53. Your first night of internship begins with a page from the night nurse regarding Mr. Smith, a patient on your expanding psychiatry service. Mr. Smith, admitted for profound depression, is also 10 years status post total laryngectomy for laryngeal cancer. According to the nurse he is “coughing more than usual” and “aspirating.” You:

- a. call the head and neck surgery resident on call because you don't like sputum
- b. run to the patients' bedside and evaluate him for the inevitable aspiration that accompanies laryngectomy
- c. go to see the patient in order to evaluate his cough—with laryngectomy patients, it's always aspiration
- d. go to see the patient in order to evaluate his cough. While there, you reassure the nurse that a total laryngectomy involves the separation of the airway from the pharynx and that aspiration is unlikely
- e. go back to sleep

54. Following a bout of rhinosinusitis, one of your medical school classmates continues to have fevers and a frontal headache. He has a tender, gradually enlarging swelling just over his right eyebrow. What's going on?

- a. osteomyelitis of the frontal bone (Pott's puffy tumor)
- b. allergic frontal sinusitis

- c. mucocoele of the frontal sinus
- d. mucopyocoele of the frontal sinus
- e. subdural abscess

55. The most common objects aspirated by children into the tracheobronchial tree are:

- a. coins
- b. buttons
- c. Nintendo Gameboy® cartridges
- d. peanuts
- e. pills

56. A three year-old with acute purulent rhinitis develops chills with fever and dull pain over the right eye. The eyelids are swollen and the eye is proptotic. The child's extraocular motions are noticeably restricted. What is your diagnosis?

- a. frontal sinusitis
- b. maxillary sinusitis
- c. ethmoid sinusitis and orbital cellulitis
- d. ethmoid sinusitis and preseptal cellulitis
- e. orbital vein thrombophlebitis

57. A 40 year old male was in a motor vehicle accident ten years ago. The facial fractures he sustained were repaired at that time. Over the past year he has noted gradual lateral displacement of his right eye. His eye now sits inferior and lateral and he has diplopia. The superomedial aspect of his orbital rim seems to be eroded away by a distinct rubbery mass.

Your diagnosis:

- a. chronic post-traumatic lymphoma
- b. frontal sinus mucocoele
- c. lacrimal sac tumor
- d. frontal sinus osteoma
- e. dacryocystitis

58. A 30 year-old is seen in the emergency room because of complete loss of voice. Indirect laryngoscopy reveals only brief approximation during attempts of phonation. However, the vocal cords completely approximate during coughing. You suspect:

- a. bilateral recurrent nerve paralysis
- b. bilateral recurrent nerve paresis
- c. dysphonia plicae ventricularis
- d. hysterical aphonia
- e. multiple sclerosis

59. A 40 year-old woman with rheumatoid arthritis undergoes direct laryngoscopy for hoarseness, weak voice, and pain in the anterolateral neck. The vocal cords are poorly mobile during passive manipulation. The likely cause is:
- cricoarytenoid arthritis
 - bilateral vocal cord paralysis
 - gold neurotoxicity
 - laryngeal lupus
 - thyroarytenoid ankylosis
60. A 16 year-old boy is the victim of a pedestrian vs. auto accident. He comes to the trauma room with a depressed frontal bone fracture, open tibia and fibula fractures, and multiple contusions of the face and neck. Severe stridor, dyspnea, and cyanosis are present. Your first move is:
- burr hole for evacuation of likely frontal hematoma
 - complete neurologic evaluation
 - large bore IV access for fluid resuscitation
 - complete radiographs of the face, skull, neck, and chest
 - secure an airway
61. A 45 year-old is seen with constitutional symptoms, productive cough, and pulmonary infiltrates. Laryngeal exam reveals a lesion at the posterior commissure. The supraglottic structures are normal. The most likely diagnosis is:
- squamous cell carcinoma of the larynx with lung metastases
 - carcinoma of the lung with laryngeal metastases
 - sarcoidosis
 - blastomycosis
 - tuberculosis
62. A 27 year-old grad student has a 2.5 cm mass to the left of midline in the anterior neck. The mass moves with deglutition. Complete exam also reveals a left vocal cord paralysis. You suspect:
- thyroglossal duct cyst
 - thyroid carcinoma
 - hyperthyroidism
 - aortic arch aneurysm
 - Hashimoto's thyroiditis
63. A 60 year-old Chinese-American with unilateral serous otitis media and a neck mass should have:
- nasopharyngoscopy to rule out a nasopharyngeal mass, as unilateral serous otitis media in any patient, particularly in an adult, should raise your suspicion for nasopharyngeal carcinoma

