



Eyes, Head & Neck

Single Choice Questions (SCQ) and Extended Match Questions (EMQ)

Emergency Medicine Fellowship Program

1. Which is not a cause of ptosis with a constricted pupil?

- a) aneurysmal compression of the third cranial nerve
- b) carotid aneurysm
- c) brainstem infarction
- d) thyroid malignancy
- e) SCC lung

2. Which of these would not cause unilateral red eye?

- a) acute closed angle glaucoma
- b) iritis
- c) scleritis
- d) cavernous sinus thrombosis
- e) dacryocystitis

3. Which is not a risk factor for acute angle closure glaucoma?

- a) short sightedness
- b) family history of the same
- c) atrovent
- d) atropine and tropicamide eye drops
- e) salbutamol

4. Which is not a clinical feature of acute glaucoma?

- a) hazy cornea
- b) blurred vision with haloes around the lights
- c) semidilated non reactive pupil
- d) irregular pupil
- e) increased intraocular pressure

5. Which should not be used to treat acute glaucoma?

- a) morphine
- b) acetazolamide
- c) tropicamide drops

d) maxalon

e) mannitol

6. What is the normal intraocular pressure?

a) <5 mmHg

b) <10 mmHg

c) <15 mmHg

d) <25 mmHg

e) <30 mmHg

7. What is NOT a feature of iritis?

a) unilateral painful red eye

b) small or normal pupil

c) irregular pupil possible

d) possible hyphaema

e) WCC in anterior chamber

8. Which should not be used in treatment of iridocyclitis?

a) topical steroids

b) topical chloramphenicol

c) morphine

d) atropine topically

e) pilocarpine topically

9. Which is not true of hyphaema?

a) it is usually due to trauma

b) it has an association with sickle cell disease

c) 10% will rebleed on 3-5

d) acute glaucoma is a possible complication

e) blood sits in the anterior chamber

10. Which is incorrect regarding treatment of hyphaemas?

- a) aspirin is the analgesic of choice
- b) bed rest with 30 degrees of elevation is the necessary
- c) mydriatics may play a role
- d) patch both eyes
- e) acetazolamide may play a role

11. Which statement is incorrect?

- a) dendritic ulcers are caused by herpes simplex
- b) episcleritis is a serious condition
- c) scleritis is a serious condition
- d) herpes zoster ophthalmicus is likely to involve the cornea if the tip of the nose is involved
- e) all of the above are correct

12. Which condition is described? – painless incomplete loss of vision, able to see fingers, over a few minutes. Fundoscopy shows flame haemorrhages and a swollen optic disc.

- a) optic neuritis
- b) central retinal artery occlusion
- c) central retinal vein occlusion
- d) vitreous haemorrhage
- e) cataract

13. Which of the conditions listed above is described by sudden painless complete loss of vision?

14. Which is not characteristic of a retinal detachment?

- a) painless
- b) flashing lights seen
- c) floaters seen
- d) nearly always decreased visual acuity
- e) decreased visual fields

Answers

1)A 2)E 3)A 4)D 5)C 6)D 7)D 8)E 9)E 10)A 11)B 12)C 13)B

4. A 30yr male presents with tension headache. The examination is otherwise unremarkable. During routine neurological examination you note the presence of cotton wool spots in the retinae. The most likely diagnosis is

- a) AIDS
- b) Diabetic retinopathy
- c) Hypertensive retinopathy
- d) Endocarditis
- e) Leukaemia

4. A

EMQ Ophthalmology

- | | |
|---------------------------|--------------------------------|
| a. acute iritis | b. allergic conjunctivitis |
| c. angle closure glaucoma | d. blepharitis |
| e. corneal foreign body | f. corneal ulcer |
| g. herpes simplex | h. herpes zoster |
| i. marginal keratitis | j. subconjunctival haemorrhage |

For the following scenarios pick the most likely diagnosis from above

1. A 18year old male presents with a painful red eye and photophobia . He has a watery discharge and ciliary hyperemia. He has recently been working outside on a building site in stormy weather
2. An 8 year old presents with profuse watering eyes. You note large gelatinous vegetations on the upper tarsal conjunctiva, His visual acuity is normal and cornea appears normal .
3. A 45year old presents with pain, photophobia and a watery eye discharge . Their visual acuity is 6/12 (not corrected with pinhole) and ciliary hyperemia. The cornea appears normal but the pupil appears small in the affected eye.
4. A 66 year old Asian male presents with impaired vision , slight watery discharge and severe eye pain in his left eye. The cornea appears slightly dusky and you note a dilated non reacting pupil.
5. A 65 year old woman presents with an acutely painful red eye. He reports red swollen eyelids for the preceding week. You note local medial conjunctival hyperemia on direct observation

Answers

1. e 2.b. 3.a 4.c 5. I

EMQ Ophthalmology 2

- a. Central retinal artery occlusion
- b. Central retinal vein occlusion
- c. Giant cell arteritis
- d. Optic neuritis
- e. Retinal detachment
- f. Trichiasis
- g. Vitreous haemorrhage

For each of the following scenarios choose the most likely diagnosis

1. A 65year old male with known hypertension and diabetes presents with sudden painless visual loss in his left eye. On examination you note an abnormal red reflex and the fundus is not clearly seen.
2. A 55year old female presents with a left temporal headache, fever and transient visual loss on the left. You note decreased visual acuity on the left (6/18) and an afferent pupillary defect.
3. A 59year old presents with sudden painless loss of vision in his right eye and associated with a loss of direct pupillary reaction to light. Visual acuity is noted to be 6/60 on the right and 6/6 on the left with no correction on pinhole.
4. A 20year old female presents with painless loss of vision that occurred gradually over 4 hours. On exam you note visual acuity of 6/18 and decreased colour vision and a relevant afferent pupillary defect.
5. A 82year old presents with sudden loss of decreased vision after experiencing some recent small objects floating past their eye. Now they sense a dark shadow in their vision. You note an abnormal red reflex on examination

Answers : 1. b 2.c 3.a 4.d 5.e

- 15.Regarding the treatment of acute otitis media in children over 2 years of age, which is true?
- a) penicillin is the antibiotic of choice
 - b) if not treated there is a high chance of chronic glue ear
 - c) antibiotic treatment is the best treatment of associated otalgia
 - d) antibiotic treatment should be withheld for 24-48 hours and only commenced if the child remains febrile or symptomatic
 - e) none of the above are true

- 16.How should a haematoma of the pinna secondary to blunt trauma be managed?
- a) pressure bandage
 - b) incision, drainage, not pressure bandage
 - c) incision, drainage, and pressure bandage
 - d) antibiotics alone
 - e) needle aspiration and pressure dressing

- 17.Regarding management of perforated eardrums secondary to blunt trauma which is FALSE?
- a) they should be surgically repaired
 - b) they should be left to heal spontaneously
 - c) it is important to administer topical antibiotics
 - d) the ear canal should not be allowed to get wet
 - e) B C and D are true
 - f) B and D are true

- 18.Which is the most common organism of malignant otitis externa?
- a) pseudomonas
 - b) MRSA
 - c) Anaerobes
 - d) Clostridium
 - e) Streptococci

19. Which is not routine management of sialolithiasis?

- a) gland massage
- b) local heat
- c) sucking on lemon wedges
- d) analgesia
- e) decreased fluid intake

20. Which is false regarding sialolithiasis?

- a) the diagnosis is usually clinical
- b) intraoral radiographs show more stones than extra oral ones
- c) sialography is being replaced by CT
- d) the most common gland involved is the parotid gland
- e) most patients can be discharged and managed as outpatients

21. Which is false of suppurative parotitis?

- a) differentiation from a viral aetiology is clinical
- b) treatment is as for sialolithiasis plus antibiotics
- c) it is more likely in a debilitated or dehydrated patient
- d) diagnosis is clinical
- e) inpatient treatment is mandatory

22. How many adult teeth are there?

- a) 20
- b) 24
- c) 28
- d) 32
- e) 36

23. What is the best transport medium for an avulsed tooth?

- a) milk
- b) saliva
- c) iced salt water
- d) iced tap water
- e) in ice

24. A fracture of the tooth that is sensitive to temperature fluctuations and clinically the fracture part looks yellow, is what Ellis fracture classification?

- a) 1
- b) 2
- c) 3
- d) 4
- e) 5

25. Which intraoral lacerations should be sutured?

- a) 5mm
- b) >1cm
- c) if through and through lac, only suture external lac, not internal
- d) all of the above
- e) B and C

26. What is Ludwig's angina?

- a) ulcerative tonsillitis
- b) cardiac ischemic pain felt in the jaw
- c) bilateral cellulites of the submandibular and sublingual spaces
- d) ulcerative gingiva-stomatitis
- e) impacted 3rd molar

27. Which age group is a retropharyngeal abscess most commonly seen in?

- a) <1 year
- b) 1-5 years
- c) 5-12 years
- d) 12-18 years
- e) >18 years

28. How long should a patient with possible caustic ingestion be observed for and discharged if still asymptomatic?

- a) 2 hours
- b) 5 hours
- c) 8 hours
- d) 12 hours
- e) 24 hours

15)D 16)C 17)F 18)A 19)E 20)D 21)E 22)D 23)B 24)B 25)B 26)C 27)A 28)B

1. A 30 yr male presents after a fight with a grossly swollen face

- a) OPG (panorex) is the best view to show mandibular symphysis fracture
- b) If there are signs of inferior rectus entrapment the best management is immediate surgery
- c) He has less chance of a zygomatic arch fracture than his 8 yr son would have
- d) LeForte 2 fractures never involve the zygoma
- e) 1/3 of the upper lip may be debrided during wound repair with preservation of cosmetic appearance

2. Ludwig's angina

- a) Is more common in males
- b) Is rarely due to dental abscess
- c) Is treated with antibiotics and dexamethasone 0.15mg/kg IV (max 12mg)
- d) Has a mortality of >50%
- e) The commonest cause of death is asphyxiation

3. The commonest site of sinusitis leading to periorbital cellulitis is

- a) Sphenoid
- b) Frontal
- c) Ethmoid
- d) Maxillary
- e) Cavernous

1. D 2. E 3. C

ENT MCQs

1. Which of the following is *not* a suppurative complication of pharyngitis?

- A. Deep neck infection
- B. Acute rheumatic fever
- C. Peritonsillar abscess
- D. Otitis media
- E. Sinusitis

2. Which of the following statements is true regarding deep neck infections?

- A. Patients with deep neck infections require immediate otolaryngologic consultation.
- B. Empiric antibiotic therapy for deep neck infections should cover normal oropharyngeal flora and beta-lactamase-producing organisms.
- C. Internal jugular thrombosis is the most common vascular complication of deep neck infections.
- D. All of the above.

3. Treatment options for GABHS include all the following *except*:

- A. penicillin.
- B. cephalexin.
- C. tetracycline
- D. clindamycin.
- E. macrolides.

Q4 A child is brought to the emergency department by her mother for evaluation of a frontal headache. At what age would frontal sinusitis become a likely diagnosis?

A) <input type="radio"/>	2 years
B) <input type="radio"/>	3 years
C) <input type="radio"/>	4 years
D) <input type="radio"/>	5 years
E) <input type="radio"/>	8 years

Q5 A 37-year-old metal shop worker complains of sudden sharp pain and foreign body sensation to the left eye. Visual acuity: 20/20 OD, 20/60 OS. Slit lamp examination reveals a 2- mm corneal abrasion without foreign body or rust ring. A Seidel test—streaming of dilute fluorescein dye away from the lesion—is positive. Appropriate initial evaluation includes all of the following EXCEPT

A) <input type="radio"/>	direct ophthalmoscopy
B) <input type="radio"/>	radiograph of the orbit
C) <input type="radio"/>	tonometry
D) <input type="radio"/>	orbital CT
E) <input type="radio"/>	B-mode ultrasonography

Q6 A 47-year-old woman with non-insulin-dependent diabetes, returns to the emergency department for a 3-day recheck of a swimmers ear. Despite treatment with a topical antibiotic-steroid drop, her pain is worse. Examination reveals a temperature of 101.2 °F, and a swollen, painful erythematous external ear. The admitting physician requests that you begin parenteral antibiotic therapy in the emergency department. When choosing therapy, which of the following organisms must be covered?

