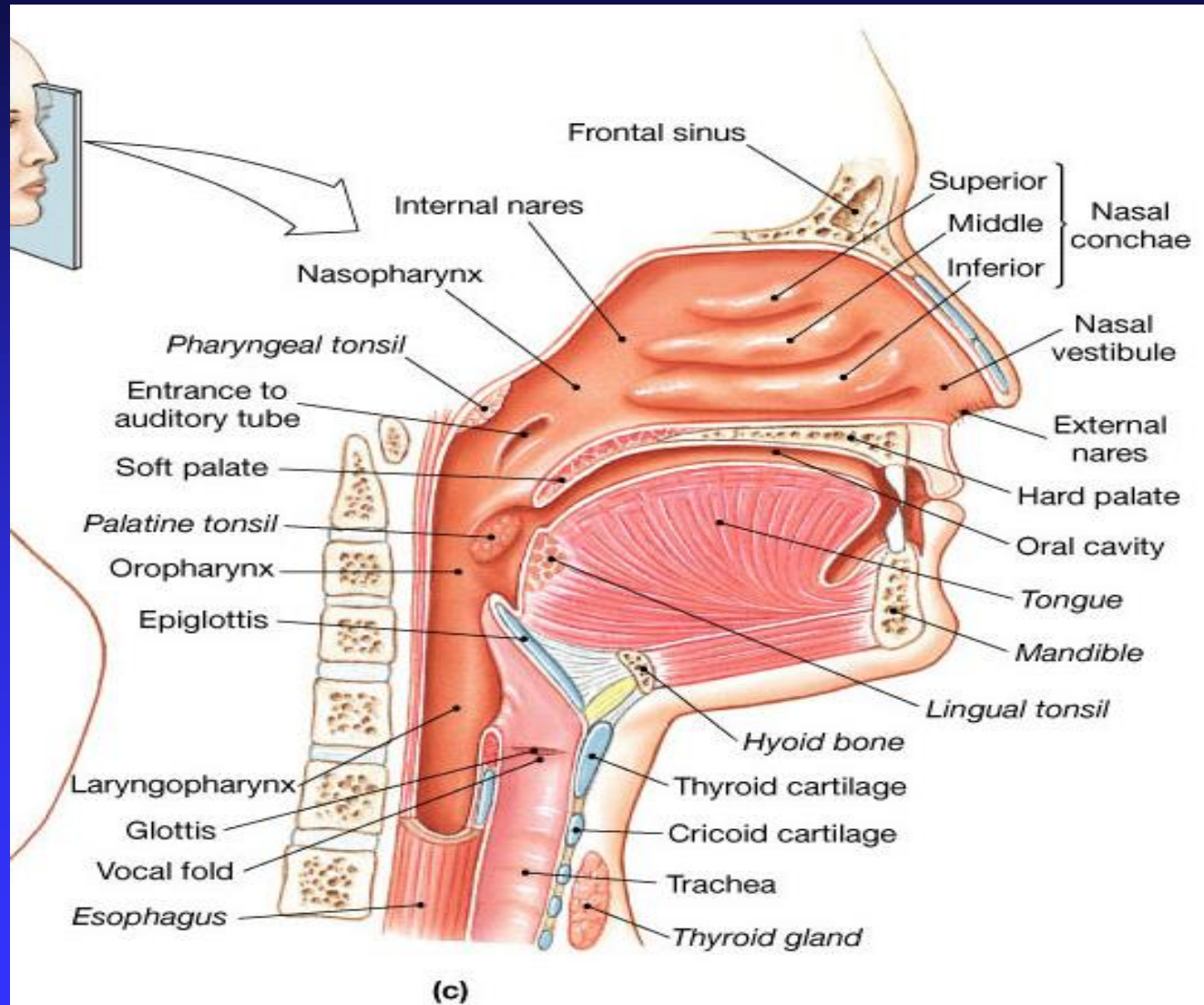


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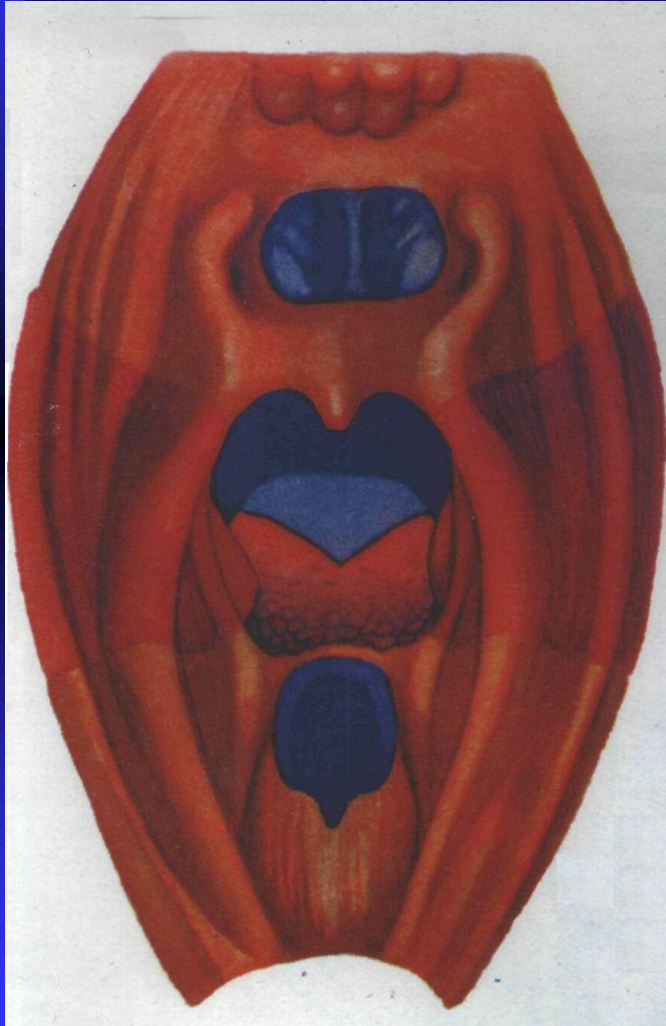
Acute and Chronic Diseases of Pharynx

prof. Gasyuk Y.A.

