



TEST BANK



Subject:

Anatomy

**Collected
by**



دينا عادل ابو رزق
يمنى الفقيه
شيماء المناصرة
إيلاف الصقور

BRS

1) A 14-year-old boy hits his head on the asphalt road after falling off his skateboard. His radiograph reveals damage to the sella turcica. This is probably due to fracture of which of the following bones?

- A) Frontal bone
- B) Ethmoid bone
- C) Temporal bone
- D) Basioccipital bone
- E) Sphenoid bone

E

2) A 37-year-old patient has an infectious inflammation of the dural venous sinus closest to the pituitary gland and a secondary thrombus formation. Which of the following is the most likely site of infection?

- (A) Straight sinus
- (B) Cavernous sinus
- (C) Superior petrosal sinus
- (D) Sigmoid sinus
- (E) Confluence of sinuses

B

3) A 31-year-old woman complains of headache and dizziness after hitting a kitchen cabinet door with her head. Her MRI scan and venogram show a large blood clot in the great cerebral vein of Galen. The obstructed vein of the brain is a direct tributary of which of the following venous structures?

- A) Emissary veins
- B) Pterygoid venous plexus
- C) Diploic veins
- D) Dural venous sinuses
- E) Internal jugular vein

D

4) A 32-year-old house painter suffers from a head injury after falling off a ladder and has bleeding in his head. During intraoperative testing, the neurosurgeon notes loss of general sensation in the dura of the middle cranial fossa. Which of the following nerves has been affected?

- A) Vagus nerve

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- B) Facial nerve
- C) Hypoglossal nerve
- D) Trigeminal nerve
- C) Glossopharyngeal nerve

D

5) During a game, a 26-year-old baseball player is hit in the head by a baseball, which fractures the optic canal. Which of the following pairs of structures is most likely to be damaged?

- A) Optic nerve and ophthalmic vein
- B) Ophthalmic vein and ophthalmic nerve
- C) Ophthalmic artery and optic nerve
- D) Ophthalmic nerve and optic nerve
- E) Ophthalmic artery and ophthalmic vein

C

6) The drummer of a local band presents to your clinic with hearing loss. Otoscopic examination reveals loss of contraction of the tensor tympani and the stapedius, which prevents damage to the eardrum and middle ear ossicles. These muscles are most likely controlled by which of the following nerves?

- A) Chorda tympani and tympanic nerve
- B) Trigeminal and facial nerves
- C) Auditory and vagus nerves
- D) Facial and auditory nerves
- E) Trigeminal and accessory nerves

B

7) A 61-year-old woman is found to have ocular lymphoma invading her optic canal. Which of the following structures would most likely be damaged?

- A) Ophthalmic vein
- B) Ophthalmic nerve
- C) Oculomotor nerve
- D) Trochlear nerve
- E) Ophthalmic artery

E

8) During surgery for a malignant parotid tumor in a 69-year-old woman, the main trunk of the facial nerve is lacerated. Which of the following muscles is paralyzed?

BRS

- A) Masseter muscle
- B) Stylopharyngeus muscle
- C) Anterior belly of the digastric muscle
- D) Buccinator muscle
- E) Tensor tympani

D

9) A 59-year-old woman with pain at the side of her skull comes to the emergency department. An emergent head CT scan shows a large lesion in the internal auditory meatus. This condition may progress and damage which of the following pairs of structures?

- A) Vagus and glossopharyngeal nerves
- B) Internal carotid and vertebral arteries
- C) Internal jugular vein and trigeminal nerve
- D) Facial and vestibulocochlear nerves
- E) Hypoglossal and accessory nerves

D

10) After ingesting a toxic substance found in her friend's home, a 12-year-old girl is unable to close her lips. Which of the following muscles may be paralyzed?