- b. an empiric course of anti-tubercular antibiotics
- c. CT scan of the temporal bone
- d. radical neck dissection
- e. plain films of the nasopharynx

64. You are doing an H & P on a patient and the previous notes say the patient underwent a "RADICAL NECK DISSECTION". If true, this means that the patient:

- a. had a cancer operation on his neck
- b. had some, but not all of the lymph node-bearing tissue removed from both his anterior and posterior triangles of his neck
- c. had all the lymph node-bearing tissue but no "vital" structures removed from his neck
- d. had all the lymph node-bearing tissue as well as the spinal accessory nerve, internal jugular vein, and sternocleidomastoid removed from his neck
- e. had all the lymph node-bearing tissue as well as the spinal accessory nerve, internal jugular vein, external carotid artery, and sternocleidomastoid muscle removed from his neck

65. A 35 year-old woman is an unrestrained passenger in a motor vehicle accident. He suffers a mild closed head injury and a mandible fracture. The patient is dizzy and examination reveals a blue eardrum on the right. One should suspect:

- a. dislocation of the temporomandibular joint into the middle fossa
- b. serous otitis media
- c. dehiscent jugular bulb
- d. temporal bone fracture

66. A 3 year-old female recovering from a URI develops mild airway compromise, fever, and a muffled cry. Her exam is notable for a stiff neck and a bulging mass just off the midline of the posterior pharynx visible through the mouth. You treat her with:

- a. antibiotics
- b. ice water pharyngeal irrigation and antibiotics
- c. quinsy tonsillectomy
- d. decompressive laminectomy for spinal osteomyelitis
- e. drainage of her retropharyngeal abscess

67. Your uncle Bill interrupts an otherwise pleasant Memorial Day picnic to insist that you look at "this thing growing inside my mouth." Upon examination, you note a bony hard mass in the middle of the hard palate. There is no overlying mucosal abnormality. "It has been growing there for years," your uncle reminds you. Your diagnosis is:

- a. epulis
- b. torus palatini
- c. osteogenic sarcoma

- d. epignathus
- e. neoplasm of a minor salivary gland

68. An otherwise healthy 2 year-old is seen by her family doctor with “ atypical asthma” and unilateral wheezing. Fluoroscopy reveals obstructive emphysema of the left lung. She should next undergo:

- a. pulmonary function tests
- b. blood gas analysis
- c. contrast bronchogram
- d. postural drainage for lung abscess
- e. bronchoscopy

69. A boisterous 5 year-old male with a 3 month history of hoarseness is found to have bilateral tiny swellings at the junction of the anterior and middle third of the vocal cords bilaterally. Both his parents are smokers. He has:

- a. granulomatous laryngitis
- b. vocal nodules
- c. vocal polyps
- d. respiratory papillomas
- e. chondrosarcoma of the larynx

70. While you are covering the ER a 72 year-old veteran comes to you complaining of progressive dyspnea. Mirror exam of the larynx reveals a huge mass at the laryngeal inlet extending across the vocal cords. His stridor is so dramatic that he is not even thinking of the next cigarette.