Sagittal Section of Pharynx



Floors of Pharynx



Pharynx is a place of crossing over the respiratory and digestive tract.

Three floors of pharynx:

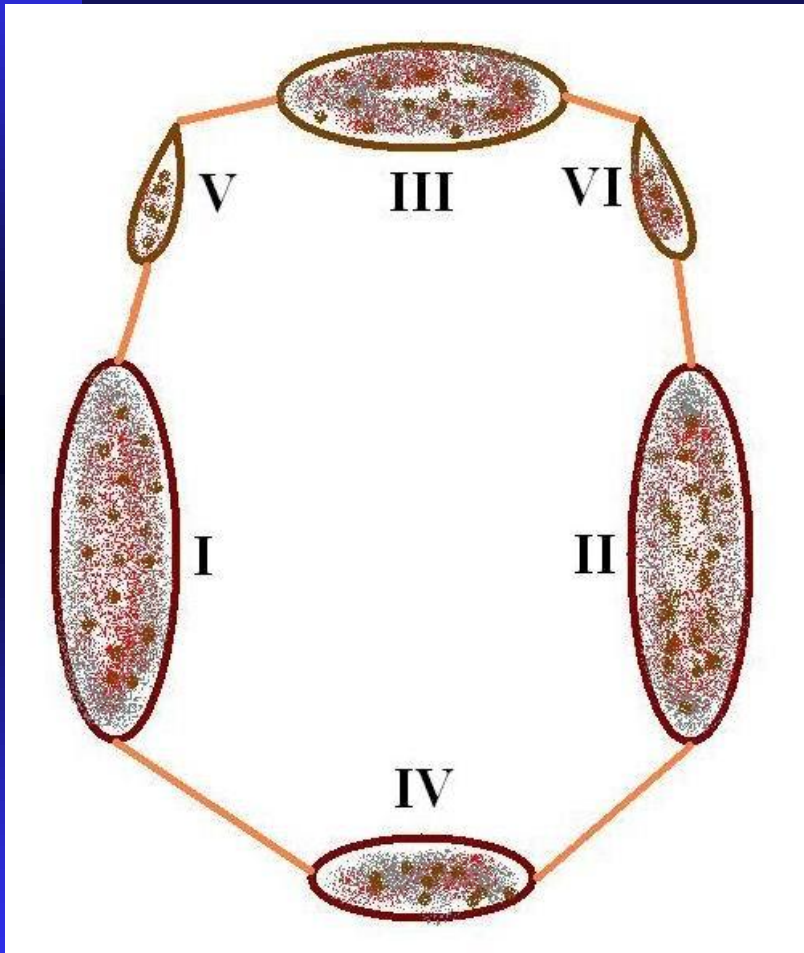
Upper – nasopharynx

Medium – oropharynx

Lower – hypopharynx

Pharynx is formed by muscles fibrous membranes and inside covered with mucosa.