- A) Levator labii superioris
- B) Zygomaticus minor
- C) Orbicularis oris
- D) Lateral pterygoid
- E) Depressor labii inferioris

C



Anatomy questions for the next week

The source: GRAY'S Anatomy Review

Done by: دينا عادل أبو رزق

There are some Explanations for certain questions at the end of the file

Questions 10 and 19 are omitted

1-Early closure of the fontanelles of the infant skull can result in compression of the brain, restricting brain growth. Which of the following fontanelles is located at the junction of sagittal and coronal sutures and at what age does this fontanelle typically close?

- A. Posterior fontanelle, which closes at about
2 years
- B. Mastoid fontanelle, which closes at about
16 months
- C. Lambdoid fontanelle, which closes at
8 months to 1 year
- D. Sphenoidal fontanelle, which closes at 3 years
- E. Anterior fontanelle, which closes at 18 months

2- A 50-year-old woman complained of pain over her chin and lower lip. A few days later small vesicles appeared over the same area and soon began erupting. She was diagnosed with a dermatomal herpes zoster inflammation (shingles). Which of the following nerves was most likely responsible for the transmission of the virus in this case?

- A. Auriculotemporal
- B. Buccal
- C. Lesser petrosal
- D. Mental

E. Infraorbital

3- A 68-year-old woman is suffering from excruciating, sudden bouts of pain over the area of her midface. Laboratory studies indicate that she has tic douloureux (trigeminal neuralgia). Which ganglion is the location of the neural cell bodies of the nerve mediating the pain?

A. Geniculate

B. Trigeminal (semilunar or Gasserian)

C. Inferior glossopharyngeal

D. Otic

E. Pterygopalatine

4- A 17-year-old woman is admitted to the hospital with signs of cavernous sinus thrombosis, as revealed by radiographic and physical examinations. Thrombophlebitis in the “danger area” of the face can spread to the cavernous sinus and involve the ophthalmic branch of the trigeminal nerve. Which of the following symptoms will most likely be present during physical examination?

A. Pain in the hard palate

B. Anesthesia of the upper lip

C. Pain from the eyeball

D. Pain over the lower eyelid

E. Tingling sensation over the buccal region of the face

5-A 40-year-old unconscious man is admitted to the emergency department after being hit in the head with a baseball. A CT scan examination reveals a fractured pterion and an epidural hematoma. Branches of which of the following arteries are most likely to be injured?

A. External carotid

B. Superficial temporal

C. Maxillary

D. Deep temporal

E. Middle meningeal

6-An unconscious 48-year-old woman is admitted to the hospital. CT scan reveals a tumor in her brain. When she regains consciousness, her right eye is directed laterally and downward, with complete ptosis of her upper eyelid, and her pupil is dilated. Which of the following structures was most likely affected by the tumor to result in these symptoms?

A. Oculomotor nerve

- B. Optic nerve
- C. Facial nerve
- D. Ciliary ganglion
- E. Superior cervical ganglion

7- A 55-year-old man is admitted to the hospital after an injury sustained at work in a factory. He presents with severe scalp lacerations, which were sutured. After three days the wound is inflamed, swollen, and painful. Between which tissue layers is the infection most likely located?

- A. The periosteum and bone
- B. The aponeurosis and the periosteum
- C. The dense connective tissue and the aponeurosis
- D. The dense connective tissue and the skin
- E. The dermis and the epidermis

8- A 55-year-old male has a complaint of left-sided maxillary tooth pain. A dental examination reveals no abnormalities of his teeth. During physical examination tapping on his right maxilla elicits sharp pain on the right side of his face. The patient reports that he has no allergies. Which of the following conditions will be the most likely diagnosis?

- A. Sphenoid sinusitis
- B. Anterior ethmoidal sinusitis
- C. Posterior ethmoidal sinusitis
- D. Maxillary sinusitis
- E. Frontal sinusitis

9- A 33-year-old woman is unconscious when she is admitted to the hospital after she fell, hitting her head. The physician in the emergency department performs a pupillary light reflex test. The integrity of which of the following nerves is being checked?

- A. Optic and facial
- B. Optic and oculomotor
- C. Maxillary and facial
- D. Ophthalmic and oculomotor
- E. Ophthalmic and facial

11-A 24-year-old man is admitted to the hospital after a street fight. Radiographic examination reveals an inferior (blow-out) fracture of the orbit. Orbital structures would most likely be found inferiorly in which of the following spaces?