A) <input type="radio"/>	Staphylococcus aureus
B) <input type="radio"/>	Hemophilus influenzae
C) <input type="radio"/>	Streptococcus pneumoniae
D) <input type="radio"/>	Pseudomonas aeruginosa
E) <input type="radio"/>	Streptococcus pyogenes

Q7 A 29-year-old man complains of 2 hours of severe vertigo, associated with nausea, vomiting, and left ear fullness. The patient describes repetitive episodes occurring every few months which spontaneously resolve in less than an hour. Examination of the ear, nose, and throat is normal. Neurologic examination is non-focal. The differential diagnosis of this disorder includes all of the following EXCEPT

<input checked="" type="radio"/> A)	vertebrobasilar insufficiency
<input type="radio"/> B)	labyrinthine fistula
<input type="radio"/> C)	Meniere's disease
<input type="radio"/> D)	labyrinthitis
<input type="radio"/> E)	benign positional vertigo

Q8 Cotton wool spots (soft exudates) might typically be seen on retinal examination in patients with all of the following conditions EXCEPT

<input type="radio"/> A)	senile macular degeneration
<input type="radio"/> B)	hypertension
<input type="radio"/> C)	central retinal vein occlusion
<input type="radio"/> D)	collagen vascular disease
<input type="radio"/> E)	diabetes mellitus

Q9 Regarding the ophthalmic medication tropicamide, all of the following are true EXCEPT

<input checked="" type="radio"/> A)	It may decrease synechiae formation in anterior chamber uveitis
<input type="radio"/> B)	It may decrease visual acuity measured with pin hole device
<input type="radio"/> C)	It may increase intraocular pressure in susceptible patients
<input type="radio"/> D)	Maximal mydriasis occurs in 20 to 40 minutes and resolves in about 6 hours
<input type="radio"/> E)	It may decrease pain secondary to iridocyclitis

Q10 All of the following are true of cerebrospinal fluid (CSF) rhinorrhea EXCEPT

- A) rhinorrhea is usually bilateral
- B) the fluid is characteristically clear
- C) compression of the jugular vein increases the rhinorrhea
- D) leaning forward increases the rhinorrhea
- E) nasal packing should be avoided

Q11 A 65-year-old overweight man complains of recent misty vision on sunny days. His vision, when tested, is 6/18 right and left. Which one of the following is the MOST LIKELY basis of his complaint?

- A) Diabetic retinopathy
- B) Macular degeneration
- C) Cataract
- D) Myopia
- E) Chronic simple glaucoma

Q12 A 20-year-old male unrestrained driver in a motor vehicle accident is brought to the emergency department by ambulance. The patient has obvious facial trauma with numerous bleeding lacerations. During the trauma secondary survey, you note that when grasping the superior alveolar ridge, there is mobility of the maxilla and nose relative to the zygoma and forehead. Which fracture does this patient MOST likely have?

- A) Le Fort II
- B) Zygomatic arch
- C) Le Fort III
- D) Trimalar
- E) Le Fort I

Q13 A 22-year-old man presents with bilateral eye pain, redness, and blurry vision for 10 days. Despite using over-the-counter eye drops, symptoms have worsened. Three other members of the family have recently developed similar symptoms. Physical examination is notable for tender preauricular nodes, injected conjunctiva, and keratitis with subepithelial infiltrates. The MOST likely diagnosis is

- A) Staphylococcus conjunctivitis
- B) allergic conjunctivitis
- C) Herpes zoster conjunctivitis
- D) corneal ulcer
- E) epidemic keratoconjunctivitis

Q14 With respect to ocular emergencies, all of the following are true EXCEPT

- A) Sudden painless loss of vision in one eye from outside inwards is suspicious for retinal artery occlusion
- B) Floaters are pathognomonic of retinal vein occlusion
- C) Normal intraocular pressure is less than 25mmHg
- D) The commonest cause of contact lens related bacterial ulcers is Pseudomonas
- E) A patient with a positive Siedel sign should undergo orbital xrays

ANSWERS

1. B
2. D
3. C
4. E
5. C
6. D
7. A
8. A
9. B
10. A
11. C

- 12. A
- 13. E
- 14. B

1. What is the most common bacterial cause of corneal ulcers in contact lens wearers?

- a. S. aureus
- b. S. epithelium
- c. streptococcal
- d. **pseudomonas**

2. The rebleeding rate from a hyphema is ?

- a. 4%
- b. 5%
- c. 8%
- d. **10%**

3. A Cherry red spot on fundoscopy is consistent with?

- a. **CRAO**
- b. CRVO
- c. retinal haemorrhage
- d. optic neuritis

4. A 25 yr old man with Type 1 diabetes presents with sudden onset blurred vision. He reports that he has had laser on his eyes previously. The most likely cause of his presentation is

- a. **Vitreous Haemorrhage**
- b. CRVO
- c. CRAO
- d. retinal detachment

5. The most common age group for epiglottitis in the developed world is

- a. >5yrs

- b. 5-15 yrs
- c. 20-40 yrs
- d. 40-60 yrs

6. of those who present with a post tonsillectomy haemorrhage , what percentage will need to return to theatre?

- a. <10%
- b. 20 %
- c. 30%
- d. 40%

7. In the management of AOM what percentage will improve without antibiotic therapy?

- a. <50%
- b. 65%
- c. 75%
- d. 85%

138. A 61-year-old woman presents with 3 days of severe left eye pain, redness, and watery discharge. Physical examination reveals pin-hole visual acuity of 20/100 on the left and 20/30 on the right. Intraocular pressures are measured at 15 bilaterally via Schiotz tonometry. A small vesicle is noted at the tip of the nose. All of the following therapies are appropriate EXCEPT

- (A) tropicamide drops
- (B) prednisolone drops
- (C) acyclovir drops
- (D) sodium sulamyd drops
- (E) ophthalmologic consultation

139. A 22-year-old man presents with bilateral eye pain, redness, and blurry vision for 10 days. Despite using over-the-counter eye drops, symptoms have worsened. Three other members of the family have recently developed similar symptoms. Physical

examination is notable for tender preauricular nodes, injected conjunctiva, and keratitis with subepithelial infiltrates. The MOST likely diagnosis is

- (A) allergic conjunctivitis
- (B) Herpes zoster conjunctivitis
- (C) epidemic keratoconjunctivitis
- (D) Staphylococcus conjunctivitis
- (E) corneal ulcer

140. A 35-year-old woman complains of 4 days of increasing pain and redness to the left eye. Despite treatment with topical antibiotic drops her symptoms have not improved. Visual acuity is 20/200 on the left and 20/30 on the right. The affected pupil is nonreactive. Slit lamp examination reveals marked corneal edema with normal fluorescein staining (see illustration). Which of the following tests would be MOST appropriate at this point?

Double click button to view illustration

- (A) Pupillary dilation with indirect fundoscopy
- (B) Schiötz tonometry
- (C) Intraocular ultrasound
- (D) Anterior chamber paracentesis
- (E) CT of the orbit with 3 mm cuts

141. Appropriate initial therapy for the woman in question 140 would include which of the following agents?

- (A) Homatropine ophthalmologic drops
- (B) Phenylephrine ophthalmologic drops
- (C) Prednisolone acetate ophthalmologic drops
- (D) Pilocarpine ophthalmologic drops
- (E) Tetracaine ophthalmologic drops

142. A 21-year-old Caucasian male presents with a one week history of left eye pain, redness and photophobia. The patient admits to several similar episodes in the past few years which have spontaneously resolved. He recently had X-rays taken as part of an evaluation for increasing low back pain and stiffness (see photo). Physical examination of the left eye reveals decreased visual acuity with scleral injection greatest at the limbus. Slit lamp is notable for moderate anterior chamber cell and flare, a small hypopyon, but no corneal infiltrate. Additional work-up should include all of the following except:

Double click button to view illustration

- (A) chest X-ray
- (B) erythrocyte sedimentation rate
- (C) anterior chamber paracentesis for culture
- (D) HLA-B27 test
- (E) urethral chlamydiazyme

143. A 67-year-old woman notes a sudden painless loss of vision to her left eye beginning 20 minutes prior to presentation. By the time she is examined, her symptoms have resolved. Past medical history is notable for hypertension and angina. Visual acuity, visual fields, and fundoscopy are all normal. The MOST likely diagnosis in this patient is

- (A) central retinal artery occlusion
- (B) central retinal vein occlusion
- (C) temporal arteritis
- (D) amaurosis fugax
- (E) hysterical blindness

144. The MOST appropriate initial management of the patient in question 143 would include

- (A) digital massage of the globe
- (B) anterior chamber paracentesis

- (C) IV steroid therapy
- (D) aspirin
- (E) psychiatric referral

145. Which of the following risks is the basis for the concerns regarding the emergency department use of topical steroids in the eye?

- (A) Exacerbation of ocular infections
- (B) Systemic steroid dependence
- (C) Glaucoma
- (D) Cataract formation
- (E) Corneal thinning

146. A 47-year-old man with long standing insulin-dependent diabetes complains of the sudden onset of painless loss of vision in the right eye 1 day earlier. You note normal vision on the left and "light perception only" on the right. There is an afferent pupillary defect on the right and an absent red reflex. Slit lamp examination is normal. What is the MOST likely diagnosis?

- (A) Central retinal artery occlusion
- (B) Central retinal vein occlusion
- (C) Hyphema
- (D) Vitreous hemorrhage
- (E) Macular retinal detachment

147. Regarding the ophthalmic medication tropicamide, all of the following are true EXCEPT

- (A) it may decrease pain secondary to iridocyclitis
- (B) it may increase intraocular pressure in susceptible patients
- (C) it may decrease visual acuity measured with pin-hole device

- (D) it may decrease synechiae formation in anterior chamber uveitis
- (E) maximal mydriasis occurs in 20–40 minutes and resolves in about 6 hours

148. A 29-year-old man complains of 2 hours of severe vertigo, associated with nausea, vomiting, and left ear fullness. The patient describes repetitive episodes occurring every few months which spontaneously resolve in less than an hour. Examination of the ear, nose, and throat is normal. Neurologic examination is non-focal. The differential diagnosis of this disorder includes all of the following EXCEPT

- (A) Meniere's disease
- (B) labyrinthitis
- (C) benign positional vertigo
- (D) vertebrobasilar insufficiency
- (E) labyrinthine fistula

149. A 47-year-old woman with non-insulin-dependent diabetes, returns to the emergency department for a 3-day recheck of a "swimmer's ear." Despite treatment with a topical antibiotic-steroid drop, her pain is worse. Examination reveals a temperature of 101.2 °F, and a swollen, painful erythematous external ear. The admitting physician requests that you begin parenteral antibiotic therapy in the emergency department. When choosing therapy, which of the following organisms must be covered?