Lymphoid Pharyngeal Waldeyer's Ring



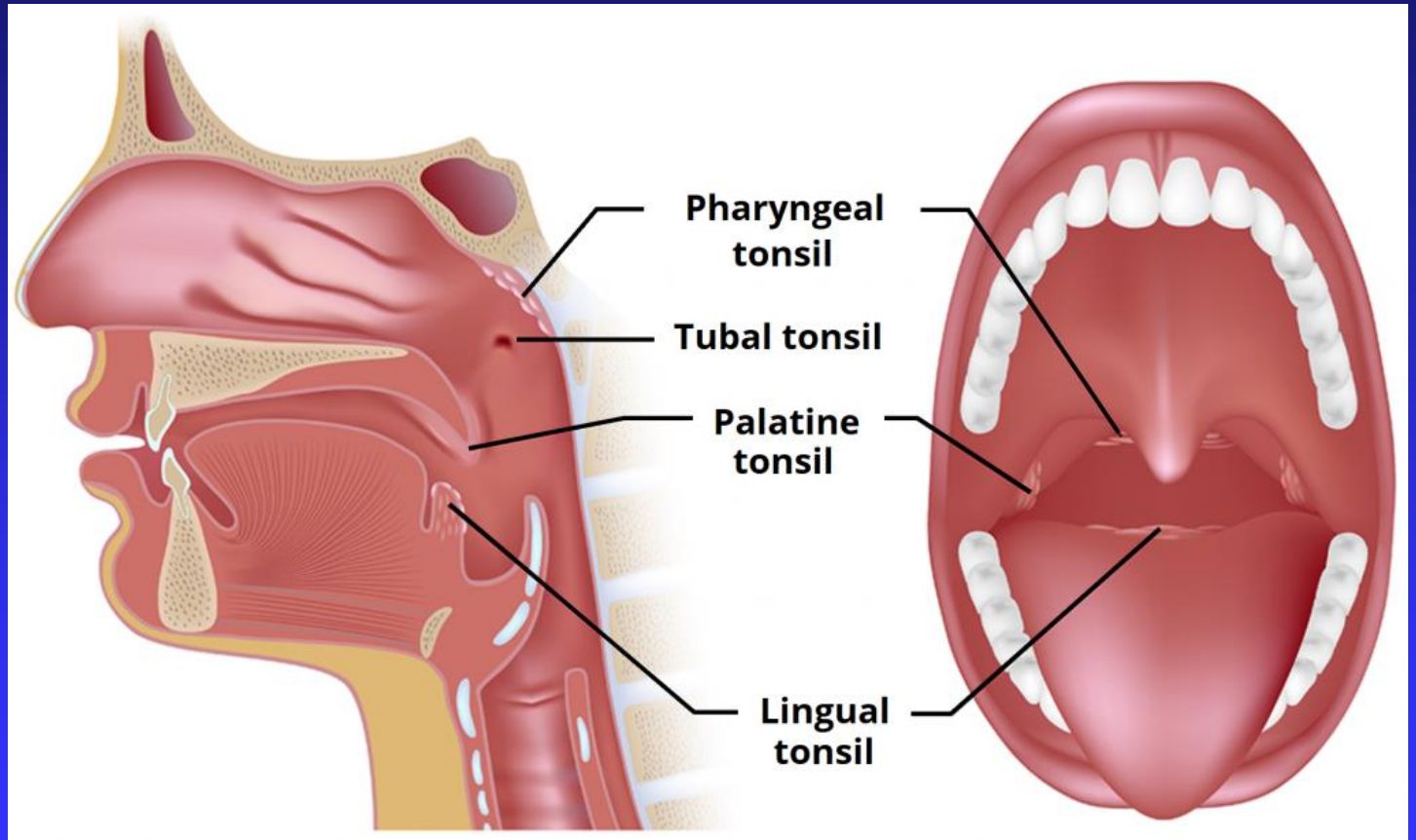
I and II – palatine tonsils

III – nasopharyngeal tonsil
(adenoid)

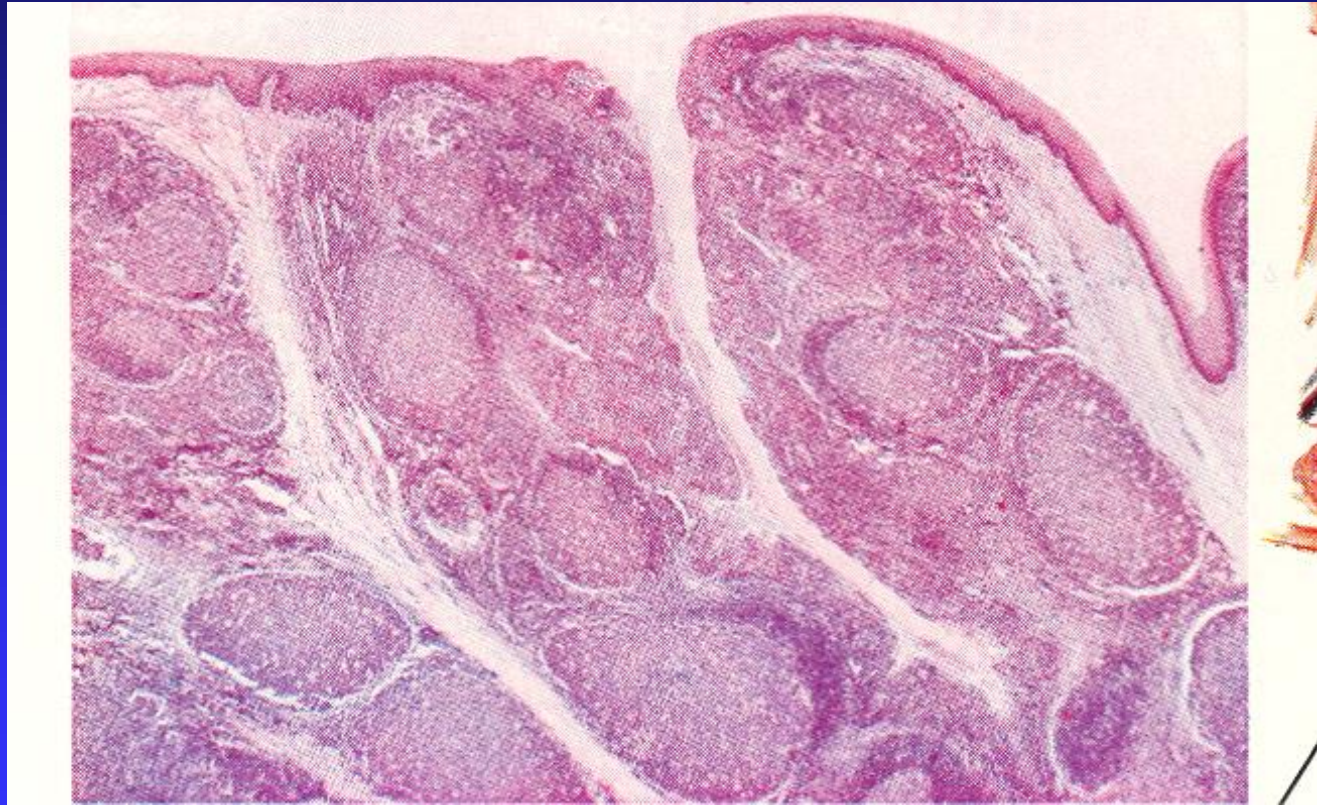
IV – lingual tonsil

V and VI – tubal tonsils

Lymphoid Pharyngeal Waldeyer's Ring



Histology of Tonsil



Functions of Tonsils

- The tonsils are classified as mucosa-associated lymphoid tissue (MALT), contain T-cells, B-cells and macrophages
- They have an important role in fighting infection – the first line of defence against pathogens entering through the nasopharynx or oropharynx

Oropharynx



Functions of Pharynx

- Swallowing
- Respiratory
- Resonatory (speech)

Classification of Tonsillitis

- I. Acute
 - 1. Primary:
catarrhal, lacunar, follicular, Plaut-Vincent's angina
 - 2. Secondary:
 - a) at acute infectious diseases - scarlet fever, tularemia, abdominal typhus;
 - b) at diseases of the blood system - infectious mononucleosis, agranulocytosis, alimentary-toxic aleukia, leukemia
- II. Chronic
 - 1. Non-specific:
 - a) compensatory form;
 - b) decompensatory form
 - 2. Specific: at infectious granulomas - tuberculosis, syphilis, scleroma

