MEMBRANOUS & ULCERATIVE CONDITIONS OF THE PHARYNX

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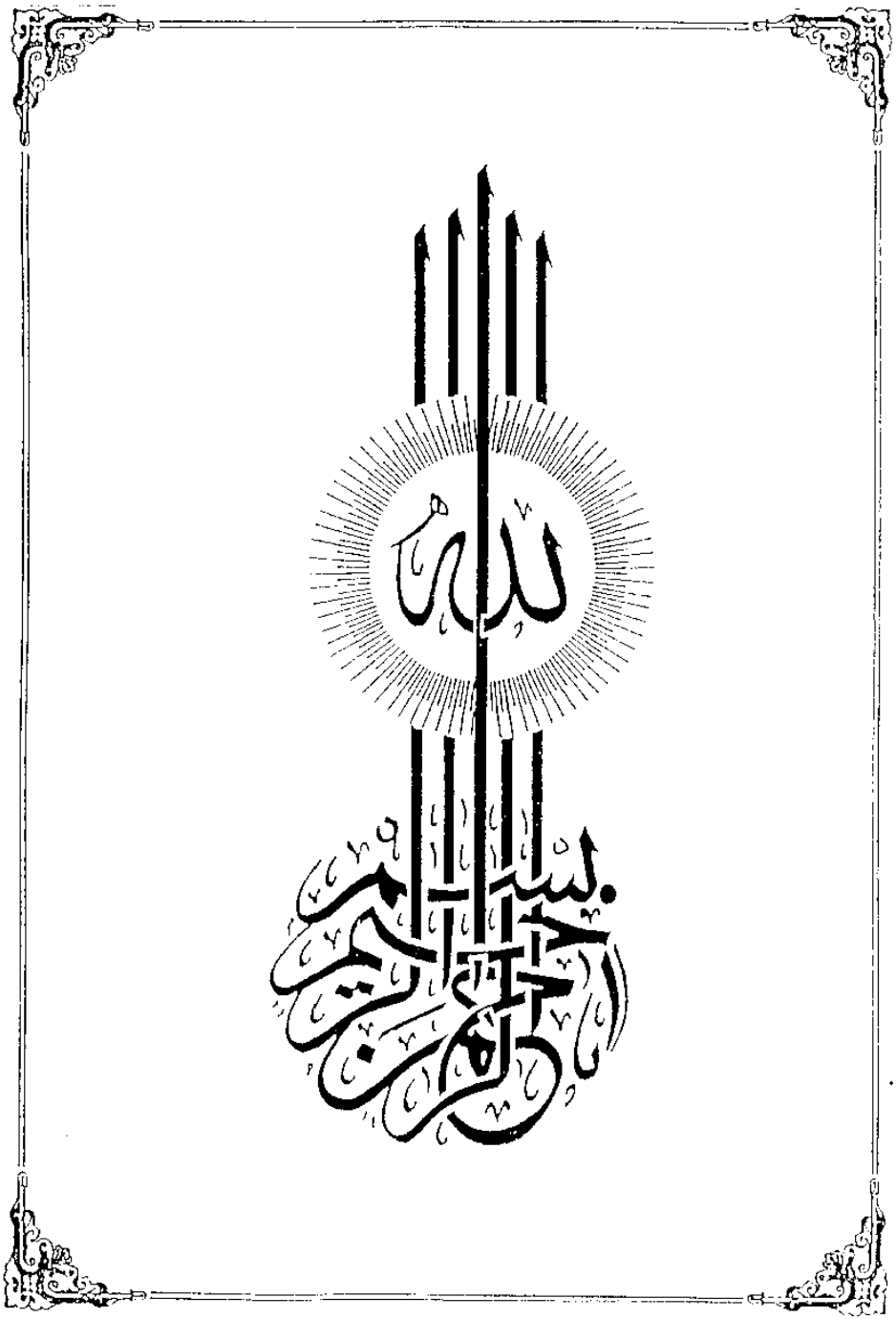


C O N T E N T S

INTRODUCTION

There are wide range of diseases affecting the pharynx leading to formation of ulcers or membranes. These diseases might vary from very mild and transitory state, to very severe and fatal conditions.

In many cases, such ulcers may be small and trivial and may pass unnoticed or may be discovered during routine examination.

In other cases pharyngeal ulcers may be so extensive and painful causing trouble to the patient. So our aim of the study, is clearing up of all the ulcerative and membranous lesions of the pharynx.

Anatomy of the Pharynx :

The pharynx is a wide fibromuscular tube lined with mucous membrane. It is about 5 inches long and extends from the base of the skull to the level of the body of the 6 th cervical vertebra.