- (A) Hemophilus influenzae
- (B) Pseudomonas aeruginosa
- (C) Streptococcus pneumoniae
- (D) Streptococcus pyogenes
- (E) Staphylococcus aureus

150. A SCUBA diver develops sudden severe vertigo during the descent of his first check-out dive. On the surface, the patient begins to vomit and complain of diminished hearing to the left ear. Appropriate action for this patient includes

- (A) hyperbaric therapy

- (B) head CT and neurologic consultation
- (C) oral antibiotics
- (D) topical antibiotics
- (E) 2-month interdiction for diving

151. A 27-year-old woman presents to the emergency department via ambulance in severe respiratory distress after being stung by a bee. Examination finds the patient to be normotensive and tachycardiac with mild upper-airway stridor and a diffuse urticarial rash. Each of the following is an appropriate use of epinephrine EXCEPT

- (A) SQ epinephrine, 0.3 mg, 1:1000
- (B) IM epinephrine, 0.3 mg, 1:1000
- (C) IVP epinephrine, 0.3 mg, 1:10,000
- (D) IV epinephrine, 1.0 mg, 1:10,000 in 50 cc D5W, piggy back over 1 hour
- (E) via nebulizer, epinephrine (racemic), 0.5 ml of 2.25%

152. Which of the following would be LEAST appropriate in the treatment of a 3-year-old child with laryngotracheitis?

- (A) Oxygen
- (B) Cool mist
- (C) IM ceftriaxone
- (D) IM dexamethasone
- (E) Racemic epinephrine, nebulized

153. A 55-year-old man presents after sustaining a single direct blow to the nose during an altercation. The nose is markedly swollen, erythematous, and bleeding. Potential associated injuries include all of the following EXCEPT

- (A) fracture of cribriform plate with CSF rhinorrhea
- (B) subperichondrial hematoma

- (C) displacement of the medial palpebral ligament
- (D) infraorbital nerve injury
- (E) laceration of the lacrimal duct

154. On examination of the patient in question 152, you notice continued brisk bleeding from the right nares. You ask the patient to pinch his nose and tilt his head, which seems to control the bleeding. Fifteen minutes later the nurse alerts you to the fact that the patient has vomited 300 ml of blood. His blood pressure is 100/60 mm Hg and heart rate is 120 bpm. The MOST likely source of this patient's bleeding is

- (A) upper gastrointestinal tract
- (B) oral pharyngeal laceration
- (C) anterior ethmoidal artery
- (D) sphenopalatine artery
- (E) Mallory-Weiss tear

155. A 25-year-old man is assaulted to the right side of his face with an unknown object. The triage nurse notes marked pain and soft tissue swelling to the right side of the face and orders an radiograph (see illustration). On your examination you could expect to find all of the following EXCEPT

Double click button to view illustration

- (A) subconjunctival hemorrhage
- (B) anesthesia in the V-2 distribution
- (C) diplopia
- (D) orbital emphysema
- (E) trismus

156. Which of the following is LEAST likely to cause dislocation of the mandible?

- (A) Eating a large hamburger

- (B) Laughing
- (C) Manipulation under anesthesia
- (D) Trauma to the clenched jaw
- (E) Yawning

157. A 20-year-old male unrestrained driver in a motor vehicle accident is brought to the emergency department by ambulance. The patient has obvious facial trauma with numerous bleeding lacerations. During the trauma secondary survey, you note that when grasping the superior alveolar ridge, there is mobility of the maxilla and nose relative to the zygoma and forehead. Which fracture does this patient MOST likely have?

- (A) Zygomatic arch
- (B) Trimalar
- (C) Le Fort I
- (D) Le Fort II
- (E) Le Fort III

158. Likely complications from this fracture include all of the following EXCEPT

- (A) airway compromise
- (B) CSF rhinorrhea
- (C) hemotympanum
- (D) epistaxis
- (E) ocular muscle entrapment

159. The patient in question 157 has his lacerations repaired and is admitted to the hospital. Two days later, the swelling has resolved and the ENT consultant notes a drooping of the left corner of the mouth. Which other symptom is this patient likely to experience?

- (A) Loss of taste to the anterior two thirds of the tongue
- (B) Numbness to left side of cheek

- (C) Absent tears
- (D) Dry mouth
- (E) All of the above

160. A 37-year-old metal shop worker complains of sudden sharp pain and foreign body sensation to the left eye. Visual acuity: 20/20 OD, 20/60 OS. Slit lamp examination reveals a 2-mm corneal abrasion without foreign body or rust ring. A Seidel test—streaming of dilute fluorescein dye away from the lesion—is positive. Appropriate initial evaluation includes all of the following EXCEPT

- (A) radiograph of the orbit
- (B) orbital CT
- (C) B-mode ultrasonography
- (D) tonometry
- (E) direct ophthalmoscopy

161. A 55-year-old man with a history of non-insulin-dependent diabetes and chronic alcoholism complains of fever, chills, and difficulty swallowing and opening his mouth. Physical examination is remarkable for a temperature of 103.0 °F, diffuse swelling to the floor of the mouth, and brawny induration at the base of the neck anteriorly. The MOST likely diagnosis is

- (A) peripharyngeal space infection
- (B) masticator space infection
- (C) retropharyngeal space infection
- (D) Ludwig's angina
- (E) Vincent's angina

162. A patient presents after an assault with fists, complaining of lower-jaw pain. Physical examination reveals no malocclusion, intraoral bleeding, or ecchymosis. On opening of the mouth, the jaw deviates to the right. Which fracture do you expect to see on the radiograph?

- (A) right-angle fracture
- (B) left-angle fracture
- (C) right condylar fracture
- (D) left condylar fracture
- (E) tripod fracture

163. A 25-year-old hockey player has cracked a front tooth during the afternoon game. The tooth is tender, slightly mobile, and chipped. The exposed surface has a red blush at its center. How do you classify this injury?

- (A) Ellis I
- (B) Ellis II
- (C) Ellis III
- (D) Ellis IV
- (E) Alveolar fracture

164. How should the patient in question 163 be managed?

- (A) File down rough edges and refer to a dentist in several days
- (B) Apply a tin foil dressing and refer to a dentist in 1 day
- (C) Prescribe antibiotics and topical pain medication and refer to a dentist in 1 day
- (D) Urgent dental consultation for tooth extraction
- (E) Analgesia and reassurance, no follow-up required

165. A 4-year-old boy presents with a 5-day history of frontal headache, fever, and chills. The child has marked swelling and redness to the right periorbital area, which started today. Examination reveals equal and round, reactive pupils, slight proptosis, and pain with extraocular movement. Which condition MOST frequently leads to this problem?

- (A) Dental abscess

- (B) Facial cellulitis
- (C) Maxillary sinusitis
- (D) Ethmoid sinusitis
- (E) Frontal sinusitis

166. A 25-year-old man complains of persistent blurring to his left eye one day after sustaining a blow to the area in an altercation. Visual acuity is 20/20 OD, 20/200 OS, correcting to 20/20 with pin hole. Pupils are equal, round, and reactive. Fundoscopy is normal at -12 diopters. Slit lamp examination is unremarkable. You suspect that which of the following conditions exists?

- (A) Iridocyclitis
- (B) Retinal detachment
- (C) Lens dislocation
- (D) Macular edema
- (E) Hyphema

Questions 167 and 168

An 8-day-old baby is brought to the emergency department with a 1-day history of bilateral red swollen eyes. A diagnosis of conjunctivitis is made.

167. Which organism is MOST likely responsible for this infection?

- (A) Hemophilus influenzae
- (B) Staphylococcus aureas
- (C) B-Hemolytic Streptococcus
- (D) Neisseria gonorrhoeae
- (E) Chlamydia trachomatis

168. The MOST appropriate therapy would be

- (A) silver nitrate drops
- (B) sodium sulamyd drops
- (C) IV ceftriaxone
- (D) oral penicillin
- (E) oral erythromycin

Questions 169 and 170

A 72-year-old man complains of sudden complete visual loss to the left eye beginning 12 hours earlier. Review of systems is notable for 6 weeks of mild left-eye pain, frontal headache, malaise, and myalgias for which the patient has been taking aspirin. Visual acuity is 20/30 OD, light perception OD. Slit lamp reveals moderate anterior chamber cell and flare. Fundoscopy is notable for disc pallor.

169. The MOST likely diagnosis is

- (A) Reiter's syndrome
- (B) central retinal artery occlusion
- (C) temporal arteritis
- (D) iridocyclitis
- (E) retinal detachment

170. The MOST appropriate treatment for would be

- (A) ocular massage
- (B) anterior chamber paracentesis
- (C) cycloplegic agent
- (D) parenteral steroids
- (E) doxycycline

171. A 3-year-old child presents with a small laceration in the region of the left eye brow after an unwitnessed fall. The child was last seen playing in the garden with tree twig.

Physical examination reveals a 3-mm superficial laceration to the upper eyelid above the lateral canthus. The base of the wound is clearly defined. Visual acuity and slit lamp exam are normal. Which is the MOST appropriate next step in management?

- (A) Schiottz tonometry
- (B) Pupillary dilation and indirect ophthalmoscopy
- (C) Tape and double patching of the eye
- (D) Patching with a non-compressive metal shield
- (E) Local wound care and follow-up with the child's pediatrician

172. A successful inferior alveolar nerve block would be expected to provide anesthesia to the ipsilateral portions of all the following EXCEPT

- (A) the chin
- (B) the lower lip
- (C) the mandibular teeth
- (D) the parotid gland
- (E) the tongue

173. A young man presents complaining that a curtain fell down in front of his vision. It happened once in the morning, but only lasted a second, and then recurred for about 30 seconds just prior to his arrival. Upon further questioning you discover that he has seen flashes of light and dark floating specks that began the previous day. The patient is a sculptor, but denies trauma to his eyes. He says that his vision is now fine and he is embarrassed that he came to the emergency department for something so minor. You examine his eyes and find normal visual acuity and no physical findings. What should you do next?

- (A) Call for immediate ophthalmologic consultation
- (B) Obtain a CT scan of the brain to rule out intracranial tumor
- (C) Obtain a CT scan of the orbits to rule out intraocular pathology
- (D) Obtain plain radiographs of the orbits to rule out a foreign body

(E) Reassure him and discharge home with instructions to follow-up with his primary physician if the symptoms recur

174. Cotton wool spots (soft exudates) might typically be seen on retinal examination in patients with all of the following conditions EXCEPT

- (A) central retinal vein occlusion
- (B) collagen vascular disease
- (C) diabetes mellitus
- (D) hypertension
- (E) senile macular degeneration

175. Which of the following mydriatic agents has the longest duration of action?

- (A) Atropine
- (B) Homatropine
- (C) Phenylephrine
- (D) Scopolamine
- (E) Tropicamide

176. Which of the following is true regarding temporomandibular joint (TMJ) dysfunction?

- (A) Men are more commonly affected than women
- (B) Open and closed films of the TMJ frequently reveal joint irregularities
- (C) Pain and stiffness are usually worse in the morning and improve with use of the joint
- (D) Pain is usually bilateral
- (E) Trauma is thought to be a major factor contributing to its development

177. All of the following are characteristic of unilateral dislocation of the mandible EXCEPT

- (A) the jaw is displaced toward the affected side
- (B) the jaw is locked in an open position
- (C) the patient has difficulty swallowing
- (D) the patient has difficulty talking
- (E) there is swelling anterior to the ear on the affected side

178. What is the MOST common site at which fractures of the mandible occur?

- (A) Angle
- (B) Condyle
- (C) Mental
- (D) Molar
- (E) Symphysis

179. All of the following are considered classic signs or symptoms of mandibular fracture EXCEPT

- (A) deviation of the jaw upon opening the mouth
- (B) malocclusion of the teeth during biting
- (C) mental nerve anesthesia
- (D) pain at the site of injury
- (E) subluxation of a mandibular tooth

180. A 5-year-old girl is brought to the emergency department by her parents because of an inability to swallow. She has had a sore throat for 2 days and has received one dose of the penicillin prescribed for her yesterday. She is ill, appearing with a temperature of 102 °F. The child is sitting up with her mouth slightly open; the right side of her face appears swollen in the region of the parotid gland. Her voice is muffled, trismus is present, and her neck appears to be stiff. The view you get of her oropharynx shows mild diffuse

swelling and displacement of the right tonsil inferiorly. The MOST likely diagnosis suggested by this picture is

- (A) acute epiglottitis
- (B) acute mastoiditis
- (C) acute parapharyngeal abscess
- (D) acute parotitis
- (E) acute peritonsillar abscess

181. A 25-year-old man presents complaining of swelling in his throat for the past 2 hours. He was well until 2 days ago when he began to have a sore throat which has since resolved. He states that he has had this swelling in his throat before, but it was less severe and he never sought treatment for it. He has no identifiable allergies or exposures. He thinks one of his brothers may have had similar problems in the past. Upon examination, the patient appears well but anxious. His voice is somewhat muffled and he is sitting forward with his mouth open. He can open his mouth widely permitting you to see a diffusely edematous posterior pharynx and a large, edematous uvula. Which of the following medical therapies would you expect to be MOST helpful?