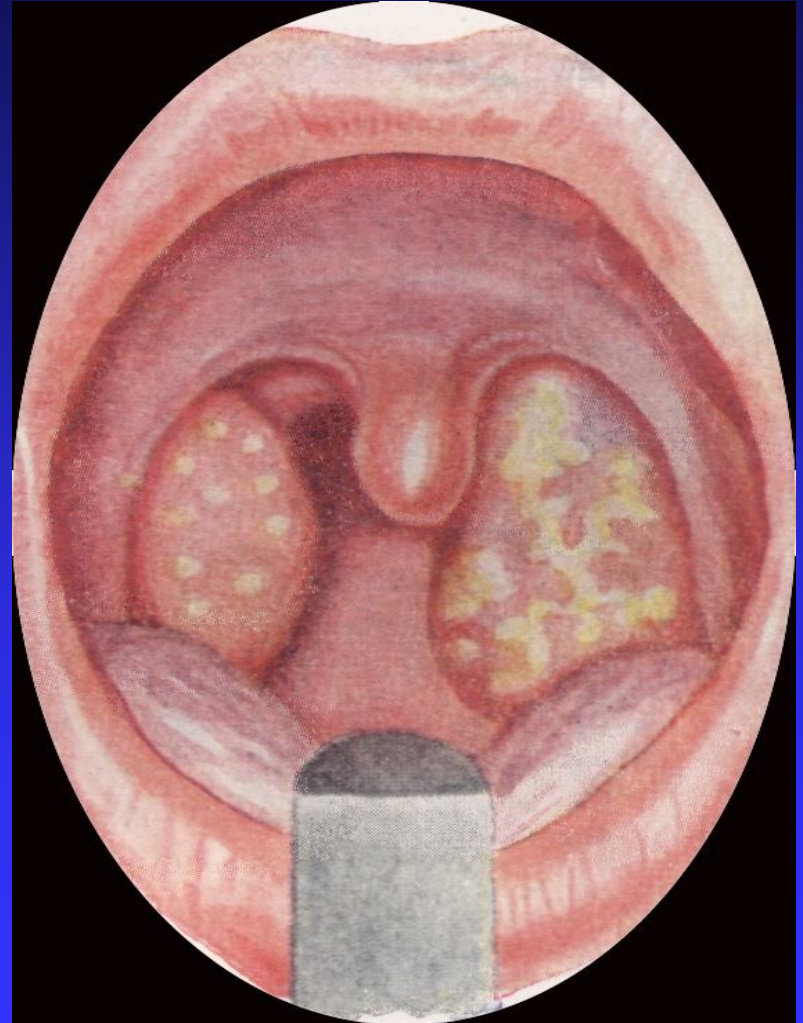
Clinical Evaluation of Acute Tonsillitis

- Throat pain, painful swallowing, malais, fever, tender cervical lymphadenopathy
- Supporting symptoms, 2 or more
 - Fever > 37.5
 - Tonsillar Exudate
 - Tender cervical LAD $> 2\text{cm}$
 - Positive culture from throat



Acute Tonsillitis

- catarrhal
- lacunar
- follicular



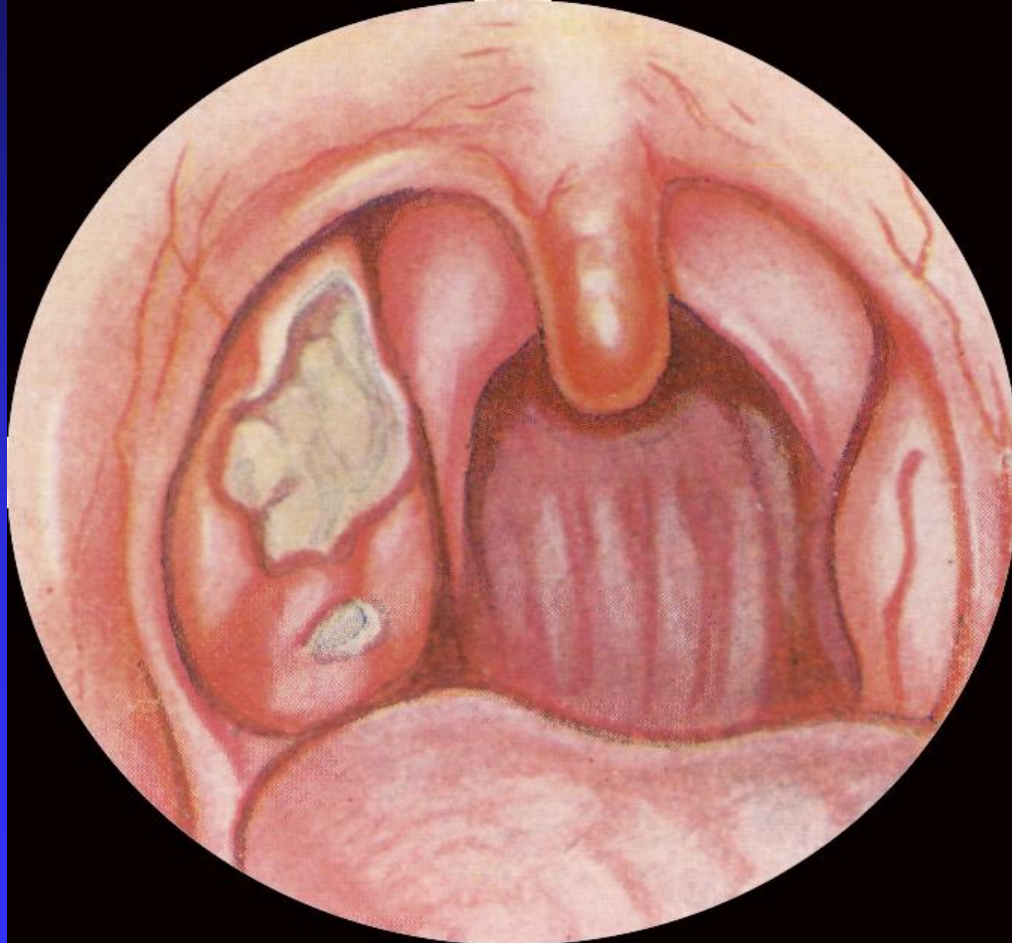




Plaut-Vincent's Angina

- fusospirochaetal complex
- unilateral ulcero-necrotic tonsillitis
- appears almost exclusively in young persons
- clinically is different other acute tonsillar pathology