The wall of the pharynx is formed from without inwards by (Cunningham , 1975):

1- Buccopharyngeal fascia.
2- Pharyngeal muscles.
3- Pharyngo-basilar fascia.
4- Submucous coat.
5- Mucous membrane.

It is devided into 3 parts:-

1) Naso-pharynx.
2) Oro-pharynx.
3) Laryngo or Hypo-pharynx.

1- Naso-pharynx:

It lies behind the nasal cavities and above the soft palate. The anterior boundary is formed by the posterior nasal choanae, the roof by the posterior inferior part of the sphenoidal sinus, basisphenoid and basiocciput bones which slope back to the vertical posterior wall. This is formed by the strong pharyngobasilar fascia overlying the anterior surface of the arch of the atlas and the upper part of the

body of the second cervical vertebrae. A collection of lymphoid tissue, the naso-pharyngeal tonsil or adenoid, is founded embeded in the mucous membrane at the junction of the roof with the upper and posterior part of the naso-pharynx. (A.G.D. MARAN & P.M. STELL , 1979).

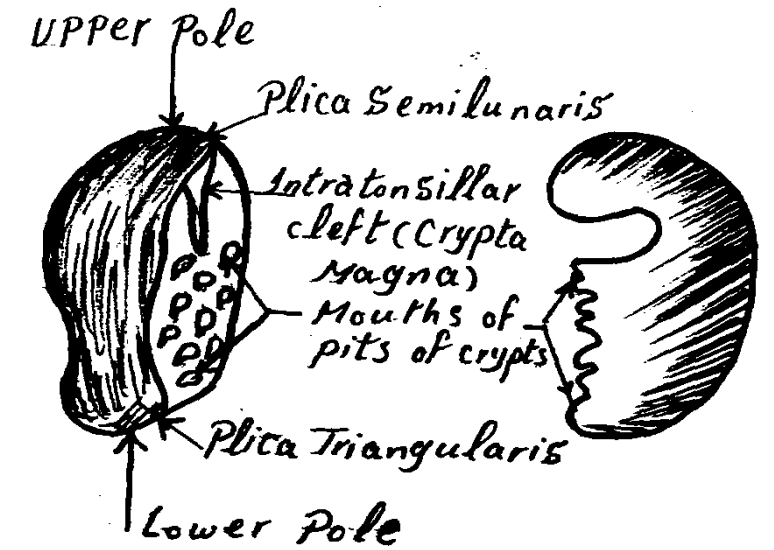
The pharyngeal bursa, appearing as a blind recess, lies close to the base of the naso-pharyngeal tonsil. On each lateral wall there is the narrow pharyngeal orifice of the pharyngotympanic tube, which lies at the level of the inferior concha of the nose and behind it by 1-1.5 cm. and is partially surrounded posterosuperiorly by the tubal elevation (torus tubarius) around which lies the tubal tonsil. (Scott-Brown , 1971). Immediately behind the torus there is a narrow vertical depression, the pharyngeal recess or fossa of Rosenmuller, an epithelial lined cleft which may exceed 1 cm in depth. This recess pass laterally above the upper edge of the superior constrictor muscle of the pharynx and corresponds to the position of the sinus of Morgagni.

Inferiorly the nasopharyngeal space opens into the orpharynx so that the floor is formed by the dorsal aspect of the soft palate which is the only mobile boundary (MARAN & STELL,1979).

2. ORO-PHARYNX:

It is continuous with the nasopharynx and it communicates in front with the buccal cavity. It is bounded above by the soft palate and below by the upper border of the epiglottis. The lateral boundary is marked by the palatoglossal fold, which passes from the under-surface of the palate to the side of the mucous membrane of the tongue a little posterior to its middle. The palatoglassus muscle lies in the fold. A second fold , the palatopharyngeal, passes from the posterior edge of the soft palate downwards and backwards to the side wall of the pharynx. The palatopharyngeus muscle lies in this fold.(Scott-Brown 1971).

Second and third cervical vertebrae lie behind it.



From Grant's Atlas of Anatomy

The palatine tonsils: are situated in its lateral wall between the anterior and posterior pillars of the fouces. The free surface is covered by stratified squamous epithelium. 12-18 crypts open on this surface and each is lined with squamous epithelium. The intratonsillar cleft (Crypta magna) is the largest. Mucous glands open into the crypts. (Synopsis , 1978).

The fibrous capsule forming the lateral or attached surface of the tonsil. Loose areolar tissue lying between the capsule and the thin pharyngobasilar fascia, which forms the immediate bed of the tonsil.