- (A) Antibiotics
- (B) Antihistamines
- (C) Epinephrine
- (D) Fresh frozen plasma
- (E) Steroids

182. What is the MOST common origin of sinusitis that presents as a toothache?

- (A) Cavernous sinus
- (B) Ethmoid sinus
- (C) Frontal sinus
- (D) Maxillary sinus
- (E) Sphenoid sinus

183. All of the following are true of cerebrospinal fluid (CSF) rhinorrhea EXCEPT

- (A) compression of the jugular vein increases the rhinorrhea
- (B) leaning forward increases the rhinorrhea
- (C) nasal packing should be avoided
- (D) the fluid is characteristically clear
- (E) rhinorrhea is usually bilateral

184. What percentage of nosebleeds in the pediatric population originate from Kiesselbach's plexus?

- (A) < 1%
- (B) 10%
- (C) 30%
- (D) 60%
- (E) 90%

185. A patient presents to the emergency department with a chemical burn to the eye. After instilling topical anesthetic, what is the appropriate order of further treatment?

- (A) Assess visual acuity, irrigate the eye, check conjunctival pH
- (B) Assess visual acuity, check conjunctival pH, irrigate the eye
- (C) Check conjunctival pH, irrigate the eye, assess visual acuity
- (D) Irrigate the eye, assess visual acuity, check conjunctival pH
- (E) Irrigate the eye, check conjunctival pH, assess visual acuity

186. A young man presents to the emergency department after being struck in the eye with a baseball. Which of the following would you consider most concerning when attempting to rule out post traumatic glaucoma?

- (A) chemosis
- (B) decreased visual acuity
- (C) hyphema
- (D) non-reactive pupil
- (E) proptosis

187. The eye of the young man from Question 186 is proptotic with marked subconjunctival hemorrhage and tensely swollen lids. He is able to count fingers with the affected eye; vision in the unaffected eye is normal. There appears to be an afferent pupillary defect in the involved eye. Fundoscopic exam is difficult, but appears to be normal. What is the fastest way to reduce the intraocular pressure in the setting of post-traumatic glaucoma?

- (A) Administer IM acetazolamide, 500 mg
- (B) Administer IV mannitol, 1.5–3 g/kg, over 20 minutes
- (C) Aspirate fluid from the anterior chamber of the eye
- (D) Intubate the patient and hyperventilate
- (E) Perform lateral canthotomy of the affected eye

188. A 3-year-old girl is brought to the emergency department by her mother. Mom says the child was playing with chalk on the sidewalk earlier in the day. At dinner the child would not eat and complained that her nose hurt. You see before you a happy, playful child. Upon examining her nose you find a smooth yellow mass superiorly. What is the MOST appropriate action?

- (A) Attempt to remove the object
- (B) Prescribe antibiotics and decongestants and give instructions to blow the nose frequently
- (C) Provide mother with a syringe and catheter and instruct her to irrigate the nose frequently
- (D) Reassure mother and have the child seen by her physician in 2 days if the nose still hurts
- (E) Refer the child to a specialist for further work-up of the mass

189. A 50-year-old immunocompromised patient presents complaining of throat and ear pain of 2 days duration. He has had no fever, denies ill contacts, and no history of trauma or chemical exposures. On examination, he appears to be in significant discomfort from pain. There are several grouped vesicles on his right posterior pharynx and in the right ear canal. You notice that the right corner of his mouth is drooping and he has inability to close the right eye tightly. In addition to analgesia, what would be the MOST appropriate therapy?

- (A) Admission to the hospital for IV acyclovir
- (B) Admit to intensive care and observe for signs of airway compromise
- (C) Prescribe erythromycin, a steroid taper, and follow-up in 48 hours
- (D) Prescribe oral acyclovir and instructions to follow-up in 48 hours
- (E) Prescribe oral acyclovir, a steroid taper, and follow-up in 24 hours

190. You receive a phone call at midnight from an anxious parent whose 10-year-old has just completely knocked out an upper front tooth. What should you advise the parent?

- (A) Place the tooth in milk and bring it to the emergency department with the child at once
- (B) Place the tooth in the socket and bring the child to the emergency department at once
- (C) Place the tooth on a dry towel and bring it and the child to the emergency department at once
- (D) Place the tooth on a wet towel and bring it to the emergency department with the child at once
- (E) This is not an emergency and the parent should phone the dentist in the morning

191. When examining a child who has sustained blunt injury to the eye, the possibility of a blowout fracture must be considered. Which of the following signs and symptoms is the LEAST suggestive of a fracture of the orbital floor?

- (A) Hypesthesia of the upper lip
- (B) Ipsilateral epistaxis
- (C) Limitation of upward gaze
- (D) Subconjunctival hemorrhage
- (E) Subcutaneous emphysema

192. Which of the following is true regarding facial fractures in the pediatric population?

- (A) Children are more prone to fractures of the facial bones than adults
- (B) Facial fractures in children are rarely associated with closed-head injuries
- (C) Nasal fractures in children are unlikely to result in significant disfigurement
- (D) The mandible of a child is less likely to fracture than is that of an adult
- (E) Presence of a facial fracture in a child should suggest child abuse

193. A child presents complaining of a painful ear. Which of the following physical findings is MOST suggestive of acute otitis media?

- (A) A red tympanic membrane with obscured landmarks
- (B) A swollen and erythematous external auditory canal
- (C) An immobile tympanic membrane
- (D) Increased vascularity of the tympanic membrane
- (E) Palpable cervical lymphadenopathy on the affected side

194. A child is brought to the emergency department by her mother for evaluation of a frontal headache. At what age would frontal sinusitis become a likely diagnosis?

- (A) 2 years
- (B) 3 years
- (C) 4 years

- (D) 5 years
- (E) 8 years

195. How many milligrams of drug are contained in a 5-ml bottle of 4% topical cocaine?

- (A) 0.02 mg
- (B) 0.2 mg
- (C) 2.0 mg
- (D) 20.0 mg
- (E) 200.0 mg

196. An 18-year-old boy presents complaining of painful gums and a foul taste in his mouth. His temperature is 100.5 °F. The gums are red, swollen, and tender, and there is ulcerated, gray tissue between his teeth. You also find tender, bilaterally swollen anterior cervical lymph nodes. The best initial treatment would include which of the following?

- (A) Debridement of necrotic tissue
- (B) Intravenous acyclovir
- (C) Oral acyclovir
- (D) Systemic antibiotics
- (E) Topical corticosteroids

197. Third molars frequently have a prolonged period of eruption or incomplete eruption. This results in folds of gingival tissue over the partially erupted tooth. When food particles are trapped within these folds, inflammation and pain may ensue. What is the name for this condition?

- (A) Subgingival micro-abscess
- (B) Superficial odontitis
- (C) Gingival dentinitis
- (D) Pericoronitis

(E) Perigingivitis

198. A 30-year-old man presents with a painful tooth and a foul taste in his mouth. Three days prior, he had a third molar removed. The oral analgesics prescribed by his dentist are no longer effective. He appears to be in severe pain. The best treatment would be to

(A) curette the infected bone, prescribe antibiotics, and recommend close follow-up

(B) immediately refer him back to his dentist for definitive treatment of the problem

(C) incise and drain the infected area, and recommend follow-up with his dentist in 24 hours

(D) irrigate the painful area, pack with iodoform gauze, and recommend follow-up with his dentist within 24 hours

(E) provide parenteral pain medications and reassurance, and recommend follow-up with his dentist in 24 hours

199. All of the following should be part of the initial assessment of a child suspected to have epiglottitis EXCEPT

(A) a quiet room and position on a parent's lap

(B) antibiotics

(C) cardiac and respiratory monitoring

(D) lateral soft-tissue films of the neck

(E) humidified oxygen

200. A 60-year-old diabetic woman presents to the emergency department complaining of pain under her tongue that began 3 hours ago while she was having a light supper. It resolved when she drank orange juice at triage because of her borderline low fingerstick glucose. She had no other associated symptoms, is currently pain free, and is feeling embarrassed for coming in for a self-limited problem. She recalls having had a similar episode of pain once before lasting only a few minutes. Her exam is unremarkable and she looks well. Appropriate treatment would consist of

- (A) admission for intravenous antibiotics and immediate otolaryngologic consultation
- (B) admission to rule out unstable angina
- (C) consultation with a cardiologist to arrange outpatient exercise tolerance testing
- (D) oral antibiotics, oral irrigation, and close otolaryngologic follow-up
- (E) reassurance and instructions to follow-up with an otolaryngologist if symptoms recur

201. What is thought to be the cause of malignant otitis externa?

- (A) Basilar-cell carcinoma
- (B) Perichondral inflammation
- (C) Pseudomonas infection
- (D) Staphylococcal infection
- (E) Superficial tuberculosis

ENT / Eyes / Maxillofacial

138	D	139	C	140	B	141	D
142	C	143	D	144	D	145	A
146	D	147	C	148	D	149	B
150	E	151	D	152	C	153	D
154	D	155	E	156	A	157	D
158	C	159	D	160	D	161	D
162	C	163	C	164	B	165	D
166	C	167	E	168	E	169	C
170	D	171	B	172	D	173	A
174	E	175	A	176	E	177	A
178	A	179	E	180	C	181	D
182	D	183	E	184	E	185	E

186	B	187	E	188	A	189	A
190	B	191	D	192	E	193	C
194	E	195	E	196	D	197	D
198	D	199	B	200	E	201	C

Eye, Ear, Nose, Throat, and Maxillofacial Emergencies

Each question below contains five suggested responses. Select the ONE BEST response to each question.

07-137 A 23-year-old female presents to the ED complaining of 24 h of left eye irritation and redness. Physical examination shows normal visual acuity, pupillary action, and motor function. There are several patches of dark red blood scattered across the sclera. The patient denies any history of trauma. All of the following are important considerations in this setting EXCEPT

- (A) hypertension
- (B) coagulopathy
- (C) ruptured globe
- (D) incidental ocular trauma
- (E) domestic violence

[Show Answer](#)

Questions 138-139

07-138 A 30-year-old contact-lens wearer complains of 2 days of left eye pain and discharge with blurred vision. She immediately stopped using the contact lens at the onset of symptoms and began antibiotic drops left over from a previous eye infection. There is moderate conjunctival injection and a pinhole-corrected visual acuity of 20/40 on the left. Slit lamp shows an oval-shaped corneal abrasion with dense fluorescein uptake and a halo of white stromal infiltrate.

The most likely infective organism associated with this disorder is

- (A) Herpes zoster
- (B) Herpes simplex
- (C) Pseudomonas
- (D) Staphylococcus
- (E) Candida albicans

[Show Answer](#)

07-139 Appropriate management for the above patient may include all of the following EXCEPT

- (A) culture of the corneal lesion
- (B) frequent topical antibiotic therapy (every 12 h)
- (C) cycloplegic drops
- (D) pain control

(E) eye patch

[Show Answer](#)

07-140 A 65-year-old female arrives via ambulance minutes after accidentally instilling several drops of cyanoacrylate (SuperGlue) into the left eye. She mistook the tube of glue for the artificial tears she uses for dry eyes. The upper and lower lids are joined medially, and there is a large concretion of glue on the lateral corneal surface. All of the following are accepted treatments EXCEPT

- (A) immediate copious water irrigation
- (B) acetone soaks
- (C) mineral oil
- (D) mechanical debridement
- (E) surgical debridement

[Show Answer](#)

07-141 A 15-year-old boy presents to the ED with a blunt injury to the right eye sustained in a brawl during school recess. He describes watery, clear discharge, photophobia, and a dull ache in the injured right eye. Physical examination shows 20/80 visual acuity correcting to 20/40 with pinhole. The right pupil is dilated and sluggishly reactive, but extraocular movements are intact. There is scleral and ciliary injection with moderate cell and flare in the anterior chamber on slit lamp examination. The MOST likely diagnosis is

- (A) traumatic cranial nerve III palsy
- (B) traumatic mydriasis with iritis
- (C) conjunctivitis with traumatic lens dislocation
- (D) conjunctivitis with iris sphincter rupture
- (E) conjunctivitis with ruptured globe

[Show Answer](#)

Questions 142-143

07-142 A patient presents to the ED complaining of mild pain with markedly decreased vision after blunt eye trauma. Physical examination shows 20/100 vision with pinhole, an afferent pupillary defect, and a meniscus of red cells in the lower portion of the anterior chamber.

