

MODULE V: REVIEW OF HEAD AND NECK ANATOMY

A: SCALP, SKULL, MENINGES AND DURAL SINUSES

B: FACE

1. Illustrate the general sensory innervation of the face and scalp using a labelled diagram
2. State the characteristics of the muscles of facial expression
3. State the course and branches of the facial artery
4. Outline the venous drainage of the face and indicate regions of communication with intracranial veins
5. Describe the danger area of the face and indicate its anatomical basis
6. Describe the lymphatic drainage of the face

C. PAROTID REGION AND PAROTID GLAND

1. Describe the fasciae of the parotid gland
2. Describe the landmarks of the parotid duct
3. State the relations of the parotid gland
4. Name the structures that form the parotid bed
5. Name the structures that traverse the substance of the parotid gland
6. Describe the innervation to the parotid gland
7. Outline the pathway of secretomotor innervation to the parotid gland
8. Outline the pathway of vasomotor innervation to the parotid gland
9. Describe the light microscopic organization of the parotid gland
10. Outline the light microscopic differences among the major salivary glands

D: FACIAL NERVE

State the following about the facial nerve:

1. Brainstem nuclei of origin
2. Functional components
3. Brainstem exit point
4. Parts
5. Intracranial course, branches and distribution
6. Extracranial course, branches and distribution
7. Clinical anatomy

E: ORBIT AND EYEBALL

1. Name the bones that form the orbital margin
2. Outline the bones that form the superior, medial, lateral and inferior walls of the orbit
3. Name the foramina that communicate with the orbit and state the contents of each
4. List the contents of the orbit
5. Describe fascial organization of the orbit
6. Outline the relations of the orbit and state their clinical relevance
7. Describe the innervation of the eyeball and state its clinical significance
8. Name the extraocular muscles and state the innervation and actions of each
9. Name the tunics of the eyeball and state the components and functions of each tunic
10. Describe the venous drainage of the orbit and state its clinical relevance
11. Name the branches and distribution of the ophthalmic division of trigeminal nerve
12. Describe the pathway of secretomotor innervation to the lacrimal gland
13. Describe the pathway of sympathetic innervation to the iris and ciliary body
14. List the structures that form the refractive media of the eyeball
15. Classify and name the retinal cell types and indicate the role of each
16. Describe the development and congenital anomalies of the retina
17. Describe the visual pathway and explain the effects of lesion at various parts of this pathway

18. Define the following reflexes and describe the anatomical basis of each

- a. Corneal reflex
- b. Direct pupillary light reflex
- c. Consensual pupillary light reflex
- d. Visual reflex

F: NECK TRIANGLES

1. Describe the cutaneous innervation of the neck, indicating the various dermatomes
2. State the origin, course and termination of the anterior and external jugular veins
3. State the clinical relevance of the external jugular vein
4. Describe the fascial organization of the neck
5. Describe the divisions and subdivisions of the neck triangles, and state the contents of each
6. State the attachments, actions, innervation, relations and clinical relevance of the sternocleidomastoid muscle
7. Using a diagram, illustrate the nerves emerging from the nerve point and indicate clinical relevance
8. Describe the anatomy of the supraclavicular brachial plexus using a diagram
9. Name the muscles forming the floor of the posterior neck triangle
10. State the boundaries, contents and clinical relevance of the sub-occipital triangle
11. Describe the formation using of the ansa cervicalis a diagram and state its distribution
12. Name important surface landmarks in the neck and indicate their significance
13. Name the infrahyoid and suprahyoid muscles and indicate their actions
14. State the formation, course, surface landmarks and clinical relevance of the internal jugular vein
15. Describe the branching pattern of the carotid arterial system
16. State the classification of cervical lymph nodes
17. State the origin, functional components, course, branches and distribution of the vagus nerve
18. State the origin, functional components, course, branches and distribution of the hypoglossal nerve

G: THYROID GLAND

1. State the position, extents and relations of the thyroid isthmus and lobes
2. Describe the arterial blood supply and venous drainage of the thyroid gland
3. Describe the light microscopic organization of the thyroid gland
4. Illustrate the features of the thyroid parenchyma using a labelled diagram
5. Outline the features of the thyroid parenchyma in various states of activity
6. Name the secretions of the thyroid gland and state their target organs, physiological effects and clinical relevance