The capsule extending round the anterior border and slightly over the medial surface as a thin, free fold, covered with mucous membrane on both surfaces. The upper part of this fold is called the plica semilunaris; the lower the plica triangularis.

From the inner surface of the capsule fibrous septa pass into the tonsil. The fibres of the palatoglossus and palatopharyngeus muscles are attached to the capsule.(Grant's Atlas of Anatomy , 1978).

Blood supply of the tonsil:-

Arteries:

The main artery is derived from the tonsillar branch of the facial artery.

Additional small branches are derived from:

- Ascending pharyngeal artery.
- Dorsalis linguae arteries
- Greater palatine branch of the maxillary artery.
- Ascending palatine branch of the facial artery.

(Scott-Brown , 1971).

Veins:

The veins from the tonsil emerge from its lateral surface as two branches, the paratonsillar veins, which pierce the superior constrictor muscle to end in the common facial vein and pharyngeal plexus.

Lymphatics:-

The main vessels pass to the lateral surface of the tonsil and then pierce the pharyngeal wall to end in the upper deep cervical glands.

3- Laryngo- or Hypo-pharynx:-

It lies behind the larynx. It is bounded above by the upper border of the epiglottis, below by the lower border of the cricoid cartilage. 3 rd , 4 th , 5 th & 6 th cervical vertebrae lie behind it.

Pyriform f ssae are small recesses lying on each side of the laryngeal inlet. Each is bounded by:-

a) Ary-epiglottic fold medially.

b) Thyroid cartilage and thyrohyoid membrane laterally (Synopsis ,1978).

It is of practical importance because foreign bodies may lodge in it, it may contain salivary secretion in conditions of dysphagia ,occasionally it is the seat of malignant neoplasms(Cunningham , 1975).

Structure of the Pharynx:

It is a fibromuscular tube. It has 5 layers:-

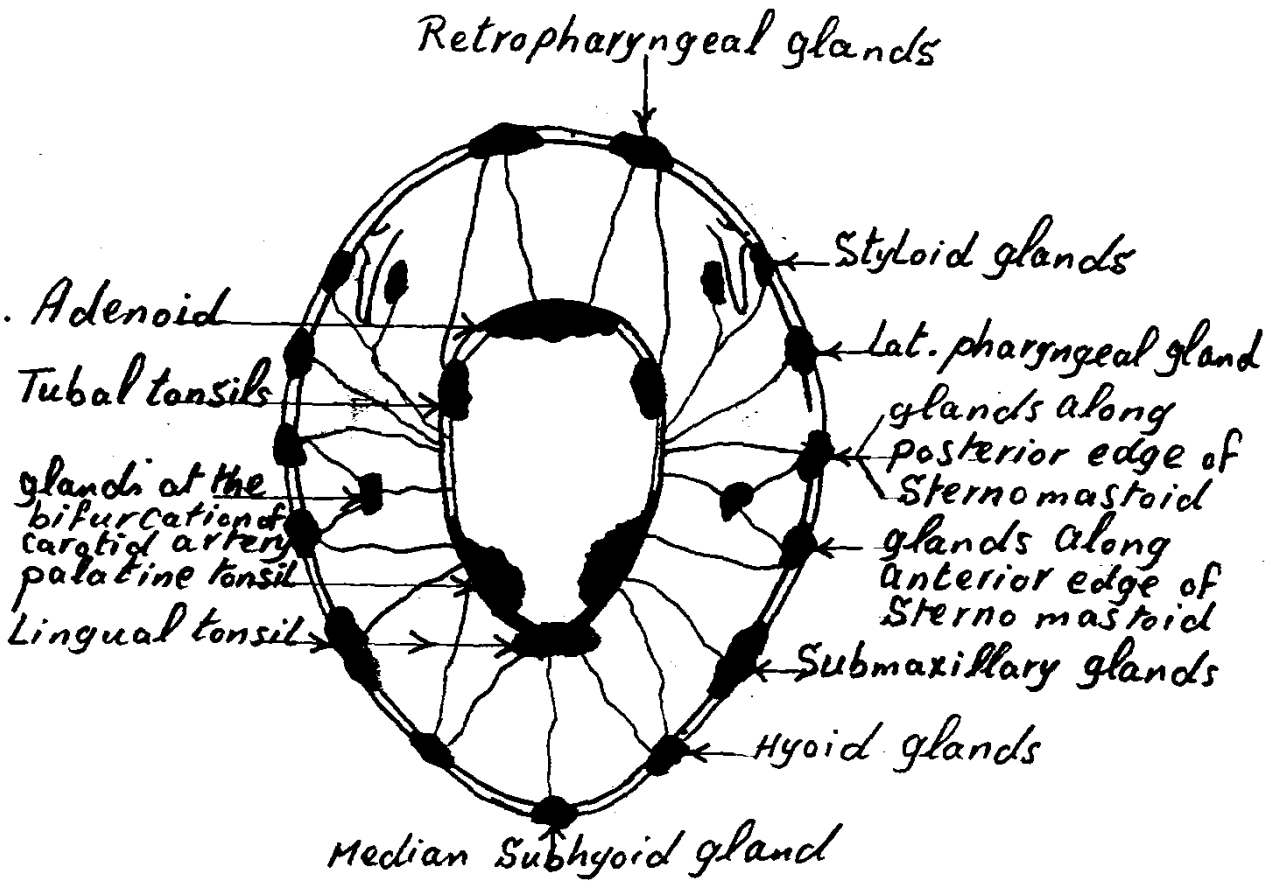
1) Mucous Membrane: This is continuous with the mucous membranes of the Eustachian tubes, nasal fossae, mouth, larynx and oesophagus. Ciliated columnar epithelium found in the upper half of the naso-pharynx.

