CLASSIFICATION OF TONSILLITIS. QUINSY. COMPLICATIONS OF ACUTE TONSILLITIS. CHRONIC TONSILLITIS. ADENOID. TONSILLAR HYPERTROPHY.

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The Palatine Tonsils
(Anatomy and Function)
Anatomy of the Tonsils

- Paired, sit in tonsillar sinus
- Limited anteriorly by palatoglossal arch, posteriorly by palatopharyngeal arch, laterally by superior pharyngeal constrictor
- Enclosed in a fibrous capsule
Anatomy of the Tonsils

- 10-30 crypts
- Innervation from sphenopalatine ganglion via lesser palatine and glossopharyngeal nerves
- No afferent lymphatics, efferents drain to upper deep cervical lymph nodes
Immunology and Function

- Part of secondary immune system
- No afferent lymphatics
- Exposed to ingested or inspired antigens passed through the epithelial layer
- Immunologic structure is divided into 4 compartments: reticular crypt epithelium, extra follicular area, mantle zone of the lymphoid follicle, and the germinal center of the lymphoid follicle
Membrane cells and antigen presenting cells are involved in transport of antigen from the surface to the lymphoid follicle.

Antigen is presented to T-helper cells.

T-helper cells induce B cells in germinal center to produce antibody.

Secretory IgA is primary antibody produced.

Involved in local immunity.
Immunology and Function

B-cells

T-cells

IgM, IgG, IgA

Цитотоксична дія
Adenotonsillar disease

- Major divisions are:
  - Infection/inflammation
  - Obstructive
  - Neoplasm
Clinical Evaluation

- Acute Tonsillitis
- Chronic Tonsillitis
- Obstructive Tonsillar Hyperplasia
CLASSIFICATION OF TONSILLITIS

ACUTE

- Primary: catarrhal, lacunar, follicular, necrotic.
- Secondary:
  a) in case of acute infectious diseases (diphtheria, scarlet fever, tularaemia, typhoid fever);
  b) in case of circulatory system diseases (infectious mononucleosis, agranulocytosis, leucosis, alimentary toxic aleukia).

CHRONIC

- Non-specific: a) compensated form; b) decompensated form.
- Specific: in case of infectious granuloma (tuberculosis, syphilis).

*The classification by academician I.E. Soldatov is generally accepted.*
Acute Tonsillitis

- Signs and symptoms:
  - Fever
  - Sore throat
  - Tender cervical lymphadenopathy
  - Dysphagia
  - Erythematous tonsils with exudates
Clinical evaluation

- Viral
  - Lower grade fever
  - Lower WBC, Lymphocytic shift
  - Less tonsillar exudate

- Bacterial
  - Higher WBC, Granulocytic shift
  - More exudative
CLINICAL EVALUATION
CLINICAL EVALUATION

LACUNAR

FOLLICULAR
Infectious mononucleosis should be suspected if a sore throat and malaise persist despite antibiotic treatment, and a white cell analysis and Paul–Bunnell test are indicated.
Medical Management

- Penicillin is first line treatment
- Recurrent or unresponsive infections require treatment with beta-lactamase resistant antibiotics such as
  - Clindamycin
  - Augmentin
Medical Therapy

- First Line
  - Penicillin/Cephalosporin for 10 days
  - Injectable forms for noncompliance
- BLPO, co pathogens
- Macrolides
  - Penicillin allergy
  - Erythromycin/Clarithromycin 10 days
  - Azithromycin (12mg/kg/day) 5 days
Complications of Tonsillitis

- Cervical Adenitis
- Neck Abscess
- Peritonsillar abscess
- Intratonsillar abscess
- Lemierre’s syndrome
Peritonsillar Abscess (Quinsy)

- Abscess formation outside tonsillar capsule
- Signs and symptoms:
  - Fever
  - Sore throat
  - Dysphagia/odynophagia
  - Drooling
  - Trismus
  - Unilateral swelling of soft palate/pharynx with uvula deviation
Peritonsillar Abscess (Quinsy)

A peritonsillar abscess PTA is a collection of pus located between the fibrous capsule of the tonsil and the superior pharyngeal constrictor muscle.

The most commonly held theory is that PTA occurs secondary to the penetration of bacteria from the tonsillar crypts through the tonsillar capsule into the peritonsillar space.
The treatment of paratonsillar abscess consists in the abscess opening and antibacterial treatment.