- (A) hospitalization for rest and elevation of the head
- (B) atropine 1 percent topical eye drops
- (C) topical prednisolone
- (D) aminocaproic acid
- (E) surgical wash out of the anterior chamber

[Show Answer](#)

07-143 Potential complications of the above disorder include all of the following EXCEPT

- (A) rebleed in 2 to 5 days
- (B) acute glaucoma
- (C) cataract
- (D) corneal staining
- (E) optic atrophy

[Show Answer](#)

07-144 A 25-year-old male presents to the ED after being struck in the right eye with a fist. On examination of extraocular movement, you notice entrapment of upward gaze with diplopia. You make a clinical diagnosis of an orbital blowout fracture. While awaiting radiographic confirmation, each of the following physical findings could be anticipated EXCEPT

- (A) anesthesia to the right anterior cheek
- (B) orbital emphysema
- (C) enophthalmos
- (D) subconjunctival hemorrhage
- (E) CSF rhinorrhea

[Show Answer](#)

07-145 Which of the following statements is TRUE regarding acute traumatic retinal detachments?

- (A) Most detachments can be visualized on standard fundoscopy
- (B) Eighty percent of detachments occur within 24 h of the traumatic event
- (C) Most detachments originate in the inferotemporal quadrant
- (D) Visual outcome depends on the extent of involvement of the optic disc
- (E) Sudden onset of pain is a prominent feature

[Show Answer](#)

Questions 146-147

07-146 A 62-year-old female with a medical history of hypertension, diabetes, and glaucoma complains of 1 day of sudden, painless loss of vision to the right eye. Physical examination shows only hand-motion visual acuity to the affected side. There is an afferent pupillary defect and absent red reflex on the right. You are unable to visualize the fundus. Slit lamp examination is normal. The MOST likely diagnosis is

- (A) acute open-angle glaucoma
- (B) optic neuritis
- (C) vitreous hemorrhage
- (D) central retinal artery occlusion
- (E) central retinal vein occlusion

[Show Answer](#)

07-147 Which of the following would constitute the most appropriate management of this patient's condition?

- (A) Pilocarpine, intravenous diamox, and urgent laser iridectomy
- (B) Intravenous prednisolone
- (C) Expectant management with delayed phototherapy
- (D) Ocular massage
- (E) Anterior chamber paracentesis

[Show Answer](#)

07-148 A victim of an assault with a baseball bat presents to the ED for evaluation. Assessment shows an obvious mid-face fracture and unstable mandible. The left eye is noted to be mildly proptotic with severe conjunctival swelling and a subconjunctival hemorrhage. The pupil is fixed and mid-point. Visual acuity is to count fingers only. Appropriate initial management would include all of the following EXCEPT

- (A) broad-spectrum antibiotic coverage
- (B) sedation and analgesia
- (C) radiographic imaging via CT
- (D) antibiotic ointment and gauze eye patch
- (E) immediate ophthalmologic consultation

[Show Answer](#)

07-149 A 35-year-old mother of four children presents complaining of bilateral eye irritation, redness, and decreased vision of 2 weeks. She describes worsening symptoms despite having self-treated with over-the-counter eye drops. All four children are developing symptoms. Physical examination shows injected conjunctiva, tender preauricular nodes, and keratitis with subepithelial infiltrates. The MOST likely diagnosis is

- (A) corneal ulcer
- (B) *Herpes simplex* conjunctivitis
- (C) *Herpes zoster* conjunctivitis
- (D) *Staphylococcal* conjunctivitis
- (E) epidemic keratoconjunctivitis

[Show Answer](#)

07-150 A 62-year-old male seeks medical attention for 5 days of unilateral eye redness, irritation, and decreased vision. On review of systems, the patient denies fever, weight loss, myalgias, or headache. Physical examination is notable for 20/100 vision on the affected side, injected conjunctiva, and more than one cell in the anterior chamber. Intraocular pressure is measured at 15 bilaterally. There is a small vesicle present at the tip of the nose. All of the following therapies are appropriate EXCEPT

- (A) cyclopentolate drops

- (B) acyclovir drops
- (C) prednisolone drops
- (D) Viroptic (trifluridine) drops
- (E) ophthalmologic consultation

[Show Answer](#)

Questions 151-152

07-151 A 75-year-old female with diabetes and hypertension complains of abrupt onset of right eye pain, blurred vision, unilateral headache, and mild nausea. Physical examination is notable for 20/200 vision on the right, conjunctival injection, and a cloudy, edematous cornea. Vision does not correct with pinhole. The pupil is mid-point and nonreactive to light. Slit lamp examination is negative for corneal staining.

Which of the following tests would be MOST appropriate at this point?

- (A) Erythrocyte sedimentation rate (ESR)
- (B) Pupillary dilation and direct fundoscopy
- (C) Orbital CT with 3-mm cuts
- (D) Schiottz tonometry
- (E) Intraocular ultrasound

[Show Answer](#)

07-152 The MOST appropriate initial therapy for this patient would include

- (A) parenteral steroid therapy
- (B) anterior chamber paracentesis
- (C) pilocarpine ophthalmologic drops
- (D) tropicamide ophthalmologic drops
- (E) phenylephrine ophthalmologic drops

[Show Answer](#)

07-153 A 43-year-old African-American male presents with complaints of 2 weeks of progressive left eye pain, redness, and photophobia. He states that he has had several similar episodes in the past, all of which spontaneously resolved. Review of systems is positive for a recent diagnosis of restrictive lung disease but negative for joint pains, headache, or dysuria. Physical examination shows mildly decreased visual acuity and scleral injection greatest at the limbus. Slit lamp examination is notable for moderate anterior chamber cell and flare, a small hypopyon, but no corneal uptake. The MOST likely underlying diagnosis in this patient is

- (A) Reiter's syndrome
- (B) rheumatoid arthritis
- (C) HLA-B27

- (D) sarcoidosis
- (E) tuberculosis

[Show Answer](#)

07-154 A 25-year-old hockey player complains of 2 days of right eye blurred vision after catching an elbow to the face during a match. Physical examination shows a resolving periorbital ecchymosis. Visual acuity is 20/200 OD and 20/20 OS correcting to 20/20 bilaterally with pinhole. Fundoscopy and visual field examinations are normal. Which of the following conditions do you suspect?

- (A) Acute posttraumatic cataract
- (B) Retinal detachment
- (C) Lens dislocation
- (D) Hyphema
- (E) Preexisting myopia

[Show Answer](#)

Questions 155-156

07-155 A 71-year-old hypertensive male reports sudden painless loss of vision to the right eye beginning 20 min before. He experienced no headache, dizziness, chest pain, or syncope. Since his arrival to the ED, his vision has returned to normal. Physical examination shows 20/30 visual acuity bilaterally, normal intraocular pressure, and a quiet anterior chamber on slit lamp examination. Fundoscopy shows copperwire changes with few flame hemorrhages.

The MOST likely etiology of this patient's disorder is

- (A) central retinal artery occlusion
- (B) central retinal vein occlusion
- (C) temporal arteritis
- (D) amaurosis fugax
- (E) retinal detachment

[Show Answer](#)

07-156 Appropriate initial management for the patient above can include which of the following treatments?

- (A) Ocular massage
- (B) Parenteral steroids
- (C) Anterior chamber paracentesis
- (D) Antiplatelet therapy
- (E) Laser retinal surgery

[Show Answer](#)

07-157 A 59-year-old male presents 4 h after experiencing an abrupt, painless loss of vision in the left eye. Physical examination shows severe visual impairment on the left, with light perception only, and an afferent pupillary defect. Fundoscopy is notable for a pale retina and a cherry-red-appearing macula. You make a diagnosis of central retinal artery occlusion. Regarding this patient, all of the following statements are true EXCEPT

- (A) The cherry-red spot depicts localized retinal hemorrhage
- (B) Urgent anticoagulation may be indicated
- (C) Open angle glaucoma has been associated with this disorder
- (D) Anterior chamber paracentesis may dislodge intraarteriole clot
- (E) This patient has a poor prognosis, with a less than 10 percent chance for return of vision

[Show Answer](#)

07-158 A 47-year-old female presents with a 6-h history of sudden, painless visual loss to the left eye. Vital signs show a heart rate of 85 beats per minute, blood pressure of 180/110 mm Hg, and respiratory rate of 16 breaths per minute. Corrected visual acuity is 20/25 OD and 20/200 OS. There is an afferent pupillary defect on the left. The conjunctiva, sclera, cornea, and anterior chamber are normal. Fundoscopy shows macular edema and marked venous dilation with retinal hemorrhages in all four quadrants. The MOST likely etiology of this presentation is

- (A) central retinal artery occlusion
- (B) central retinal vein occlusion
- (C) amaurosis fugax
- (D) temporal arteritis
- (E) malignant hypertension

[Show Answer](#)

07-159 A 22-year-old female complains of 1 day of dull right eye pain and blurry vision. Review of systems is positive for occasional double vision, and one episode of right-hand numbness the previous year which spontaneously resolved. The patient denies fevers, weight loss, or rash. Visual acuity is 20/100 OD and 20/20 OS. There is pain on range of motion in the affected eye. Conjunctiva, sclera, and slit lamp examinations are normal. Fundoscopy shows a swollen, hyperemic optic disc on the right side. What is the MOST likely cause of this disorder?

- (A) Intracranial mass lesion
- (B) Multiple sclerosis (MS)
- (C) Orbital cellulitis
- (D) Acute angle closure glaucoma
- (E) Iridocyclitis

[Show Answer](#)

07-160 A 15-year-old male presents with no significant medical history and complains of right-sided headache, nausea, and fatigue. Before the onset of the headache, the patient experienced a large dark "hole" in his right visual field with adjacent bright flashing lights. All visual symptoms resolved with the onset of headache. Physical examination is notable for bilateral photophobia, normal visual acuity, and normal external eye and slit lamp examinations. The patient has a supple neck and nonfocal neurologic examination. The MOST likely etiology of the patient's symptoms is

- (A) amaurosis fugax
- (B) TIA
- (C) subarachnoid hemorrhage
- (D) retinal detachment
- (E) ocular migraine

[Show Answer](#)

07-161 An 18-year-old male presents to the ED with his mother complaining of right-sided monocular blindness after being struck in the face by a younger sibling. Examination of the head and neck shows no obvious signs of trauma. Visual acuity is "no light perception" OD and 20/20 OS. Pupillary response is normal, and there is no afferent pupillary defect. Slit lamp examination and fundoscopy are normal. Neurologic examination is nonfocal. The most likely etiology of this patient's disorder is

- (A) cortical blindness
- (B) functional blindness
- (C) retinal detachment with macular involvement
- (D) vitreous hemorrhage
- (E) traumatic lens dislocation

[Show Answer](#)

07-162 A patient presents with a bilateral homonymous quadrantanopsia involving the right upper visual field. Which of the following represents the MOST likely anatomic location of the abnormality?