Plaut-Vincent's Angina



Differential Diagnosis

- diphtheria
- infectious mononucleosis
- scarlet fever
- tuberculosis
- syphilis
- scleroma
- benign or malignant tumor

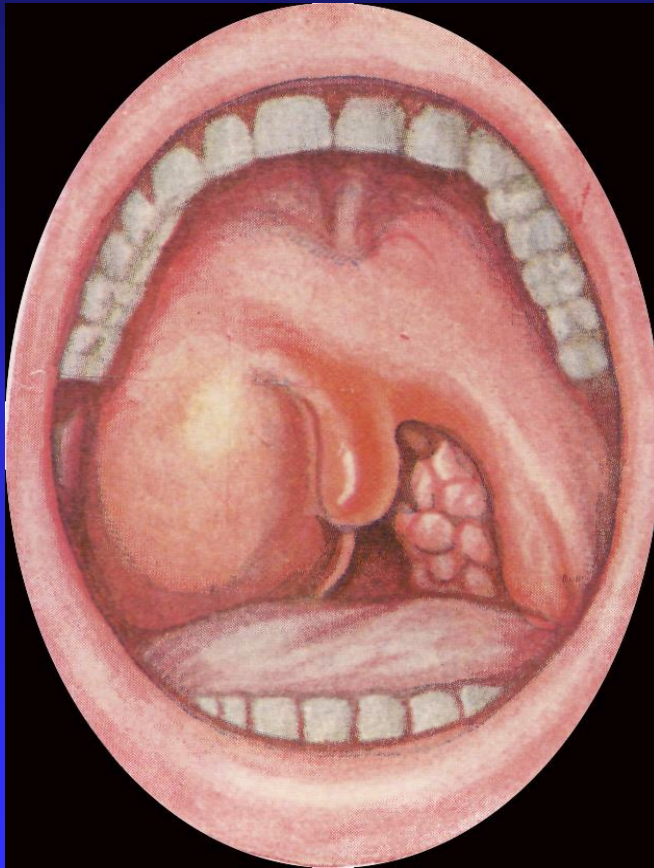
Complications of Acute Tonsillitis

- Cervical Adenitis
- Neck Abscess
- Peritonsillar abscess
- Intratonsillar abscess
- Lemierre's syndrome

Peritonsillar Abscess (Quinsy)

- Common complication of tonsillitis in adolescents and young adults
- Symptoms: trismus, Sore throat, dysphagia, odynophagia, fever, otalgia, twang
- Classic findings:
 - unilateral edema of peritonsillar region with bulging soft palate
 - deviation of midline of palate and uvula

Peritonsillar Abscess



Management of Peritonsillar Abscess

- opening of an abscess
- antibacterial therapy 7 days + local antiseptics and non-steroidal anti-inflammatory drugs
- sometimes tonsillectomy at first episode
- 2 or more cases of peritonsillar abscess - candidate for tonsillectomy

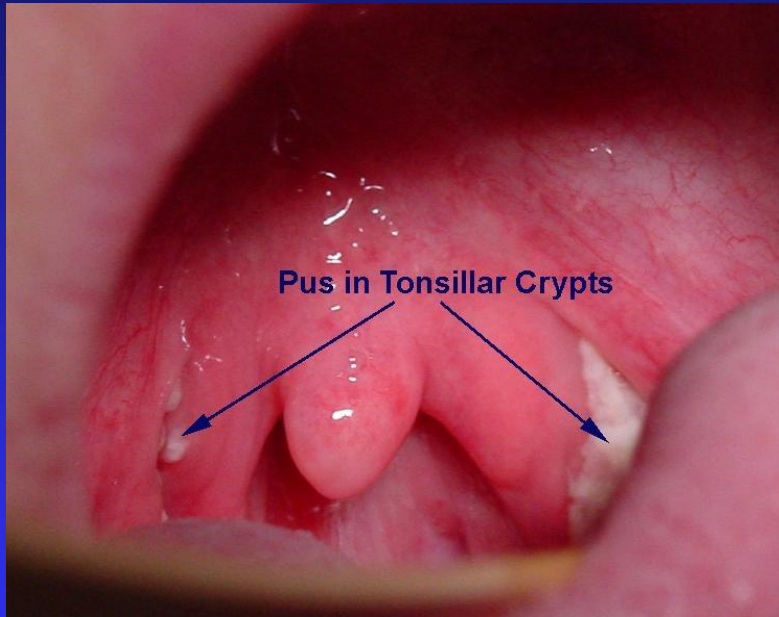
Chronic Tonsillitis

- hyperaemia and roller-shaped thickening of palatine arch edges
- adhesions between the tonsils and the palatine arches
- loosened and sclerotic tonsils
- presence of purulent masses and liquid pus in the tonsil lacunas
- regional lymphadenitis – enlargement of retromaxillary lymphatic nodes

Chronic Tonsillitis

- compensatory form
- decompensatory form

Chronic Tonsillitis



Treatment of Chronic Tonsillitis

- Conservative (lavage palatine tonsils) - at compensatory form
- Surgical (tonsillectomy) - in cases of unsuccessful conservative treatment or decompensatory form

Surgical Indications

- Absolute
 - Obstructive airway with cor pulmonale
 - Severe dysphagia
 - Failure to thrive
- Relative
 - Recurrent acute tonsillitis
 - Chronic tonsillitis
 - Obstructive Sleep Apnea
 - Peritonsillar Abscess
 - Halitosis
 - Suspected Neoplasia/Tonsillar hyperplasia

Recurrent Acute Tonsillitis

- Seven episodes in a single year
- Five or more episodes in 2 years
- Three or more episodes in 3 years

Tonsillectomy



Innovative Surgical Techniques

- cold dissection
- electrosurgery
- intracapsular partial tonsillectomy
- harmonic scalpel
- radiofrequency tonsillar ablation and coblation.