H: ROOT OF THE NECK

1. State the boundaries of the thoracic inlet
2. Name the structures that traverse the thoracic inlet (thoracic outlet)
3. Describe the relations of the 1st rib
4. State the attachments, innervation, actions and relations of the anterior scalene muscle
5. Name the pre-vertebral muscles
6. State the boundaries, contents and clinical relevance of the inter-scalene gap
7. State the boundaries, contents and clinical relevance of the vertebral triangle
8. State the origin, course, termination and territory of drainage of the thoracic duct
9. Describe the formation, course, associated ganglia and clinical relevance of the cervical sympathetic chain
10. Describe the origin, course, parts and branches of the subclavian artery
11. Describe the origin, course, distribution and clinical relevance of the phrenic nerve
12. Describe the anatomy of the right and the left recurrent laryngeal nerves
13. Highlight on the following:
 - a. Subclavian steal syndrome
 - b. Cervical rib and its implications
 - c. Thoracic outlet syndrome
 - d. Horner's syndrome

I: TEMPORAL AND INFRATEMPORAL REGION

1. State the attachments and actions of the muscles of mastication
2. List the contents of the infratemporal fossa
3. Outline the branches and distribution of the mandibular nerve
4. State the location and connections of the otic ganglion
5. State the origin, functional component, course and distribution of the chorda tympani nerve
6. State the origin, course, parts and branches of the maxillary artery
7. Outline the communications and clinical relevance of the pterygoid venous plexus

J: ORAL CAVITY

1. Describe the boundaries of the oral cavity proper
2. State the components of the dental arch
3. State the boundaries of the vestibule
4. State the site of opening of the major salivary glands
5. Illustrate the parts of the tongue using a diagram
6. Describe the attachments, innervation and actions of the extrinsic muscles of the tongue
7. State the components and clinical relevance of the “pillars of fauces”
8. Name the intrinsic muscles of the tongue and state the role of each
9. Describe the pattern of lymphatic drainage of the tongue and state its clinical relevance
10. Outline the light microscopic features of the lingual mucosa
11. Describe the pathway of taste sensation from the receptors to the cortex
12. Outline the embryonic sources and congenital anomalies of the tongue, indicating the basis of each anomaly
13. State the attachments, actions and innervation of the muscles of the soft palate
14. Describe the blood supply of the palate
15. Describe the development and congenital anomalies of the palate
16. Outline the muscular and skeletal derivatives of the 1st pharyngeal arch
17. State the anomalies associated with 1st arch syndromes

K: PHARYNX

1. Describe the parts and extents of the pharynx
2. Name the layers of the pharyngeal wall
3. Name the muscles of the pharynx and state the action and innervation of each
4. Name the structures that penetrate the pharyngeal wall at different levels
5. Describe the internal features of the nasopharynx and the anatomical basis of each feature
6. State the components of the tonsillar (Waldeyer's) ring and indicate the clinical relevance of each
7. Describe the location, relations, blood supply and clinical relevance of the palatine tonsils
8. State the boundaries and clinical relevance of the vallecular fossa
9. State the boundaries of the laryngeal inlet
10. Give an account of the derivatives of the embryonic pharyngeal pouches and state related anomalies
11. State the anatomical basis and clinical relevance of the pharyngeal pouch

L: NASAL CAVITY

1. Name the structures that form the lateral nasal wall and the nasal septum
2. Outline the neurovascular supply to the nasal walls and the nasal septum, and state its clinical relevance
3. State the boundaries of the choana, and state its clinical relevance
4. Name the structures that open into the various nasal meati

M: EAR

1. Name the parts of the ear and state the main function of each
2. Describe the parts of the pinna (real time)
3. Describe the blood supply to the pinna and state its clinical relevance
4. State the orientation of the external auditory meatus
5. List the contents of the tympanic cavity
6. State the relations of the middle ear
7. Name the openings on the middle ear and state the contents of each
8. State the components of the membranous labyrinth
9. Outline the structural organization of the spiral organ of Corti
10. Describe auditory and vestibular pathways

N: LARYNX

1. Name the parts of the larynx
2. Outline the components of the laryngeal skeleton
3. State the boundaries of the laryngeal inlet
4. Name the intrinsic and extrinsic muscles of the larynx, and indicate the actions of each
5. Describe the sensory and motor innervation of the larynx
6. List the functions of the larynx
7. Describe the relational anatomy of the larynx
8. State the surface landmarks of the larynx
9. State the anatomical basis of surgical airways