- (A) Prechiasmal, right side
- (B) Optic chiasm
- (C) Postchiasmal, prethalamic, left side
- (D) Occipital lobe, right side
- (E) Occipital lobe, left side

[Show Answer](#)

07-163 All of the following statements regarding acute angle closure glaucoma are true EXCEPT

- (A) It is the most common form of glaucoma
- (B) It may be precipitated by emotional upset
- (C) It has been associated with certain over-the-counter medications

(D) It may be treated with laser iridectomy

(E) It may result in abdominal pain, nausea and vomiting

[Show Answer](#)

07-164 All of the following statements regarding the ED use of topical ophthalmic steroids are true EXCEPT that topical steroids

(A) can exacerbate ocular *Herpes simplex* infections

(B) are often prescribed for ocular *Herpes zoster* infections

(C) improve symptoms in cases of traumatic iritis

(D) may result in cataract formation

(E) are therapeutic in cases of allergic conjunctivitis

[Show Answer](#)

07-165 All of the following patients are at risk for necrotizing external otitis EXCEPT

(A) AIDS patients

(B) cancer patients

(C) diabetics

(D) elderly patients

(E) swimmers

[Show Answer](#)

07-166 Bullous myringitis is commonly related to which organism?

(A) *Haemophilus influenzae*

(B) *Moraxella catarrhalis*

(C) *Mycobacterium tuberculosis*

(D) *Mycoplasma pneumoniae*

(E) *Pseudomonas aeruginosa*

[Show Answer](#)

07-167 Which of the following is NOT associated with acute mastoiditis?

(A) Bezold abscess

(B) Facial palsies

(C) Hearing loss

(D) Meningitis

(E) Normal tympanic membrane in 30 percent of cases

[Show Answer](#)

07-168 Which of the following is the most likely pathogen in a patient with mastoiditis of more than 3 months?

- (A) *Haemophilus influenzae*
- (B) *Bacteroides* species
- (C) *Mycoplasma pneumoniae*
- (D) *Moraxella catarrhalis*
- (E) *Pseudomonas* species

[Show Answer](#)

07-169 What is the most common cause of hearing loss in a previously healthy patient?

- (A) Barotrauma
- (B) Cerumen impaction
- (C) Neuronitis
- (D) Otitis media
- (E) Tympanic membrane perforation

[Show Answer](#)

07-170 In the absence of a foreign body in the external auditory canal, which of the following is the most common cause of unilateral sensory hearing loss?

- (A) Acoustic neuroma
- (B) Autoimmune disorders
- (C) Meniere's disease
- (D) Pharmacologic ototoxicity
- (E) Viral neuronitis

[Show Answer](#)

07-171 Tympanic membrane perforations occur in all of the following conditions EXCEPT

- (A) barotrauma
- (B) direct trauma
- (C) lightning strike
- (D) mandible fracture
- (E) otitis media

[Show Answer](#)

07-172 What is the most common form of barotrauma in recreational scuba divers?

- (A) Barotitis media

- (B) Canal squeeze
- (C) Eustachian barotrauma
- (D) Inner ear barotrauma
- (E) Auricular barotrauma

[Show Answer](#)

07-173 Which of the following is NOT a predisposing factor for epistaxis?

- (A) Cocaine use
- (B) Hypertension
- (C) Infection
- (D) Peptic ulcer disease
- (E) Uremia

[Show Answer](#)

07-174 All of the following are important questions to ask a patient with acute epistaxis EXCEPT

- (A) Is there a history of drug use?
- (B) How long has there been bleeding?
- (C) Is there ear pain?
- (D) Is there a history of liver disease?
- (E) Is there a sensation of blood in the back of the throat?

[Show Answer](#)

07-175 All of the following are accepted methods of controlling anterior epistaxis EXCEPT

- (A) direct cautery of a bleeding vessel
- (B) nasal packing
- (C) embolization
- (D) direct pressure
- (E) application of vasoconstrictive agents

[Show Answer](#)

07-176 Complications of epistaxis controlled with anterior nasal packing include all of the following EXCEPT

- (A) anemia
- (B) dislodgment
- (C) sinusitis
- (D) toxic shock syndrome
- (E) vertigo

[Show Answer](#)

- 07-177** A posterior source of epistaxis should be suspected in all of the following conditions EXCEPT
- (A) bleeding from both nares
 - (B) epistaxis with associated presyncope or syncope
 - (C) presence of foreign body
 - (D) no anterior source
 - (E) sensation of blood down back of throat

[Show Answer](#)

- 07-178** Which type of force is most likely to cause a nasal bone fracture?
- (A) Barotrauma
 - (B) Frontal
 - (C) Inferior to superior
 - (D) Lateral
 - (E) Superior to inferior

[Show Answer](#)

- 07-179** Complications of nasal trauma include all of the following EXCEPT
- (A) avascular necrosis of the nasal septum
 - (B) extraocular movement dysfunction
 - (C) fracture of the cribriform plate
 - (D) saddle deformity
 - (E) septal hematoma

[Show Answer](#)

- 07-180** Clinical features suggestive of nasal foreign body in children include all of the following EXCEPT
- (A) persistent foul-smelling rhinorrhea
 - (B) persistent unilateral epistaxis
 - (C) recurrent unilateral epistaxis
 - (D) recurrent unilateral otitis media
 - (E) unilateral sensation of nasal obstruction

[Show Answer](#)

- 07-181** Common bacterial pathogens that produce acute sinusitis include all of the following EXCEPT

- (A) *Haemophilus* species
- (B) *Bacteroides* species
- (C) *Moraxella* species
- (D) *Streptococcal* species
- (E) *Staphylococcal* species

[Show Answer](#)

07-182 All of the following are complications of sinusitis EXCEPT

- (A) facial cellulitis
- (B) mastoiditis
- (C) periorbital cellulitis
- (D) Pott's Puffy tumor
- (E) subdural empyema

[Show Answer](#)

07-183 Signs and symptoms associated with mandibular fractures include all of the following EXCEPT

- (A) deformity of the dental arch
- (B) limited range of motion
- (C) mental nerve anesthesia
- (D) subconjunctival hemorrhage
- (E) sublingual hematoma

[Show Answer](#)

07-184 Which area of the mandible is MOST commonly fractured?

- (A) Angle
- (B) Condyle
- (C) Molar
- (D) Mental
- (E) Symphysis

[Show Answer](#)

07-185 Which of the following is the LEAST likely clinical feature of a zygomatic-maxillary complex (ZMC) fracture?

- (A) Diplopia
- (B) Epistaxis
- (C) Facial emphysema
- (D) Mental nerve anesthesia

(E) Subconjunctival hemorrhage

[Show Answer](#)

07-186 What is the MOST common finding after orbital floor fracture?

- (A) Corneal abrasion
- (B) Diplopia
- (C) Epistaxis
- (D) Retinal detachment
- (E) Sinusitis

[Show Answer](#)

07-187 Which of the following maxillofacial fractures extends bilaterally through the frontozygomatic suture lines?

- (A) LeForte I
- (B) LeForte II
- (C) LeForte III
- (D) Mandibular fracture
- (E) Pyramidal fracture

[Show Answer](#)

07-188 Which of the following fractures is MOST commonly associated with CSF rhinorrhea?

- (A) LeForte I
- (B) LeForte II
- (C) LeForte III
- (D) Pyramidal fracture
- (E) ZMC fracture

[Show Answer](#)

07-189 After a mandible dislocation, in which direction is the condyle of the mandible MOST commonly displaced relative to the temporomandibular joint (TMJ) fossa?

- (A) Anteriorly
- (B) Laterally
- (C) Medially
- (D) Posteriorly
- (E) Posterolaterally

[Show Answer](#)

07-190 Symptoms of TMJ syndrome (myofascial pain dysfunction) include all of the following EXCEPT

- (A) bruxism
- (B) crepitus
- (C) dysphonia
- (D) earache
- (E) tinnitus

[Show Answer](#)

07-191 All of the following are causes of sialoadenitis EXCEPT

- (A) diabetes
- (B) irradiation
- (C) paramyxovirus
- (D) phenothiazines
- (E) uremia

[Show Answer](#)

07-192 In which of the following glands does sialolithiasis (salivary calculi) MOST frequently occur?

- (A) Lacrimal
- (B) Meibomian
- (C) Parotid
- (D) Sublingual
- (E) Submandibular

[Show Answer](#)

07-193 Classic symptoms of peritonsillar abscess (PTA) include all of the following EXCEPT

- (A) drooling
- (B) muffled voice
- (C) sore throat
- (D) stridor
- (E) trismus

[Show Answer](#)

07-194 In which age group is retropharyngeal abscess MOST likely to occur?

- (A) in those 1 to 5 years old
- (B) in those 5 to 10 years old
- (C) in those 10 to 15 years old

(D) in those 15 to 25 years old

(E) in those older than 60 years

[Show Answer](#)

**07-
195**

All of the following are commonly seen in Ludwig's angina EXCEPT

(A) decreased neck motion

(B) drooling

(C) dysphagia

(D) palpable fluctuance

(E) trismus

[Show Answer](#)

**07-
196**

Each of the following is associated with Ludwig's angina EXCEPT

(A) age between 20 and 60 years

(B) chronic alcoholism

(C) diabetes mellitus

(D) female sex

(E) systemic lupus erythematosus (SLE)

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(137) The answer is C

This patient has a subconjunctival hemorrhage. Symptoms are typically limited to minor irritation and eye watering, with an otherwise normal physical examination. The cause is usually minor ocular trauma that may have been inconsequential to the patient. Domestic violence is always a concern. Sneezing and violent coughing are also associated with this disorder. More serious nontraumatic causes include hypertension and coagulation disorders. Ruptured globe often presents with a subconjunctival hemorrhage, but other features such as decreased visual acuity, pain, and abnormal intraocular pressure dominate the clinical picture.

(Chapter 230)

(138, 139) The answers are C and E, respectively.

Contact-lens-related disorders can range from simple conjunctivitis to keratitis, corneal abrasion, and even corneal ulcer. This patient presents with eye pain, redness, and decreased visual acuity. The white haze around the abrasion represents white cell infiltration and confirms the diagnosis of corneal ulcer. *Pseudomonas* is the leading organism in contact-lens-related bacterial ulcers and can devastate a cornea in 24-48 h.

Treatment includes all of the stated items except an eye patch, which is contraindicated because it may worsen the underlying infection or retard healing.

(Chapter 230)

(140) The answer is B

Cyanoacrylate-based glues form strong tissue bonds within seconds of application. The small tubular dispensers resemble many ophthalmologic medications, leading to accidental exposures. Physician use of tissue adhesives for wound closure may become a new source of risk. Although acetone and ethanol/water mixtures can dissolve glue on normal skin, these substances are extremely toxic to the eye and must be avoided. Mineral oil may soften the glue enough to allow separation of the lids. Mechanical or surgical debridement is usually necessary to remove glue from the cornea. A corneal abrasion typically results, which can be treated in the usual fashion.

(Chapter 230)

(141) The answer is B

There are a number of potential consequences to blunt eye trauma. The constellation of eye pain, photophobia, ciliary injection, and anterior chamber cell and flare is strongly suggestive of traumatic iritis. Furthermore, the ciliary body may respond to blunt trauma with either spasm and constriction (traumatic miosis) or dilation and cycloplegia (traumatic mydriasis), as demonstrated in this case. Cranial nerve III palsy is an unlikely result of blunt eye trauma, particularly if extraocular movements are intact. *Iris sphincter rupture* refers to small rents in the margin of the iris, resulting in a triangular notch in the border of the pupil.

(Chapter 230)

(142, 143) The answers are A and C, respectively.

The condition described is a hyphema: blood in the anterior chamber resulting from a rupture of one or more iris stromal vessels. Severity of the bleed can vary from minor hemorrhage visible only on slit lamp to the "8-ball" hyphemas in which the anterior chamber is filled with clot. Between 8 and 33 percent of patients experience a rebleed usually after 2 to 5 days, which is invariably worse than the original event. Potential complications include acute and chronic glaucoma related to occlusion of the trabeculae, corneal staining, and optic atrophy. Cataracts may occur after blunt eye trauma, but this is independent of the hyphema. Treatment centers on the prevention of rebleeding (bed rest and aminocaproic acid) and patient comfort (cycloplegics, prednisolone). Studies have debunked the practice of routine hospitalization after finding no difference in outcome between treatment and control groups. Daily intraocular pressure monitoring is nevertheless recommended to assess for developing glaucoma.