- ☐A. Ethmoidal sinus
- ☐B. Frontal sinus
- ☐C. Maxillary sinus
- ☐D. Nasal cavity
- ☐E. Sphenoidal sinus

12- A 35-year-old woman is hospitalized due to cavernous sinus thrombosis resulting from an infection on the face. Which of the following is the most direct route for spread of infection from the face to the cavernous sinus?

- ☐A. Pterygoid venous plexus
- ☐B. Superior ophthalmic vein
- ☐C. Frontal venous plexus
- ☐D. Basilar venous plexus
- ☐E. Parietal emissary vein

13-A 7-year-old boy was suffering from a severe infection of the middle ear (otitis media), which spread to the mastoid air cells (mastoiditis). Surgery was required but resulted in the following: right corner of the mouth drooping, unable to close his right eye, food collection in his right oral vestibule. Which nerve was injured?

- ☐A. Glossopharyngeal
- ☐B. Vagus
- ☐C. Facial
- ☐D. Maxillary division of the trigeminal nerve
- ☐E. Mandibular division of the trigeminal nerve

14-A 45-year-old woman is admitted to the hospital for severe ear pain. Physical examination reveals chronic infection of the mastoid air cells (mastoiditis). The infection can erode the thin layer of the bone between the mastoid air cells and the posterior cranial fossa and spread most commonly into which of the following venous structures?

- ☐A. Superior sagittal sinus
- ☐B. Inferior sagittal sinus

☐C. Straight sinus

☐D. Cavernous sinus

☐E. Sigmoid sinus

15- A 63-year-old man with hearing loss in his left ear complains of a loss of taste and drooling from the left side of his mouth. A CT scan shows a tumor compressing the nerve entering the skull through which of the following openings?

☐A. Foramen ovale

☐B. Foramen rotundum

☐C. Internal acoustic meatus

☐D. Jugular foramen

☐E. Superior orbital fissure

16-A 54-year-old man is admitted to the hospital due to severe headaches. A CT examination reveals an internal carotid artery aneurysm inside the cavernous sinus. Which of the following nerves would be typically affected first?

☐A. Abducens nerve

☐B. Oculomotor nerve

☐C. Ophthalmic nerve

☐D. Maxillary nerve

☐E. Trochlear nerve

17-A 56-year-old woman is admitted to the hospital with rheumatoid arthritis of her temporomandibular joint (TMJ) and severe ear pain . Which of the following nerves is most likely responsible for conducting the pain sensation?

☐A. Facial

☐B. Auriculotemporal

☐C. Lesser petrosal

☐D. Vestibulocochlear

☐E. Chorda tympani

18-The arachnoid villi allow cerebrospinal fluid to pass between which two of the following spaces?

A. Choroid plexus and subdural space

B. Subarachnoid space and superior sagittal sinus

- C. Subdural space and cavernous sinus
- D. Superior sagittal sinus and jugular vein
- E. Epidural and subdural space

20-A 32-year-old female patient asks you what is the soft, thin ridge of tissue that she can feel running forward across the masseter muscle toward her upper lip. You reassure her that is perfectly normal. Which of the following is the most likely structure she is feeling?

- ☐A. Facial artery
- ☐B. Maxillary artery
- ☐C. Parotid duct
- ☐D. Marginal mandibular branch of facial nerve
- ☐E. Facial vein

Answers :

1	2	3	4	5	6	7	8
E	D	B	C	E	A	B	D
9	10	11	12	13	14	15	16
B	X	C	B	C	E	C	A
17	18	19	20				
B	B	X	C				

Explanations for some questions :

4 .C The ophthalmic branch of the trigeminal nerve supplies sensory innervation to the eyeball, leading to pain upon damage. Pain in the hard palate and lower eyelid and anesthesia of the upper lip would be carried by the maxillary branch of the trigeminal nerve. Paraesthesia over the buccal portion of the face would be mediated by the maxillary division of the trigeminal nerve.