Electrosurgery

- most popular technique for tonsillectomy
- equivalent or superior to the other methods of tonsillectomy.

Intracapsular Partial Tonsillectomy

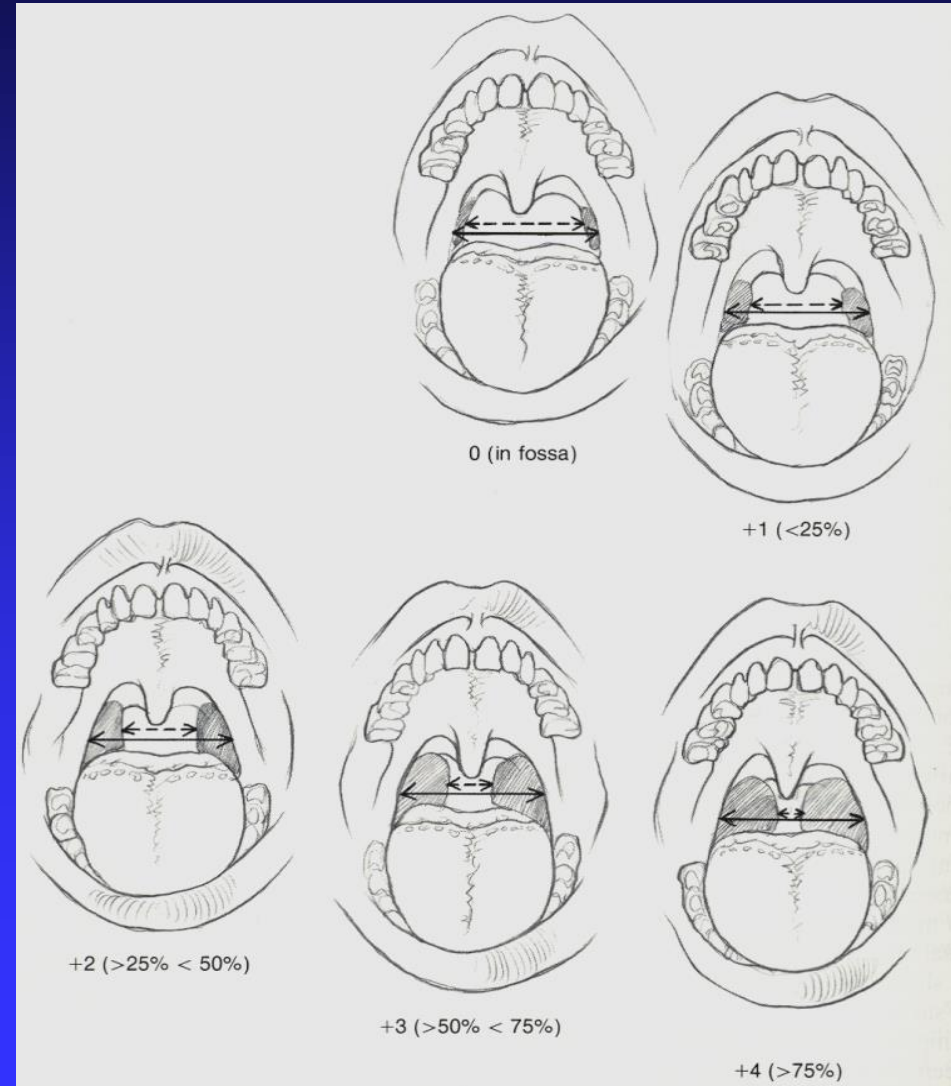
- 45 degree microdebrider (1500rpm).
- advantages
 - as effective as standard tonsillectomy in relieving obstruction.
 - less pain, quicker return to normal diet
- disadvantages:
 - tonsillar regrowth
 - greater intraoperative blood loss

Radiofrequency Tonsillar Coblation

- coblation is superior to ablation
- early elimination of pain and reduced pain medicine usage
- early resumption of normal diet
- currently inadequate for adenoidectomy

