



ANATOMY

DONE BY : Volunteer

79-year-old man is brought to a family practice office by his wife because he "keeps running into things" on his right side. His wife also reports that he seems to ignore objects on his right. Testing his vision in each eye his physician determines that the patient cannot see anything in the right visual field of either eye. The physician orders a head MRI because he suspects which one of the following?

- a. A pituitary tumor compressing his optic chiasm
- b. A tumor in the medial wall of the right orbit compressing the optic nerve
- c. An aneurysm of the left middle cerebral artery compressing the left optic tract
- d. A tumor in the middle cranial fossa compressing the right optic tract
- e. An aneurysm in the arterial supply to the visual cortex

C

A 53-year-old banker develops paralysis on the right side of his face, which produces an expressionless and drooping appearance. He is unable to close the right eye and also has difficulty chewing and drinking. Examination shows loss of the blink reflex in the right eye to stimulation of either right or left cornea. Lacrimation appears normal on the right side, but salivation is diminished and taste is absent on the anterior right side of the tongue. There is no complaint of hyperacusis. Audition and balance appear to be normal. Where is the lesion located?

- a. In the brain and involves the nucleus of the facial nerve and superior salivatory nucleus
- b. Within the internal auditory meatus
- c. At the geniculate ganglion
- d. In the facial canal just distal to the genu of the facial nerve
- e. Just proximal to the stylomastoid foramen

D

A 23-year-old woman presents with concern over a hyperpigmentation spot that has enlarged after her weeklong vacation in Cancun, Mexico. The woman is blond with fair skin. The pigmented spot is on her cheek, below the medial portion of her eye and lateral to the dorsal surface of the nose, but just above her labial malar (nasolabial) skin fold. The spot has grown to about 6 mm laterally and 4 mm cranially/caudally with irregular borders and two tones of brown pigmentation.

What two regional lymph nodes should specifically be palpated during her physical examination?

- a. Buccal and submandibular nodes
- b. Buccal and submental nodes
- c. Jugulodigastric and juguloomohyoid nodes
- d. Parotid and mastoid nodes
- e. Submental and submandibular nodes

A

A 44-year-old attorney presents to a family practice office with a hat on her head and wearing dark sunglasses even though it is an overcast January day. Upon taking off her glasses and hat a series of vesicles are visible above her left eye continuing to her hairline. The vesicles stop at the midline of her forehead, but extend onto the dorsal surface of her nose and onto her left upper eyelid. There are no vesicles around or above her ears. She reports that she had pain in a similar pattern for a couple of days before the vesicles suddenly appeared. She can think of no change in habits or travel to account for the vesicles; she has infrequently left her home and office during the past 2 weeks since she is preparing for a case before the California Supreme Court. She had both chickenpox and mumps as a child. What is the working diagnosis and explanation for the unique pattern of the vesicles?

- a. Herpes zoster affecting the mandibular division of the trigeminal cranial nerve
- b. Herpes zoster affecting the ophthalmic division of the trigeminal cranial nerve
- c. Herpes zoster affecting the zygomatic branch facial cranial nerve
- d. Mumps affecting the maxillary division of the facial cranial nerve
- e. Mumps affecting her parotid salivary gland

B

A 9-year-old boy is brought to the emergency department by his mother. He tripped on the carpet while playing tag with his sister in the living room and fell face-first onto the corner of a wooden coffee table. Fortunately, his eye just missed the corner of the table, however, his left cheek hit the table just below his eye forcing the lower lateral margin of the eye away from the orbit. Gentle palpation indicates that both his zygomatic bone and a lateral portion of the maxilla are broken and dislocated from the rest of his face. The boy's nose, medial portion of the maxillary bone and maxillary teeth are all intact. When the "H" test is performed, the left eye has more limited movement than the right eye and cannot look above the horizon. Which extraocular muscle is likely trapped in which facial bone?