You:

- a. administer steroids and observe
- b. perform direct laryngoscopy and biopsy
- c. intubate the patient endotracheally
- d. perform a total laryngectomy that evening
- e. take the patient immediately to the OR for tracheotomy followed by direct laryngoscopy and biopsy

71. Graves’ ophthalmopathy refers to:

- a. ectopic thyroid tissue in the orbit causing proptosis
- b. swelling of the eyelids seen in hypothyroid states
- c. an untreatable, unmanageable complication of Graves’
- d. characteristic infiltration of the extra-ocular muscles and the subsequent proptosis and optic nerve compromise
- e. the lid lag seen only in Graves’ disease

72. A 10 year-old girl is seen with unilateral nasal discharge. The problem is a chronic one and failed to respond to allergy treatment. She is otherwise well. Exam shows pale mucosa and a pooling of secretions posteriorly on that side. Your next move is to:
- perform an adenoidectomy
 - sinus CT
 - culture the nasal discharge
 - pass a catheter transnasally to the pharynx
 - book the patient for the OR and a general anesthetic in order to examine her nasopharynx
73. The presence of a nasal septal perforation makes you suspect all but:
- cocaine abuse
 - Wegener's granulomatosis
 - Osler-Weber-Rendu disease
 - syphilis
 - carcinoma of the nasal cavity
74. With some exceptions, routine tracheotomy is typically performed at the level of the:
- cricothyroid membrane
 - cricoid cartilage
 - cricoid cartilage and 1st tracheal ring
 - 2nd and 3rd tracheal rings
 - 5th and 6th tracheal rings
75. The etiology of Bell's palsy is:
- idiopathic
 - usually trauma
 - usually neoplastic
 - Lyme's disease
 - autoimmune
76. Initial therapy for Bell's palsy may include:
- antibiotics
 - antihistamines
 - vasodilators
 - steroids
 - facial nerve exploration
77. Your investigations into a patient's unilateral facial paralysis has failed to reveal anything sinister. Your concern is now focused on:
- your next patient; there is nothing that can or needs to be done

- b. prevention of corneal drying and ulceration; you recommend Lacrilube® and saran wrap at night
- c. dynamic reconstruction of the face using a temporalis muscle transposition
- d. the psychological impact of unilateral facial paralysis
- e. the likely development of neuroma in this patient

78. A 65 year-old edentulous patient is found to have a 1 mm black macule on the mandibular gingiva. He reports that it seems to “always have been there” and remains entirely asymptomatic. The most likely diagnosis is:

- a. *Aspergillus niger*
- b. benign melanoma
- c. malignant melanoma
- d. amalgam tattoo
- e. presbygingiva

79. A 28 year-old patient has AIDS. He has several Kaposi’s sarcomata on his trunk and now has a purplish lesion on his palate. It is asymptomatic. You recommend:

- a. excision
- b. radiation
- c. excision followed by radiation
- d. incisional biopsy to prove that it is KS
- e. observation

80. Chronic otitis media is best typified by:

- a. recurrent episodes of acute otitis media requiring antibiotics
- b. a perforation of the tympanic membrane with intermittent or persistent purulent otorrhea
- c. fluid behind an intact eardrum
- d. otitis due to a non-bacterial infection
- e. any otitis with an intra-cranial or intra-temporal complication

81. A 30 year-old healthy male is seen in your clinic for an annual exam. You notice yellowish spots on the buccal mucosa. They probably represent:

- a. Fordyce’s spots
- b. *Aspergillus flavum* colonization
- c. lichen planus
- d. mucocoeles
- e. flavoplakia

82. The peak prevalence for acute otitis media is:

- a. 0-6 months of age
- b. 6-36 months of age

- c. 3-5 years of age
- d. 5-7 years of age
- e. 7-15 years of age

83. A 3 month-old is seen with biphasic stridor present since shortly after birth. She has a right thigh hemangioma as well as multiple small hemangiomas of her right cheek. Her voice is normal but her symptoms are worse when she cries. What is the most likely diagnosis?