The abscess is opened in the place where inflammatory infiltration is bulging the most or, in case of an anterosuperior abscess, along the imaginary line between the base of the uvula and the last grinder tooth of the lower jaw on the border between the medium and the upper third of this line. The cut is not made very deep because a greater blood vessel can be damaged.
TREATMENT OF ABSCESS
Diffuse infection of the cervical fat is called diffuse phlegmon. It is a severe inflammatory disease requiring an urgent surgical intervention. The clinical course of the phlegmon is acute. It can be located in any fat tissue space of the neck.
The peculiarities of the anatomical neck structure promote rapid extension of suppurative process from one fat tissue space to another and even to mediastinum, skull cavity, axillary region, infraclavicular fossa and the anterior thoracic wall.
DIFFUSE PHLEGMON
Chronic Tonsillitis

- Chronic sore throat
- Malodorous breath
- Presence of tonsilloliths
- Peritonsillar erythema
- Persistent tender cervical lymphadenopathy
- Lasting at least 3 months
Chronic Tonsillitis

The following are the true signs of 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.
LAVAGE OF PALATINE TONSIL

- lavage of palatine tonsil lacunas with disinfecting solutions
- suction of lacuna contents

Conservative treatment is taken as different courses two times a year (in spring and autumn).
Current clinical indicators are:

- 2 or more infections per year despite adequate medical therapy
- Hypertrophy causing dental malocclusion or adversely affecting orofacial growth documented by orthodontist
- Hypertrophy causing upper airway obstruction, severe dysphagia, sleep disorder, cardiopulmonary complications
- Peritonsillar abscess unresponsive to medical management and drainage documented by surgeon, unless surgery performed during acute stage
- Persistent foul taste or breath due to chronic tonsillitis not responsive to medical therapy
- Chronic or recurrent tonsillitis associated with streptococcal carrier state and not responding to beta-lactamase resistant antibiotics
- Unilateral tonsil hypertrophy presumed neoplastic
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
TONSILLECTOMY
(step of operation)
Tonsillectomy

- Tonsillotome
- Cold dissection with snare
- Monopolar/bipolar electrocautery
- CO2 or KTP laser
- Hemostasis with packing, electrocautery, sutures
TONSILECTOMY
(position of patient)
TONSILLECTOMY
Tonsillectomy

- Tonsillotome
- Cold dissection with snare
- Monopolar/bipolar electrocautery
- CO2 or KTP laser
- Hemostasis with packing, electrocautery, sutures
Obstructive Tonsillar Hyperplasia

- Snoring and other symptoms of sleep disturbance
- Muffled voice
- Dysphagia
TONSILLOTOMY
ANATOMY OF THE ADENOID

- Single pyramidal mass of tissue based on posterior-superior nasopharynx
- Surface folded without true crypts
- Blood supply – ascending palatine branch of facial artery, ascending pharyngeal artery, pharyngeal branch of internal maxillary artery
- Innervation – n.glossopharyngeal and n.vagus
- No afferent lymphatics, efferents drain to retropharyngeal and upper deep cervical nodes
Acute adenoiditis

Symptoms include:
- Purulent rhinorrhea
- Nasal obstruction
- Fever
- Associated Otitis Media
Chronic adenoiditis

Symptoms include:
- Persistent rhinorrhea
- Postnasal drip
- Malodorous breath
- Associated otitis media >3 months
- Think of reflux
Obstructive Adenoid Hyperplasia

- Signs and Symptoms
  - Obligate mouth breathing
  - Hyponasal voice
  - Snoring and other signs of sleep disturbance
Adenoidectomy

Current clinical indicators are:

- 4 or more episodes of recurrent purulent rhinorrhea in prior 12 months in a child <12. One episode documented by intranasal examination or diagnostic imaging.

- Persisting symptoms of adenoiditis after 2 courses of antibiotic therapy. One course of antibiotics should be with a beta-lactamase stable antibiotic for at least 2 weeks.

- Sleep disturbance with nasal airway obstruction persisting for at least 3 months
Surgical Indications

- Adenoidectomy
  - Absolute
    - Airway obstruction w/ cor pulmonale
    - Failure to thrive
  - Relative
    - Chronic Nasal Obstruction
    - Recurrent/Chronic Adenoiditis
    - Recurrent/Chronic Sinusitis
    - Recurrent acute otitis media/Recurrent COME
- Hyponasal or hypernasal speech
- Otitis media with effusion >3 months or second set of tubes
- Dental malocclusion or orofacial growth disturbance documented by orthodontist
- Cardiopulmonary complications including cor pulmonale, pulmonary hypertension, right ventricular hypertrophy associated with upper airway obstruction
- Otitis media with effusion over age 4