Palatine Tonsils Size

Grade	%
■ 1	<25
■ 2	25-50
■ 3	51-75
■ 4	>75



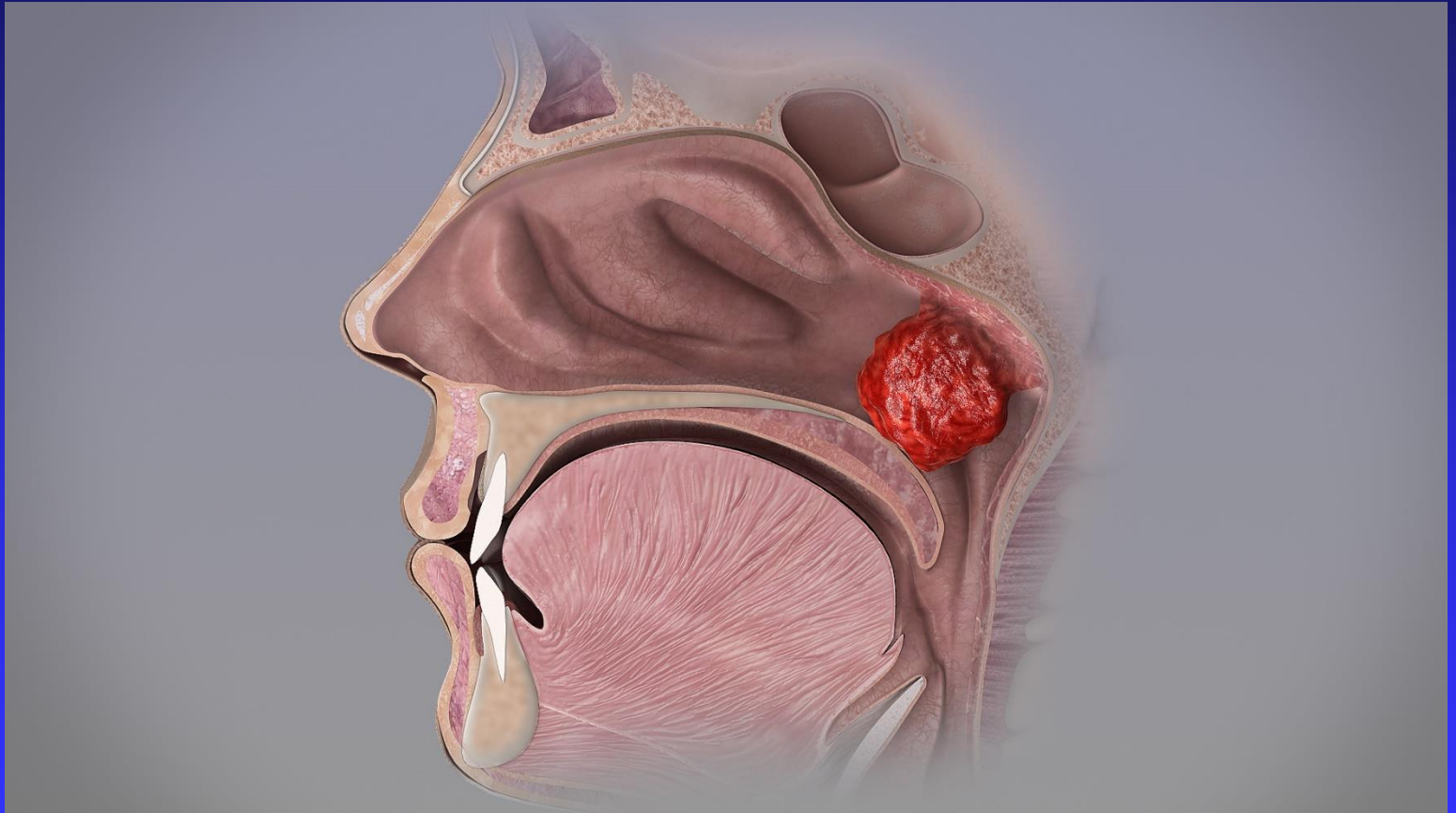
Hypertrophy of Palatine Tonsils



Adenoids (Adenoid Vegetations)

- enlargement of lymphoid tissue of pharyngeal tonsil or adenoid hypertrophy
- 3 degrees of hypertrophy
- usually form after about age 4 till teenage years and then shrink

Adenoids



Clinical Symptoms of Adenoids

- disorder of nasal breathing
- open mouth breathing
- hyponasality
- snoring
- purulent rhinorrhea
- post nasal drip
- headache

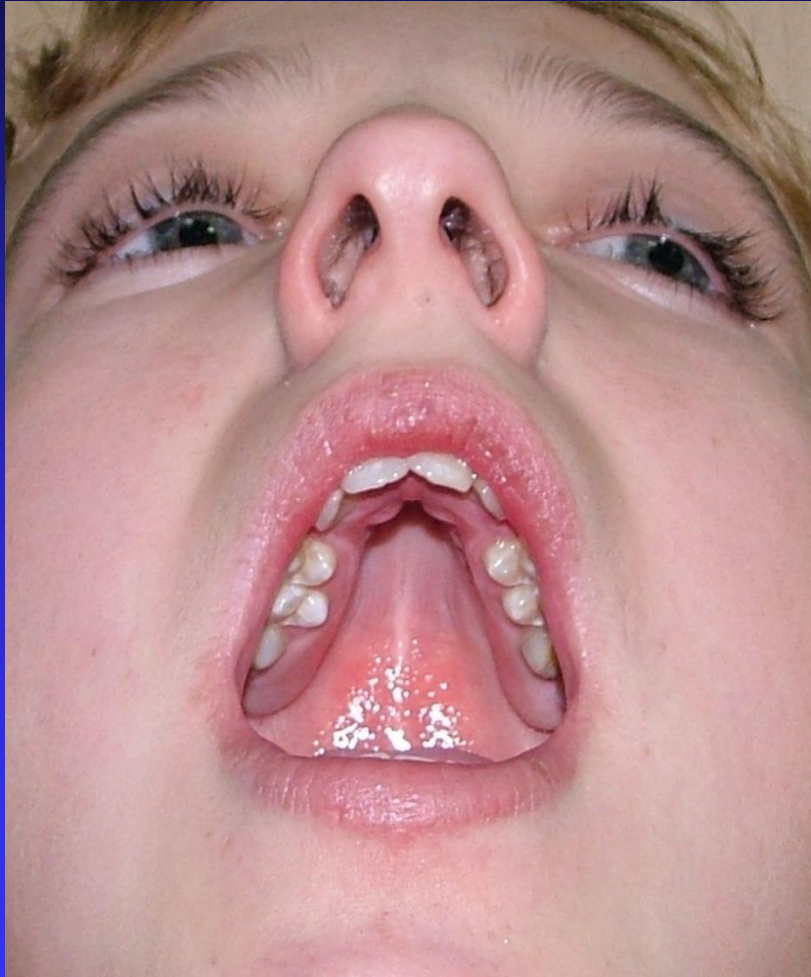
Consequences of adenoids in children

- frequent inflammatory diseases of the respiratory tract
- recurrent otitis media
- an atypical appearance of the face – «adenoid face» (open mouth, an elongated face, prominent incisors, hypoplastic maxilla, short upper lip, elevated nostrils, high arched palate)
- retardation in psychosomatic development