- a. laryngomalacia
- b. subglottic stenosis
- c. subglottic hemangioma
- d. acute epiglottitis
- e. glottic web

84. The single most important factor in the pathogenesis of middle ear disease is:

- a. heredity
- b. allergy
- c. upper respiratory infection
- d. eustachian tube dysfunction
- e. hematogenous spread of bacteria to the middle ear

85. The only intrinsic laryngeal muscle innervated by the superior laryngeal nerve is the:

- a. cricothyroid
- b. thyroarytenoid
- c. lateral cricothyroid
- d. posterior cricoarytenoid
- e. interarytenoid

86. Acute otitis media and serous otitis media are common diagnoses in clinical medicine. Which of the following signs/symptoms are seen in both?

- a. pronounced otalgia
- b. conductive hearing loss
- c. persistent vertigo
- d. freely mobile TM on pneumatic otoscopy
- e. red bulging TM

87. Your Great Aunt Millie in Toledo tells you that she is going to get a facelift from the same doctor who did her sinus surgery two years ago. You, being the only doctor in the family, tell her:

- a. Facelifts never work. Take your Zolof®
- b. Only plastic surgeons do facelifts
- c. It's too soon after sinus surgery to have a facelift

- d. It doesn't matter how many facelifts a surgeon has done before—it's a simple, foolproof operation
- e. Over 50% of practicing cosmetic surgeons were trained as head and neck surgeons and that facial plastic and reconstructive surgery is a fundamental part of the field of otolaryngology

88. Septoplasty:

- a. is a purely cosmetic procedure
- b. is purely an airway procedure
- c. is an uncommon procedure in head and neck surgery
- d. is usually done for functional reasons but, like all procedures in head and neck surgery, can have significant cosmetic implications
- e. usually involves skin grafting

89. Rhinoplasty:

- a. is a purely cosmetic procedure
- b. is purely an airway procedure
- c. is an uncommon procedure in head and neck surgery
- d. is usually done for cosmetic reasons but, like all procedures in head and neck surgery, can have significant functional implications
- e. can never be combined with septoplasty

90. Current thinking regarding the pathogenesis of sinusitis revolves around:

- a. allergy having a greater influence than anatomy
- b. the ostiomeatal complex and the surrounding ethmoid sinuses
- c. septal deviation
- d. smoking
- e. heredity

91. A patient with Raynaud's syndrome and a feeling of "tightness" around her mouth comes to see you in clinic. She has the CREST variant of systemic sclerosis. The most common head and neck symptom of this disorder is:

- a. peri-oral rhytids requiring dermabrasion
- b. dysphagia
- c. pyrosis
- d. facial telangectasias
- e. nasal tip Raynaud's phenomenon

92. An 33 year-old overweight teamster bellies into your clinic complaining of chronic throat clearing and sore throat. He has prolonged bouts of coughing just as he goes to sleep. His primary physician had ordered a sinus CT which is negative. He is a non-smoker but a

voracious eater and coffee drinker. Exam reveals reddened mucosa in the interarytenoid area.

You suspect:

- a. early laryngeal cancer
- b. intermittent sinusitis
- c. caffeine-induced laryngeal tremor
- d. gastroesophageal reflux disease
- e. conversion disorder

93. Medication induced cough is seen most commonly in patients who use:

- a. propofol
- b. calcium-channel blockers
- c. angiotensin-converting enzyme (ACE) inhibitors
- d. Zosyn®, Timentin®, Augmentin® and all the beta-lactamase inhibitors
- e. Prozac®

94. Furosemide (Lasix®):

- a. is ototoxic in and of itself
- b. is not ototoxic
- c. lessens the ototoxicity of aminoglycosides by promoting diuresis
- d. exacerbates the ototoxicity of aminoglycosides
- e. is ototoxic but not synergistically so with the aminoglycosides

95. You are on the general surgery service for your sub-internship. Your patient is status post hemicolectomy. He develops bilateral tender swellings on the sides of his face. You note pus coming from the ducts opposite his upper 2nd molar on either side. Your progress note for the day reflects your knowledge that:

- a. pus from Wharton's duct is a sign of suppurative parotitis. You begin treatment with hotpacks, IV fluids, Ancef®, and sialogogues
- b. pus from Stensen's duct after gastrointestinal surgery is not uncommon—no treatment is necessary
- c. pus from Stensen's duct is a sign of suppurative parotitis—oral irrigation and sialogogues is all that is necessary
- d. what looks like pus is really saliva and everything is OK
- e. pus from Stensen's duct is a sign of suppurative parotitis. You begin treatment with
 - 1) vigorous hydration
 - 2) sialogogues—usually just lemon drops will do
 - 3) anti-staph drugs—usually Ancef
 - 4) regular self-massage of the parotids
 - 5) hot packs if tolerated

96. A simple, cheap, and effective method for controlling reflux laryngitis is:

- a. a course of omeprazole or lansoprazole
- b. the avoidance of coffee and nicotine
- c. bed blocks
- d. avoiding spicy foods
- e. over-the-counter antacids

97. You are suturing a lower lip laceration in the ER. You realign the lip with particular attention to the _____ as it represents a crucial cosmetic landmark.

- a. philtrum
- b. mucocutaneous junction
- c. orbicularis oris
- d. vermilion border
- e. labial frenulum

98. Your repair includes both permanent (P) and absorbable (A) sutures. Put a (P) or an (A) next to each of the below suture types as appropriate.

_____ VICRYL

_____ ETHILON

_____ NYLON

_____ DEXON

_____ CHROMIC GUT

_____ TI-CRON

_____ TEVDEK

_____ PROLENE

_____ SILK

_____ ETHIBOND

_____ MAXON

_____ FAST-ABSORBING GUT

99. An audiogram demonstrates a unilateral sensorineural hearing loss. Which of the following diagnoses is least likely?

- a. mumps
- b. acoustic neuroma
- c. Ménière's disease
- d. transverse temporal bone fracture
- e. serous otitis media

100. An audiogram demonstrates a unilateral sensorineural hearing loss. Which of the following diagnoses is least likely?

- a. chronic serous otitis media
- b. otosclerosis
- c. tympanic membrane perforations
- d. noise-induced hearing loss
- e. Ménière's disease

101. Frustrated over your surgery evaluation, you punch your attending in the nose. The attending has a fracture of the nasal bones. There is minimal bleeding. To prove your knowledge and show that you deserve a better grade, you remind the attending that:
- the best functional and cosmetic results are always obtained with immediate open reduction and internal fixation of any fracture, including nasal fractures.
 - immediate closed reduction under local anesthesia can provide excellent reduction but must be done within 24 hours of the fracture.
 - immediate closed reduction under local anesthesia can provide excellent reduction and may be performed up to 7 days after the fracture.
 - they look better now anyway.
 - the local anesthetics used in closed reductions of nasal fractures can be used with impunity in otherwise healthy patients.
102. A call comes from the medical intensive care unit. One of their patients has COPD and is ventilator dependent. She has been intubated for 2 weeks. They ask you to “do a trach.” You go and evaluate the patient for the appropriateness of tracheotomy. In addition to being more comfortable for the patient, other benefits from tracheotomy include:
- enhances pulmonary toilet
 - it becomes easier for the patient to eat
 - decreases ventilatory dead space
 - decreases endolaryngeal injury
 - all of the above
103. The MICU calls again; the patient in the next bed has both nasotracheal and nasogastric tubes as well as a daily fever spike to 39°C. He has just completed a 14 day course of vancomycin, ceftazidime, and metronidazole for an aspiration pneumonia. His urinalysis and chest x-ray are unconvincing for new fever sources. The industrious medicine intern orders plain films of the sinuses to evaluate them as a source of fever.
- a sinus tap is indicated in almost all patients with opacified sinuses on plain films
 - sinus tap should only be done if an air-fluid level is present
 - a sick patient should not undergo a sinus tap as it requires a general anesthetic
 - culture of the nasal discharge is adequate evaluation of sinusitis in the ICU patient
 - changing the nasal tubes is all that is required
104. Parathyroid glands: (select all that are true)
- may be found in the chest
 - are adenomatous in Sipple’s syndrome (MEN IIa)
 - are the original source of pathology in renal osteodystrophy
 - are 4 in number in over 95% of people
 - cause local obstructive symptoms when adenomatous

