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1:PHARYNX:

INTRODUCTION:

- Pharynx is a **muscular** tube that connects the oral cavity and nasal cavity to the **larynx** and **oesophagus**.
- Pharynx begins at the base of skull, and ends at the inferior border of the **cricoid cartilage (C6)**.

LENGTH OF PHARYNX:

- 12- 14 cm in length.

PARTS OF PHARYNX:

- From superior to inferior pharynx is comprised of three parts.

1: NASOPHARYNX

2: OROPHARYNX

3: LARYNGOPHARYNX

1: NASOPHARYNX:

- Nasopharynx is found between the base of skull and the soft palate.
- It continues with the nasal cavity, and performs a respiratory function by conditioning inspired air and propagating into the larynx.
- The posterosuperior nasopharynx contains the **adenoid tonsils**, which enlarge between 3-8 years of age and then regress.

2: OROPHARYNX:

- The oropharynx is the middle part of the pharynx, located between the soft palate and the superior border of the epiglottis.
- It contains the following structures.

1:Posterior 1/3 of the tongue.

2:Lingual tonsils..lymphoid tissue at the base of tongue.

3:Palatine tonsils.. lymphoid tissue located at the tonsillar fossa.

4: Superior constrictor muscle.

WALDEYER'S RING:

- is the ring of the lymphoid tissue in the nasopharynx and oropharynx formed by the paired palatine tonsils, adenoid tonsils and lingual tonsils.

The oropharynx is involved in the **voluntary** and **involuntary** phases of **swallowing**.

3: LARYNGOPHARYNX:

- The most distal part of the pharynx is called laryngopharynx which is located between the superior border of the **epiglottis** and inferior border of the **cricoid cartilage (C6)**.
- It continues inferiorly with the oesophagus.
- The laryngopharynx contains the middle and inferior **pharyngeal constrictors**.

MUSCLES OF THE PHARYNX:

- There are two main groups of pharyngeal muscles.

1: CIRCULAR:

- There are three circular pharyngeal constrictors muscles.

1: **Superior**

2: **Middle**

3: **Inferior**

1: SUPERIOR PHARYNGEAL CONSTRICTORS:

- The uppermost pharyngeal constrictors.
- It is located in the oropharynx.

2: MIDDLE PHARYNGEAL CONSTRICTORS:

- Located in the laryngopharynx.

3: INFERIOR PHARYNGEAL CONSTRICTORS:

- It is located in the laryngopharynx.
- It has two components.

1: Superior component:

(Thyropharyngeus) has oblique fibres and attach to the thyroid cartilage.

2: Inferior component:

(Cricopharyngeus) has horizontal fibres and attach to the cricoid cartilage.

2: LONGITUDINAL MUSCLES:

- The longitudinal muscles are the;

1: STYLOPHARYNGEUS:

- Arises from the styloid process of the temporal bone, insert into the pharynx.

2: PALATOPHARYNGEUS:

- Arises from the hard palate of the oral cavity, inserts into the pharynx.
- Innervated by the vagus nerve (CN IX).

3: SALPINGOPHARYNGEUS:

- Arises from the **Eustachian tube**, inserts into the pharynx.

ARTERIAL SUPPLY TO PHARYNX:

- Arterial supply to the pharynx is via branches of the **external carotid artery**.
 1. **Ascending pharyngeal artery.**
 2. **Branches of facial artery.**
 3. **Branches of the lingual and maxillary artery.**

NERVE SUPPLY TO THE PHARYNX:

- Pharyngeal branches from the **glossopharyngeal nerve (CN IX)**.
- Pharyngeal branch of the **vagus nerve (CN X)**.
- Branches from the external **laryngeal nerve**.
- Sympathetic fibres from the superior **cervical ganglion**.

2: ESOPHAGUS:

INTRODUCTION:

- Esophagus is a **tubular** structure.
- It continues with the laryngeal part of the pharynx opposite the sixth cervical vertebrae.
- It passes through the esophageal **hiatus** of the **diaphragm** at the level of **10th** thoracic vertebra to join the stomach.

LENGTH OF ESOPHAGUS:

- It is about 25cm long.

IN THE NECK:

- In the neck the esophagus lies in front of the **vertebral column**.

ANTERIORLY:

- It is in contact with the trachea and the recurrent laryngeal nerves.

LATERALLY:

- It is related to the lobes of the thyroid gland.

RELATIONS OF THE ESOPHAGUS:

ANTERIORLY:

- Trachea.
- Left principal bronchus.
- Left recurrent laryngeal nerve.
- Pericardium.

POSTERIORLY:

- Bodies of the thoracic vertebrae.

- Thoracic duct.
- Azygos vein.
- Descending thoracic aorta.

RIGHT SIDE:

- Mediastinal pleura.
- Terminal part of the azygos vein.

LEFT SIDE:

- Left subclavian artery.
- Aortic arch.
- Thoracic duct.
- Mediastinal pleura.

ANATOMICAL STRUCTURE OF THE ESOPHAGUS:

1:ADVENTIA:

- Outer layer of connective tissue.

2:MUSCLE LAYER:

- External layer of longitudinal muscle and inner layer of circular muscle.

3:SUBMUCOSA:

4:MUCOSA:

- Non keratinized stratified squamous epithelium(contiguous with columnar epithelium of the stomach).

BLOOD SUPPLY:

- Inferior thyroid artery
- Left gastric artery
- Esophageal branches from the descending thoracic aorta .

NERVE SUPPLY:

- Esophageal plexus
- Vagal trunks
- Cervical trunks
- Thoracic sympathetic trunks.

The end.....