Adenoid Face



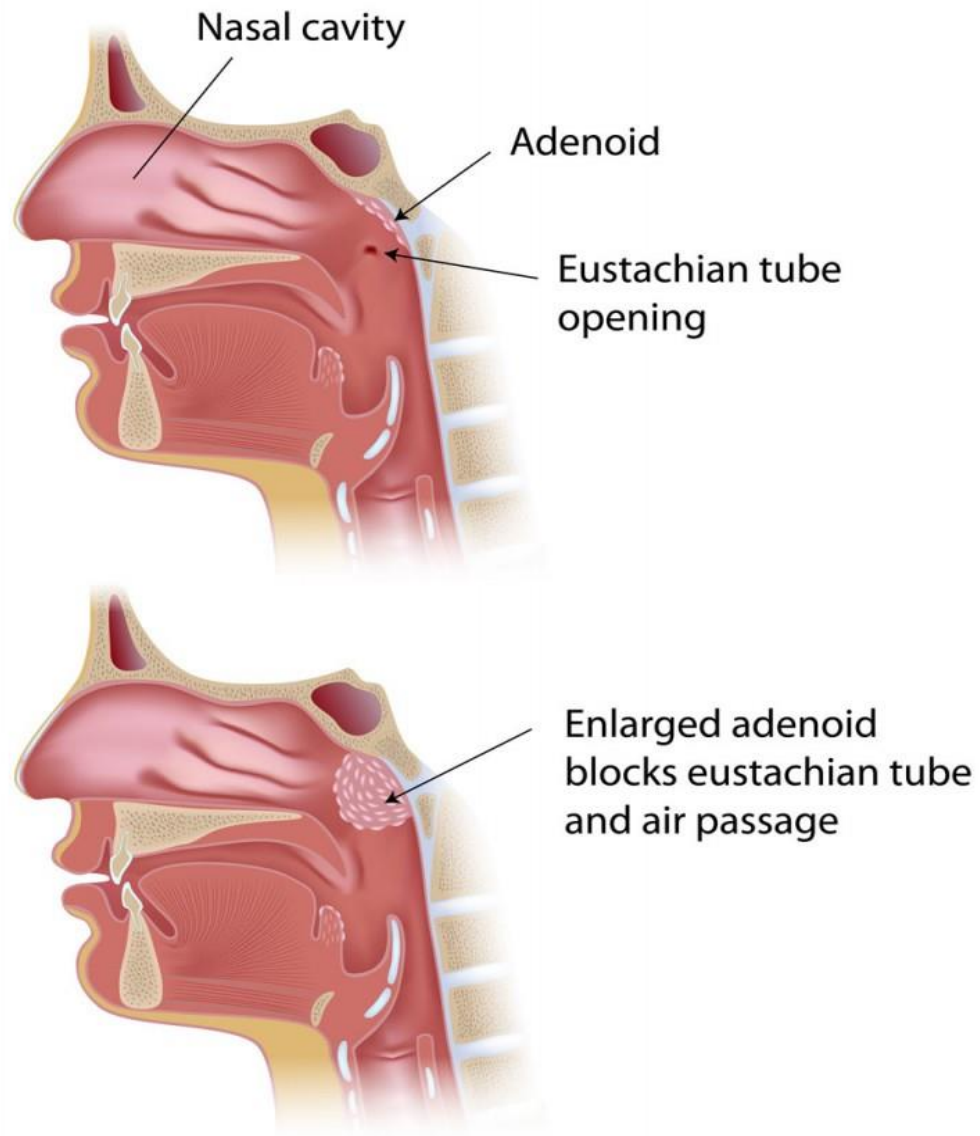
High Arched «Gothic» Palate



Anomaly of Bite



Adenoid Hypertrophy



Adenoids



Surgical Indications for Adenoidectomy

- Absolute
 - Airway obstruction w/ cor pulmonale
 - Facial deformity
- Relative
 - Chronic Nasal Obstruction
 - Recurrent/Chronic Adenoiditis
 - Recurrent/Chronic Sinusitis
 - Recurrent acute otitis media

Adenoidectomy

- involves the adenoid being curetted, cauterized, lasered, or otherwise ablated
- adenoids is often removed along with the palatine tonsils
- adenoids recidives occurs in as many as 19% of the cases after removal

Obstructive Sleep Apnea

- repeated reductions/cessations in airflow with apnea index ≥ 5 , respiratory disturbance index (RDI) of at least 10 on polysomnograph
- snoring: 28% of women, 44% of men aged 30-60
- OSA: 9% of women, 24% of men

OSA: Pathophysiology

- tongue contacts the soft palate and posterior pharyngeal wall in the presence of lateral collapse of the pharynx, thus generating occlusion
- risk factors: obesity, redundant tissue in the neck, retrognathia, craniofacial anomalies
- alcohol and other sedating medications may contribute

Obstructive Sleep Apnea

- polysomnography is the gold standard of diagnosis
 - imperative in adults
 - in children, a convincing history is adequate
- OSA: $RDI > 5$, $SpO_2 < 90\%$
- UARS (Upper Airway Resistance Syndrome):
 $RDI < 5$, $SpO_2 > 90\%$
- primary snoring: $RDI < 1$, $SpO_2 > 90\%$

OSA Management

- Investigation: polysomnogram (Sleep Study)
- Treatment
 - conservative measures: weight loss, avoid sedatives, sleep on side
 - continuous positive airway pressure (CPAP)
 - oral appliance
 - surgery in select patients:
uvulopalatopharyngoplasty, septoplasty,
tonsillectomy, adenoidectomy etc

Thank you for attention!