105. Blepharoplasty:

- a. is a purely cosmetic operation
- b. is a purely functional operation
- c. is typically a cosmetic operation with significant functional implications
- d. because it is an eyelid operation, it cannot result in blindness
- e. usually involves the upper lids and forehead—only rarely do the lower eyelids require surgical attention

106. A 17 year-old with weight loss and low grade fevers comes to the “ Urgent Medicine” clinic. He has a small, rubbery supraclavicular lymph node on the right. The patient believes that it has been there for 2 weeks. There are no other notable exam findings. The referring provider asks you to evaluate the patient. The diagnostic study most likely to shed light on this situation prior to your evaluation is:

- a. the Mantoux test
- b. the Bernstein test
- c. a complete blood count with differential and smear evaluation
- d. the Kviem test
- e. the chest radiograph

107. A 12 year-old family member has managed to stick a Q-tip® into his right ear in such a manner that he is now writhing on the floor in pain. He has removed the offending instrument and there is no otorrhea. As you approach him to evaluate his injury, you:

- a. suspect a tympanic membrane injury because of the intensity of his pain
- b. suspect an isolated canal injury because of the lack of otorrhea
- c. suspect your brother is hamming it up as the ear is not a sensitive area
- d. realize you need both an otoscope and a tuning fork
- e. wish you were an only child

108. Your evaluation of the Q-tip® incident reveals a linear tear in the postero-inferior tympanic membrane. You see a little blood and no other fluid. The boy is now saying that he is a little dizzy and that he can't hear. You are concerned about inner ear trauma but are somewhat reassured by:

- a. a negative Rinne on that side
- b. a positive Rinne on that side
- c. a Weber which lateralizes to the injured side
- d. a Weber which lateralizes away from the injured side
- e. nothing; you still wish you were an only child

109. A World War II veteran presents to the primary care physician complaining of chronic draining ears ever since serving in the Philippines in World War II. His examination shows a

chronic otitis externa. The patient claims that this is a fungal infection. Your recommended treatment is:

- a. Acidification for *Pseudomonas*
- b. Fluconazole
- c. Mycolog
- d. Temporal bone CT scan
- e. Referral to head and neck surgery

110. A 40 year-old Vietnam veteran claims that his nose was fractured during his military deployment. Ever since this time he has noted diminished airway on the left side, a difficulty which has worsened with time. He then asks if this can be repaired. ENT examination shows a septal deflection and an aging nose. Your recommendations are:

- a. This is part of life and part of aging, there is no good treatment.
- b. Septoplasty may provide benefit, but is a risky operation.
- c. Septoplasty combined with a tip elevation rhinoplasty for his aging nose would be the best treatment.
- d. Use a Breathe Right® strip.

111. A 60 year-old drill sergeant presents with a 3-month history of hoarseness. Your initial treatment is:

- a. Reflux precautions
- b. Nasal steroids for his post nasal drip
- c. ENT referral to rule out carcinoma
- d. Chest x-ray
- e. Topical oral steroids for an obviously reactive airway

112. An insulin-dependent veteran presents with otitis externa refractory to topical acidification. Examination shows an advanced otitis externa. Your treatment is:

- a. Change to an antibiotic steroid ear drop
- b. Place an external auditory canal wick
- c. Order a CT scan to rule out malignant otitis externa
- d. Irrigate the ear and then change ear drops
- e. Refer to ENT for further evaluation