Stratified squamous epithelium lines the oro- and laryngo-pharynx.

Transitional epithelium occurs between the oro-and naso-pharynx.

2) Subepithelial lymphoid tissue of pharynx:

There are scattered collections of lymphoid tissue widely distributed beneath the pharyngeal mucosa. Collectively they form Waldeyer's ring , they have efferent vessels but no afferent vessels. They drain to the retropharyngeal and upper deep cervical glands.



Waldeyer's Ring (ST. CLAIR THOMSON, 1948).

The subepithelial lymphoid tissue of the pharynx consist of:-

1 - Naso-pharyngeal tonsil (Adenoid):

It is found embeded in the mucous membrane at the junction of the roof with the upper and posterior part of the naso-pharynx. It is a single midline structure. The free surface exhibits about 5 vertical fissures. The deep surface has no capsule.(Synopsis , 1978).

2 - Tubal tonsils:

Lymphatic follicles found on the posterior lip of the lower orfice of the Eustachian tube (SI-CLAIR , 1948).

3 - Palatine Tonsils:

Discussed before in anatomy of oro-pharynx.

4 - Lingual tonsils:

Collections of lymphatic nodules in the subepithelial tissue of the root of the tongue, around the foramen caecum.

5 - Lateral pharyngeal bands:-

Descend from the tubal tonsil, behind the posterior faucial pillars. It is a strand of lymphatic tissue which when prominent may give rise to lateral pharyngitis (SICLAIR ,1948).

6 - Discrete Nodules:

Found in the subepithelial layer of the posterior pharyngeal wall.

These groups of tonsils are united to form the " ring of Waldeyer " by tracts of mucosa containing well-marked infiltrations of lymphoid tissue(SI.CLAIR , 1948).

Mucous Glands:

Also found in the subepithelial layer of the pharynx. They are numerous in its upper part, but gradually diminish towards the laryngopharynx.(Synopsis,1978).

3) Pharyngeal Aponeurosis:

An incomplete connective tissue coat in the lateral and posterior walls of the pharynx, between the muscular layers. Its thickness is greatest above but diminishes as it descends.

Pharyngo-basilar Fascia:

The thickened upper part where the muscle is defecient i.e. above the upper border of the superior constrictor muscle. Superiorly it blends with the periosteum on the under-surface of the basi-occiput.

Posteriorly it is strengthed by a strong band (median raphe). This is attached above to the pharyngeal tubercle of the basi-occiput and gives insertion to the constrictor muscles. Anteriorly it is attached to the posterior border of the medial pterygoid plate and the pterygo-mandibular ligament .

The tensor and levator palati muscles and the cartilaginous Eustachian tube, pass through it.(Synopsis,1978).

4- Muscular Coat: has two layers:

a) External layer: consists of the three constrictor muscles , superior, middle & inferior constrictors.

b) Internal layer: This layer also has three muscles stylopharyngeus, salpingopharyngeus and palatopharyngeus muscles.

5- Buccopharyngeal Fascia:

It covers the outer surface of the constrictors and extends forwards over the pterygomandibular ligament on to the buccinator muscles. Posteriorly it is loosely attached to the prevertebral fascia. Laterally it is attached to the styloid process and its muscles and to the carotid sheath. Superiorly, it is firmly united with the pharyngo-basilar fascia and here form a single layer (Synopsis , 1978).

Blood supply of the pharynx

Arteries: are all branches of the external carotid artery:

1) Ascending pharyngeal artery.

2) Ascending palatine.

3) Tonsillar b anches of the facial artery.

4) Branches of the maxillary artery, chiefly the descending