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COURSE: GROSS ANATOMY OF THE HEAD AND NECK

**ASSIGNMENT**

1. Discuss the Anatomy of the tongue and comment on its applied anatomy

ANSWER

The tongue is the principal (muscular) organ of the sense of taste and an important organ of speech; it also assists in the mastication and deglutition of food. It is situated in the floor of the mouth, within the curve of the mandible.

The tongue has borders and surfaces

1. Root: Posterior part of the tongue
2. Apex: The apex is the somewhat attenuated end which rests against the lingual surfaces
3. Inferior surface: It is the undersurface and is connected to the mandible by the mucous membrane.
4. Dorsum: of the tongue is a convex and marked by a median sulcus which divides it into symmetrical halves

Another important aspect of the tongue is the papillae.

PAPILLAE : The papillae of the tongue are projections of the corium, thickly distributed over the anterior two-thirds of its dorsum, giving to this surface its characteristic roughness. The varieties of papillae are the: **vallate papillae, fungiform papillae, filiform papillae and papillae simplices**

MUSCLES OF THE TONGUE

The tongue has two sets of muscles; the EXTRINSIC MUSCLES which have their origins inside the tongue and the INTRINSIC MUSCLES which are contained entirely within it

EXTRINSIC MUSCLES

1. Genioglossus
2. Hyoglossus
3. Chrondroglossus
4. Styloglossus
5. Palatoglossus

INTRINSIC MUSCLES

1. Superior Longitudinal
2. Inferior Longitudinal
3. Transverse
4. Vertical

VASCULATURE OF THE TONGUE

Arterial supply to the tongue is mainly by the Lingual Artery (a branch of the external carotid) and also tonsillar branches, the Ascending pharyngeal Artery also gives a branch.

Venous Drainage is by the Lingual Vein

NERVOUS SUPPLY

Sensory Nerve supply: Anterior two-thirds: Lingual (sensation) and Chorda tympani (taste),

Posterior one-third: Glossopharyngeal

Motor Nerve Supply: Hypoglossal Nerve

CLINICAL SIGNIFICANCE

Ankyloglossia: A congenital disorder of the tongue. The tongue is tied to the floor of the mouth by a short and thickened frenulum and this affects speech

Other Pathologies include; Glossitis

Oral Cancer: Affects mainly the tongue. They are squamous cells carcinomas

The sublingual region underneath the front of the tongue is an ideal location for the administration of certain medications in the body.

1. Write an Essay on the Air sinuses

ANSWER

The Air Sinuses or the paranasal sinuses are a group of four paired air-filled spaces that surround the nasal cavity. The four sinuses are;

I) Frontal Sinuses

II) Ethmoidal Sinuses

III) Sphenoidal Sinuses

IV) Maxillary Sinuses

**FRONTAL SINUSES**

The Frontal sinuses, situated behind the superciliary arches, are rarely symmetrical, and the septum between them frequently deviates to one side or the other of the midline. A large frontal sinus may extend out over most of the orbit. Each opens into the anterior part of the corresponding middle meatus of the nose through the frontonasal duct, which enters the anterior part of the middle meatus. Absent at birth, the frontal sinuses are generally fairly well developed between the 7th and 8th years

**ETHMOIDAL SINUSES OR AIR CELLS**

The Ethmoidal air cells consists of numerous small, thin-walled cavities occupying the ethmoidal labyrinth and completed by the frontal, maxillary, lacrimal, sphenoidal and palatine bones. They lie between the upper parts of the nasal cavities and the orbits, and are separated from these cavities by thin bony laminae. On either side they are arranged in three group; anterior, middle and posterior. The ethmoidal cells begin to develop after foetal life.

**SPHENOIDAL SINUSES**

The sphenoidal sinuses contained within the body of the sphenoid, vary in size and shape, and owing to the lateral displacement of the intervening septum, they are rarely symmetrical. When exceptionally large they may go into the roots of the pterygoid processes or great wings and may invade the basilar part of the occipital bone. Each sinus communicates with the sphenoethmoidal recess by means of an ostium in the upper part of its anterior wall. The Sphenoidal sinuses are present as minute cavities at birth.

**MAXILLARY SINUS**

 The Maxillary sinus (*antrum of Highmore)*, the largest of the accessory sinuses of the nose, is a pyramidal cavity in the body of the maxilla. Its base is formed by the lateral wall of the nasal cavity, and its apex extends into the zygomatic process. Its roof or orbital wall Is frequently ridged by the bony wall of the infraorbital canal. The size of the sinus varies in different skulls and even on the two same sides of the same skull. The maxillary sinus appears as a shallow groove on the medial surface of the bone at about the fourth month of foetal life.