- a. Inferior rectus muscle in the ethmoid bone
- b. Inferior rectus muscle in the maxillary bone
- c. Medial rectus muscle in the frontal bone
- d. Medial rectus muscle in the maxillary bone
- e. Superior rectus muscle in the sphenoid bone

E

A 53-year-old woman has paralysis of the right side of her face that produces an expressionless and drooping appearance. She is unable to close her right eye, has difficulty chewing and drinking, perceives sounds as annoyingly intense in her right ear, and experiences some pain in her right external auditory meatus. Physical examination reveals loss of the blink reflex in the right eye on stimulation of either cornea and loss of taste from the anterior two-thirds of the tongue on the right. The inability to close the right eye is the result of involvement of which one of the following?

- a. Zygomatic branch of the facial nerve
- b. Buccal branch of the trigeminal nerve
- c. Levator palpebrae superioris muscle
- d. Superior tarsal muscle (of Muller)
- e. Orbital portion of the orbicularis oculi muscle

E

When a physician examines the "corneal reflex" in a patient, she/he touches the cornea with a wisp of cotton that causes the eyelid to rapidly shut. As with most reflexes, one is testing both the afferent information that is carried back to the central nervous system and the reflex motor response. What specific cranial nerve branches are responsible for both the afferent and efferent parts of the corneal reflex?

- a. Short ciliary nerve (CN III); zygomatic and temporal branches of the facial nerve (CN VII)
- b. Short ciliary nerve (CN III); oculomotor nerve (CN III)
- c. Long ciliary nerve (CN V'); zygomatic branches of the facial nerve (CN VII)
- d. Long ciliary nerve (CN V'); infraorbital branch of the trigeminal nerve (CN V2)
- e. Infraorbital nerve (CN V2); zygomatic branches of the facial nerve (CN VII)

C

A one-year-old boy was brought to the hospital because her parents noticed that the child held her head to one side. On examination, the girl's head was found to be tilted towards the right side and the face turned to the left side and upwards. The parents gave a history of birth trauma to the soft tissues of the neck.

1. Name the muscle and its side involved in birth injury in this case? **Stylomastoid muscle**
2. What is the clinical condition called? **Torticollis of sternomastoid**
3. Why is this muscle considered as an anatomical landmark in the neck?
it divides the neck into anterior and posterior cervical triangles (in front and behind the muscle, respectively) which helps define the location of structures, such as the lymph nodes for the head and neck
4. Give the nerve supply of this muscle? **Motor → Spinal accessory**
Proprioceptive → C2,3

One of the following muscles is content of the posterior triangle,

- A) Inferior belly of omohyoid
- B) Digastric muscle
- C) sternomastoid
- D) Trapezius
- E) Levator scapulae

A

The carotid sheath and its contents may be safely retracted as a unit during surgical procedures of the neck. The contents of the carotid sheath include all of the following structures EXCEPT the:

- a. common carotid artery
- b. internal carotid artery
- c. internal jugular vein
- d. sympathetic trunk

D

Which muscles must be retracted to gain access to the thyroid gland during its removal?

- a. Longus coli, longus capitus, and anterior scalene muscles
- b. Mylohyoid, anterior belly of the digastrics, genioglossus, and geniohyoid muscles
- c. Platysma, sternohyoid, sternothyroid, and omohyoid muscles
- d. Superior, middle, and inferior pharyngeal constrictors
- e. Trapezius, rhomboids, and levator scapulae muscles

C

If you ask a patient to protrude his tongue and it deviates to the left, this indicates injury of which of the following nerves?

- A. Left glossopharyngeal
- B. Right glossopharyngeal
- C. Left hypoglossal
- D. Right hypoglossal
- E. Left lingual

C

A 65-year-old man is admitted to the emergency department after his head hit in an automobile collision. Radiographic and physical examinations reveal that the inferior alveolar nerve is injured at its origin. Which of the following muscles would most likely be paralyzed as a result?

- A. Geniohyoid
- B. Hyoglossus
- C. Mylohyoid
- D. Stylohyoid
- E. Palatoglossus

C