9.B The optic and oculomotor nerves are responsible for the sensory and motor portions, respectively, of the pupillary light refl ex. The optic nerve would include the sensory portion, but the facial nerve only closes the eyelid and does not affect the pupil. The maxillary nerve only provides sensory innervation to the skin surrounding the maxillary bone. The ophthalmic branch of the trigeminal nerve provides sensory innervation to the cornea for the corneal refl ex, but not the light reflex.

14 .E The sigmoid venous sinus empties into the internal jugular vein and drains the cranial vault. It runs along the posterior cranial fossa near the suture between the temporal and occipital bones. The superior sagittal sinus lies within the superior aspect of the longitudinal fissure, between the two cerebral hemispheres. The inferior sagittal sinus runs inferior to the superior sagittal sinus within the falx cerebri and joins the great cerebral vein (of Galen) to form the straight sinus. The straight sinus drains the great cerebral vein (of Galen) into the confluence of sinuses. The cavernous sinus is located within the middle cranial fossa and receives the ophthalmic veins, the greater petrosal sinus, and other venous vessels.

16 . A The abducens nerve would be affected fi rst due to aneurysmal dilation of the internal carotid artery (ICA) because the nerve runs in closest proximity to the artery within the cavernous sinus. The other nerves running in the wall of the cavernous sinus are the oculomotor nerve, trochlear nerve, and both the maxillary and ophthalmic branches of the trigeminal nerve. Each of these nerves, however, courses along, or within, the lateral walls of the cavernous sinus and may not be immediately affected by an aneurysm of the ICA.

20. C The parotid duct, also known as the Stensen's duct, crosses the masseter muscle transversely and extends to the oral cavity. The facial artery can be palpated in the groove anterior to the mandibular angle. The facial vein lies anterior to the artery, passing toward the angle of the lips, but does not ascend in close proximity to the masseter. All of the other vessels are located more deeply and cannot be palpated.

Anatomy week 2.. Usmle rx

A young man presents to the emergency department with severe head trauma following a fight. He is admitted and evaluated. A day later, he reports that he is feeling better but complains that he is having difficulty eating, particularly with opening his mouth and chewing. He has no difficulty sipping fluids with a straw and has a symmetric smile and tongue movement. The patient is able to speak normally.

Damage to which of the following cranial nerves would best explain his condition?

- A. CN V1 (ophthalmic)
- B. CN V2 (maxillary)
- C. CN V3 (mandibular)
- D. CN VII
- E. CN X
- F. CN XII

C

A 72-year-old man comes to the emergency department because of a headache that has lasted for several days. The headache began after the patient fell while intoxicated. He now says that he is more forgetful and has difficulty completing the crossword puzzle in the newspaper. His past medical history is positive for hypertension and alcoholism. Medications include hydrochlorothiazide. On evaluation today, his temperature is 99° F (37.2° C), blood pressure is 145/90 mm Hg, pulse is 80/min, and respirations are 18/min. He is unable to recall the current date or identify his current location. He is neurologically intact with no focal deficits. A CT scan is shown



- A. Lipohyalinosis of small penetrating arteries
- B. Rupture of Charcot-Bouchard microaneurysm
- C. Rupture of bridging veins
- D. Subarachnoid hemorrhage
- E. Thiamine deficiency encephalopathy
- F. Trauma to the middle meningeal artery
- G. Vertebrobasilar insufficiency

C

A 73-year-old woman presents with extremely painful blisters on her head. She does not recall having similar symptoms before. She is undergoing chemotherapy to treat late-stage breast cancer. Physical examination shows a vesicular rash above her left ear that extends from the vertex to the left side of the back of her head.

Which of the following is the root ganglion associated with the most likely cause of the patient's dermatologic lesions?

- A. C1 dorsal root ganglion

- B. C2 dorsal root ganglion
- C. C3 dorsal root ganglion
- D. C4 dorsal root ganglion
- E. C5 dorsal root ganglion

b