(Chapter 230)

(144) The answer is E

The orbital blowout fracture results from the transmission of a sudden rise in intraorbital pressure downward through the thin orbital floor into the maxillary sinus. Subsequent prolapse of the inferior rectus muscle, orbital fat, and connective tissue may result in enophthalmos and diplopia because of the restricted upward gaze. There can be compression of the infraorbital branch of cranial nerve V-2, resulting in anesthesia to the cheek and upper lip. Communication with the air-containing maxillary sinus permits the development of orbital emphysema, particularly after a sneeze or blowing one's nose. Subconjunctival hemorrhage is common, but cerebrospinal fluid (CSF) rhinorrhea has not been described with this fracture.

(Chapter 230)

(145) The answer is C

The typical retinal detachment is heralded by painless flashes of light, floaters, and a shade across the visual field. Interestingly, most detachments follow a latent period, up to 8 months posttrauma in 50 percent of cases. Detachments begin as small tears in the ora serrata (called dialysis), most frequently affecting the inferotemporal quadrant, followed by the superonasal quadrant. Because most detachments are very peripherally situated on the retina, standard funduscopy is typically inadequate for visualization. Although a number of techniques have been developed to correct the detachment, visual outcome remains largely determined by the degree of macular involvement.

(Chapter 230)

(146, 147) The answers are C and C, respectively.

Diabetic retinopathy carries a risk of spontaneous vitreous hemorrhage. The bleed may range from minor, with symptoms limited to a few floaters, to severe, with painless loss of vision, a dark pupil, and absent red reflex. This latter finding and absence of pain are the keys to diagnosing this condition and would not be expected in any of the other disease processes listed. Treatment is expectant. Once the vitreous clears, the patient can undergo photocoagulation therapy to prevent future hemorrhage.

(Chapter 230)

(148) The answer is D

This case scenario should suggest two likely diagnoses: ruptured globe and retroorbital hematoma. The differentiation between these two entities may be difficult on purely clinical grounds. Both are characterized by pain, visual and pupillary defects, marked conjunctival swelling (chemosis), and occasionally proptosis. The management keys are to provide comfort for the patient, advance the work up (CT, computed tomography), and avoid worsening the condition through secondary trauma. This last comment is particularly directed at ruptured globes, where all pressure on the eye must be meticulously avoided to prevent extrusion of intraocular contents and permanent loss of vision. A metallic shield should be placed over the eye instead of the usual compressive two-gauze eye patch.

(Chapter 230)

(149) The answer is E

Epidemic keratoconjunctivitis is a highly contagious form of viral conjunctivitis. It is characterized by rapid spread through contact groups, tender preauricular adenopathy, keratitis with subepithelial infiltrates, and an unusually long course (2-3 weeks). Differential diagnosis includes contact conjunctivitis, episcleritis, and atypical viral conjunctivitis. Treatment is symptomatic, but occasionally antibiotics are given to avoid secondary infection.

(Chapter 230)

(150) The answer is D

The presence of a nasal vesicle and eye pain strongly suggest *Herpes zoster* with ocular involvement via the shared nasociliary branch of the trigeminal nerve. Virtually any part of the eye may be affected including the lids, conjunctiva, cornea, ciliary body, or extraocular muscles. Treatment is directed at control of symptoms:

topical prednisolone to decrease inflammation, cycloplegic drops to reduce spasm, and acyclovir to reduce the length and severity of infection. Viroptic, which is typically used for *Herpes simplex* infections, is ineffective against *Herpes zoster*.

(Chapter 230)

(151, 152) The answers are D and C, respectively.

The constellation of signs and symptoms demonstrated by this patient is highly suggestive of acute angle closure glaucoma. These patients typically present with eye pain, headache, a fixed mid-point pupil, an edematous cornea, and decreased vision. Elevated intraocular pressure as measured by Schiøtz tonometer, a TonoPen, or an applanation tonometric device secures the diagnosis. This disorder occurs in anatomically susceptible patients who have small or shallow anterior chambers. There is an increased resistance to the flow of aqueous humor from the posterior to the anterior chamber, resulting in intraocular hypertension. Attacks are often precipitated by conditions that result in pupillary dilatation: prolonged exposure to dim light or the use of anticholinergic or sympathomimetic agents.

Therapy of acute angle closure is two pronged: (1) increase the flow of aqueous through the trabecular meshwork and (2) decrease the overall production of aqueous. Cholinergic agents such as pilocarpine cause miosis that in turn creates a more favorable angle for aqueous flow. β -Adrenergic agents (timolol) decrease aqueous production, and acetazolamide and mannitol, both diuretic agents, decrease total intraocular volume. Mydriatic agents must be avoided because they may worsen already compromised flow through the narrowed angle.

(Chapter 230)

(153) The answer is D

The patient's ophthalmologic disorder is most consistent with anterior uveitis, also known as iritis. Pain and photophobia with an active anterior chamber sediment (cell, flare, or hypopyon) is characteristic of this disorder. Uveitis is often a response to some underlying inflammatory condition, and a major goal of management is to explore the broad differential. All of the listed items have been associated with uveitis. However, based on the patient's sex, race, and recent diagnosis of restrictive lung disease, sarcoidosis is the most likely culprit.

(Chapter 230)

(154) The answer is C

The key to this problem is realizing that the patient's poor visual acuity resolves with pinhole, implying a pure refractive error. This leaves essentially two possibilities: lens dislocation and myopia. The acute onset of symptoms and severity of the visual impairment support the diagnosis of lens dislocation. Partial lens dislocation may also occur, resulting in the unusual symptom of unilateral diplopia. Surgery is required for lens

removal and replacement with an implant.
(Chapter 230)

(155, 156) The answers are both D

Amaurosis fugax describes a condition of transient, monocular, graying or blurring of all or part of the visual field. The pathophysiology is similar to transient ischemic attacks (TIAs) of the cerebral circulation and involves the obstruction of retinal arterioles by cholesterol or fibrin platelet emboli. Cholesterol emboli, also called Hollenhorst plaques, typically arise from atherosclerotic disease of the carotid artery and may presage future strokes. They are occasionally visible on fundoscopy as small refractile bodies within a retinal vessel. The key to diagnosis is the transient nature of the symptoms. Management should focus on investigation and remedy of the source of the emboli and stroke prevention, typically with antiplatelet drugs.
(Chapter 230)

(157) The answer is A

Central retinal artery occlusion (CRAO) is a true ophthalmologic emergency relating to obstructed blood supply to the retina. Reestablishment of retinal circulation must be accomplished within 90 min of symptom onset. Persistent visual loss beyond 2 h offers little hope for recovery. Therapeutic interventions focus on dislodging and dissolving the clot and include (1) anterior chamber paracentesis, which may decompress the eye and dislodge the clot, (2) intermittent (on and off) ocular massage, (3) inhalation of carbon dioxide, which causes retinal artery dilation and an improved perfusion gradient, and (4) acute anticoagulation. CRAO has been associated with hypertension, diabetes, vascular disease, sickle cell anemia, and glaucoma. The *cherry-red spot* refers to the macula, which has an alternate blood supply and appears bright red against the pale background of the ischemic retina.
(Chapter 230)

(158) The answer is B

Central retinal vein occlusion distinguishes itself from other causes of painless monocular vision loss with its characteristic fundoscopic findings. Retinal vein dilation and diffuse hemorrhages, sometimes described as "blood and thunder," contrast markedly with the pale retina of central artery occlusion or the relatively normal-appearing fundi of temporal arteritis and amaurosis fugax. Malignant hypertension can produce similar appearing flame hemorrhages, but the process is invariably bilateral, and the visual impact tends to be less marked.
(Chapter 230)

(159) The answer is B

This patient has optic neuritis, defined as inflammation or demyelination of any portion of the optic nerve. Classic signs and symptoms include visual loss of variable severity and dull eye pain that typically is worse with eye movement. Patients also describe a dimness to their vision and a loss of color intensity. When the optic disc is involved, it appears swollen and hypervascular. Causes include MS, Lyme disease, lupus, sarcoid, syphilis, and toxin exposure. Optic neuritis is a classic first presentation of MS as is diplopia because of lesions of the medial lateral fasciculus. This patient's age and prior neurologic symptoms support the diagnosis of MS. (Chapter 230)

(160) The answer is E

This patient is describing a classic, prodromal aura of migraine headaches. Typical aura symptoms precede the headache, last 10-15 min, and consist of a wide range of photomimicry: scotomas, scintillations, flashing lights, and even visual hallucinations. Although amaurosis fugax and TIA can present with scotoma, these are unlikely to occur in this age group or in association with headache. Retinal detachment would not resolve with time, and subarachnoid hemorrhage, although still a consideration, should have meningismus and no aura. (Chapter 230)

(161) The answer is B

Patients with functional blindness fall into two categories: hysterical conversion reaction and malingering. "No light perception" vision in the setting of a normal pupillary response and an absent afferent pupillary defect strongly suggest functional blindness. Cortical visual tracts can be tested by eliciting optokinetic nystagmus. This is an involuntary reflex in which the affected eye tracks objects moving in a horizontal direction, e.g., a tape measure moving back and forth or a spinning top with painted vertical lines. Cortical blindness can occur with bilateral occipital infarction (unlikely in this patient). (Chapter 230)

(162) The answer is E

Homonymous visual field cuts imply a postchiasmal location of the abnormality because this is the first point where fibers from the same visual field of both eyes join. Fibers further divide between the thalamus and occipital lobe into upper and lower quadrant visual fields. The most common location for quadrantanopia defects is the occipital lobe. Stroke, tumor, and atypical migraine may present with quadrantanopia. Visual fields are named from the perspective of the patient, i.e., the right visual field corresponds to the left side of the retina.

Therefore, a right-sided visual field cut involves the left-sided neurologic tracks.
(Chapter 230)

(163) The answer is A

Primary open angle glaucoma is the most common form of glaucoma, accounting for more than 90 percent of cases. It is currently the leading cause of blindness in the United States. Attacks of closed angle glaucoma are precipitated by events resulting in prolonged pupillary dilatation: dimly lit rooms, anticholinergic and sympathomimetic medications, and emotional upset that can produce increased adrenergic outflow. Headache, nausea, and abdominal pain may be more pronounced in presenting symptoms than eye complaints. Laser iridectomy represents definitive therapy.

(Chapter 230)

(164) The answer is D

Cataract formation is a complication of prolonged steroid use. The short-term limited use of topical steroids in the ED does not pose a risk for cataracts. Use of steroids in *Herpes simplex* infections must be avoided all costs. However, their use in a variety of inflammatory conditions such as iritis, *Herpes zoster* reactivations, or allergic conjunctivitis can be highly beneficial.

(Chapter 230)

(165) The answer is E

Necrotizing external otitis, also called malignant external otitis, is a dreaded progression of otitis externa. This disease requires aggressive treatment with anti-pseudomonal antibiotics. Eighty to ninety percent of cases occur in elderly, diabetic patients, with the remainder in debilitated or immunocompromised hosts. Swimmers commonly contract a benign, self-limited form of otitis externa.

(Chapter 231)

(166) The answer is D

Bullous myringitis is commonly associated with *Mycoplasma pneumoniae* infection. It is a variant of acute otitis media, in which bullae or vesicles are visualized on the tympanic membrane. These blebs resolve spontaneously and require no specific therapy. Therapy of acute otitis media with bullous myringitis consists of

antipyretics, analgesics, and antibiotics directed at *Mycoplasma* species.
(Chapter 231)

(167) The answer is E

Acute mastoiditis is a serious complication of acute otitis media. Symptoms of mastoiditis include otalgia, otorrhea, headache, and hearing loss. Serious complications include osteitis, subperiosteal abscess, meningitis, facial nerve palsies, and extension of the abscess into the neck (Bezold abscess). The tympanic membrane may show erythema, opacity, perforation with drainage, or loss of landmarks. A normal ear examination is present in fewer than 10 percent of cases.

(Chapter 231)

(168) The answer is E

In chronic mastoiditis, defined as lasting longer than 3 months, mixed infections are the most common. *P. aeruginosa* is the predominant organism through *Bacteroides* species are also commonly found. Other causes of chronic mastoiditis include *Mycobacterium tuberculosis* and sterile infection.

(Chapter 231)

(169) The answer is B

Although barotrauma, perforation, and otitis media can cause hearing loss, cerumen impaction is the most likely cause. The resultant loss of conductive hearing would lead to an abnormal Weber test, with lateralization to the affected ear. The Rinne test would demonstrate bone conduction greater than air conduction.

(Chapter 231)

(170) The answer is E

Unilateral sensory loss presents with a normal Rinne test (air conduction greater than bone conduction) and a Weber test that lateralizes to the unaffected ear. Viral neuronitis is the most common cause, with mumps as the most frequent agent in children. Acoustic neuromas and Meniere's disease present less frequently with hearing loss. Other uncommon etiologies of unilateral hearing loss include autoimmune disorders, blood dyscrasias, and idiopathic causes.

(Chapter 231)

(171) The answer is D

Tympanic membrane rupture commonly occurs after direct trauma and blast injuries with changes in air or water pressure. Otitis media, lightning strikes, and caustic exposure can also cause perforation. Whereas temporal bone fracture can cause rupture, isolated mandible fracture does not.

(Chapter 231)

(172) The answer is A

Barotitis media (middle ear squeeze) is the most common form of barotrauma in scuba divers. On descent, pressure on middle ear gas increases. With eustachian tube dysfunction (due to anatomic abnormality or respiratory infection), the tympanic membrane retracts, resulting in mucosal engorgement, hemorrhage, and often tympanic membrane perforation. The resultant cold water in the middle ear commonly produces vertigo, nausea, and vomiting. Divers may also complain of acute pain and diminished hearing secondary to conductive hearing loss.

(Chapter 231)

(173) The answer is D

Both infection and cocaine use can cause mucosal erosions in the nose, resulting in epistaxis. Lowering blood pressure in a hypertensive patient may aid in control of epistaxis after pain is controlled. Uremia-induced dysfunction in the normal clotting cascade may also contribute to epistaxis. Peptic ulcer disease by itself does not cause epistaxis, and it is not a predisposing factor unless the patient takes nonsteroidal antiinflammatory drugs.

(Chapter 233)

(174) The answer is C

History of drug use, both illicit and prescribed, is important to ascertain in a patient presenting with epistaxis. Cocaine and medications that interfere with the normal clotting cascade may predispose to bleeding. In addition, liver disease or hemophilia can make achieving hemostasis challenging. A sensation of blood in the back of the throat suggests a more serious posterior bleed. Ear pain does not by itself aid in the evaluation of epistaxis.

(Chapter 233)

(175) The answer is C

Direct pressure applied for 5 to 10 min is the initial means of managing epistaxis. If a bleeding vessel is identified and the bleeding is temporarily controlled, cautery with a silver nitrate stick often provides definitive treatment. Nasal packing with a sponge or petroleum gauze is also efficacious, but the packing is uncomfortable and it must remain in place. Topical vasoconstrictive agents such as cocaine have been described to aid in the control of anterior epistaxis, but these agents must be used with caution in elderly patients. Embolization may play a role in the management of posterior, but not anterior, hemorrhage.

(Chapter 233)

(176) The answer is E

The failure rate of anterior nasal packing is about 25 percent. Anemia may result when anterior nasal packing fails to control the bleeding. Posterior dislodgment of nasal packing may occur but was more common in the past when physicians made their own packing material. Sinusitis and toxic shock syndrome have both been described as complications. Vertigo should not be attributed to nasal packing.

(Chapter 233)

(177) The answer is C

Bleeding from both nares is more often associated with a posterior source because the site of hemorrhage is closer to the choanae and blood may cross the midline. The sensation of blood in the oropharynx is also more common with a posterior bleed. Anterior bleeding usually remains unilateral and rarely flows down the throat unless the patient is supine. Epistaxis-associated syncope suggests a large blood loss, making a posterior source more likely. A nasal foreign body is more likely to cause an anterior bleed secondary to erosion or irritation of the nasal mucosa.

(Chapter 233)

(178) The answer is D

The nasal bones are protected to some extent by surrounding cartilaginous tissue. Blows to cartilage are less likely to produce fractures than are strikes directly to bone. Lateral forces are more likely to produce fractures

because there is no cartilaginous padding. Barotrauma has little role in nasal fractures. A simple nasal fracture is a clinical diagnosis and does not require x-ray confirmation.

(Chapter 233)

(179) The answer is B

The main complications of nasal fractures are fractures to the cribriform plate and nasoseptal hematoma. Patients with nasal fractures must always be assessed for the presence of septal hematoma. Untreated septal hematomas often become infected and can result in avascular necrosis. Cartilaginous destruction occurs from compromised blood flow and may cause a cosmetic deformity known as the saddle deformity. Extraocular movements are typically unaffected by simple nasal trauma. If impaired, an orbital wall fracture must be sought.

(Chapter 233)

(180) The answer is D

Diagnosing nasal foreign bodies in small children requires a high degree of clinical suspicion. Older children are less likely to place objects into their noses. Clinicians should suspect a foreign body when a young child presents with persistent nasal drainage, sinusitis, or epistaxis. Although common in children, recurrent otitis media has not been associated with the presence of a nasal foreign body.

(Chapter 233)

(181) The answer is B

Sinusitis can be debilitating for patients and difficult for clinicians to treat. Acutely, the major causes of sinusitis tend to be aerobic bacteria. Anaerobes should be suspected with persistent symptoms. *Bacteroides* species are more often implicated in chronic than in acute sinusitis.

(Chapter 233)

(182) The answer is B

Sinusitis can have grave consequences if left untreated. Local infiltration into the surrounding bone and soft tissues causes spreading infection. Cellulitis, both periorbital and facial, is a well-documented complication. In addition, sinusitis can lead to facial abscesses or subdural empyemas. Pott's Puffy tumor results from destruction of the anterior table of the frontal bone, with local abscess formation. Mastoiditis is not commonly

seen after sinusitis.

(Chapter 233)

(183) The answer is D

Mandibular fractures produce a variety of signs and symptoms. Limited range of motion of the jaw, deformity of the dental arch, and malocclusion are prominent features. Mental nerve anesthesia and sublingual hematomas are often overlooked. Subconjunctival hemorrhage, although seen in mid-face fractures, does not commonly occur with mandible fractures.

(Chapter 249)

(184) The answer is A

The angle of the mandible is the most commonly fractured portion. This is closely followed by the condyle, molar, and mental regions. With angle fractures, the proximal segment is often displaced superiorly to the distal segment. This is caused by the pterygomasseteric sling pulling the proximal segment upward. Most mandible fractures heal well with intermaxillary fixation (wiring the upper and lower teeth in occlusion).

(Chapter 249)

(185) The answer is D

Symptoms of ZMC fractures include epistaxis, diplopia from disrupted and entrapped extraocular muscles, and facial emphysema (from fracture of the maxillary sinus causing air in the local tissues). In addition, subconjunctival hemorrhage can occur from blood tracking from fracture sites along the maxilla. Mental nerve anesthesia is often seen in mandibular fractures but less commonly in ZMC fractures.

(Chapter 249)

(186) The answer is B

Orbital floor fractures occur from direct blows to the globe that cause transmitted forces to the orbital encasement. The orbital floor is the weakest structure and is most commonly fractured. Extraocular muscles or the surrounding fat may become trapped in an orbital floor fracture, leading to diplopia. Sinusitis may be a complication if the orbital floor fracture extends into the maxillary sinus. As the sinus fills with blood, a fertile culture medium for bacteria is produced. Corneal abrasions, epistaxis, and traumatic retinal detachment may

also be seen after facial trauma.
(Chapter 249)

(187) The answer is C

LeForte III fractures extend through the frontozygomatic suture lines, across the orbits, and through the base of the nose. The LeForte II fracture, also known as the pyramidal fracture because of its extension in a pyramidal fashion through the maxilla, does not involve the zygomatic suture lines. The LeForte I fracture is even more limited and involves only the maxilla. All the LeForte-type fractures produce a free-floating jaw in which the body of the maxilla is separated from the base of the skull superior to the palate. Mandibular fractures tend not to involve the suture lines.

(Chapter 249)

(188) The answer is C

A patient who presents with clear nasal discharge after a facial injury must be suspected of having CSF rhinorrhea. Of the fractures listed, this is most commonly a complication of a LeForte III injury that extends through the cribriform plate of the ethmoid bone. CSF leaks through the torn meninges, providing a direct communication with the subarachnoid space. If a CSF leak is undetected and untreated, brain abscess or encephalitis may develop.

(Chapter 249)

(189) The answer is A

In most mandible dislocations, the condyle of the mandible is displaced anteriorly as the condyle slips out of the TMJ fossa. The muscles of the mandible may spasm, causing trismus and making reduction more difficult. Reduction consists of downward pressure on the mandible while the jaw is opened wide to free the condyle from its dislocated position anterior to the eminence. After relocation, the chin is pressed backward to allow the mandible to return to the fossa as the jaw is closed.

(Chapter 232)

(190) The answer is C

TMJ syndrome is a common and debilitating problem. Symptoms include bruxism (grinding of teeth), crepitus

over the joint, earache, and tinnitus from proximity to the facial nerves. Dysphonia is not a common presenting symptom of TMJ syndrome because word enunciation does not typically involve much mandible movement. TMJ treatment includes analgesics, muscle relaxants, warm compresses, dental occlusions to limit bruxism, and stress reduction.

(Chapter 232)

(191) The answer is A

Although diabetes can place a patient at risk by causing dehydration, it is not a primary cause of sialoadenitis. Causes of acute salivary gland dysfunction include irradiation, paramyxovirus (mumps), phenothiazines, and uremia. Systemic diseases such as tuberculosis, actinomycoses, and sarcoidosis may present with chronic sialoadenitis. Squamous carcinomas and lymphomas are also in the differential of enlarged salivary glands. Treatment is directed at the underlying disease.

(Chapter 232)

(192) The answer is E

More than 80 percent of salivary calculi are found in the submandibular gland. Five to twenty percent occur in the parotid gland, with only rare formation in the sublingual gland. Lacrimal glands do not contain salivary calculi. Meibomian glands are located on the eyelid, and obstruction may lead to chalazion formation.

(Chapter 232)

(193) The answer is D

Stridor occurs when there is a narrowing of the hypopharynx. It is classically seen with advanced epiglottitis, as air traverses through a narrowed opening. PTAs tend to not produce enough airway compromise to produce stridor. Drooling, muffled voice, sore throat, and trismus all occur frequently.

(Chapter 235)

(194) The answer is A

Retropharyngeal abscesses occur predominately in children younger than 5 years. Complications include mediastinitis secondary to spread via contiguous fascial planes, airway obstruction, empyema, and erosion into the carotid artery. A lateral soft tissue x-ray of the neck is diagnostic in up to 88 percent of cases and should be

performed at the bedside if there is any concern for impending airway obstruction.
(Chapter 235)

(195) The answer is D

Ludwig's angina is a potentially life-threatening infection of the submandibular space involving the connective tissue, fascia, and muscles, but not the glands. Patients frequently give a history of recent odontogenic infection. Ludwig's angina often produces trismus, dysphonia, and dysphagia. The infected tissues are often indurated (described as "brawny" edema) but not fluctuant. In addition to assessing for airway compromise, broad-spectrum antibiotics and emergent consultation for possible surgical drainage are the mainstays of treatment.

(Chapter 234)

(196) The answer is D

Ludwig's angina occurs most frequently in previously healthy males age 20 to 60 years. Alcoholism, diabetes, and SLE may also be predisposing factors. Because one-third of patients ultimately require tracheostomy or intubation, airway equipment should be at the bedside of any patient suspected of having this diagnosis.

(Chapter 234)