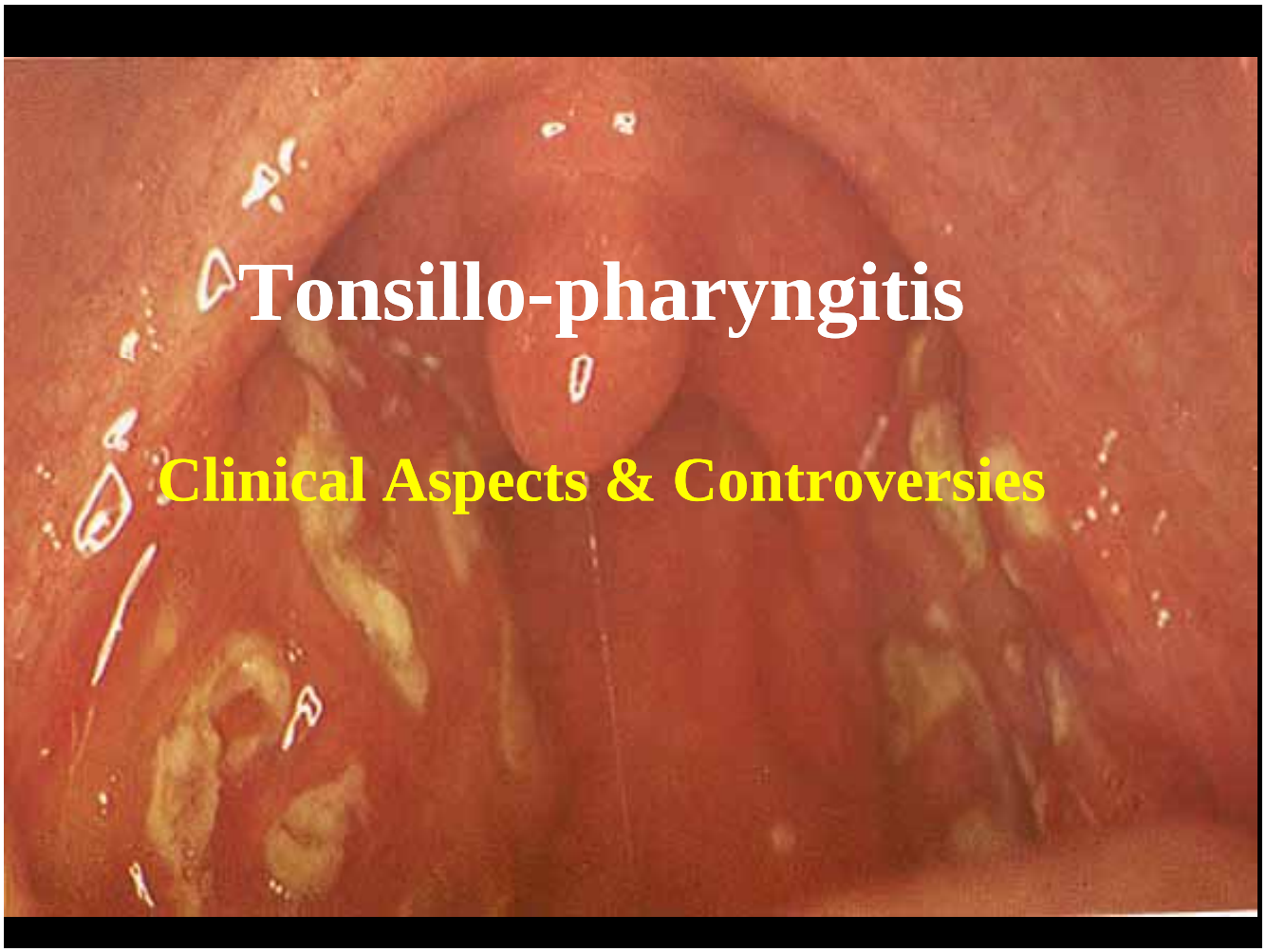
MOKHTAR BASSIOUNI, M. D.

PROFESSOR OF OTOLARYNGOLOGY

UNIVERSITY OF ALEXANDRIA

www.alexear.com



Epidemiology

Prevalence:

- Nearly all children experience at least 1 episode of tonsillitis.
- Adeno-tonsillectomy is one of the most common surgical procedures performed in children in the US today with an annual expenditure of $500 million.

Demographics

Age Occurrence:

- **Tonsillitis is infrequent in the first 2 years of life, and most common in school-age children.**

Microbiology

- **Most cases of pharyngitis and tonsillitis are viral: 90% of pharyngitis in adults and 60% to 75% in children are caused by viruses.**

Microbiology

Viral Causes of Tonsillo-pharyngitis in Children

- **Common:**
- **Adenoviruses, types 1, 2, 3, and 5.**
- **Less Common:**
- **Enteroviruses, Epstein-Barr virus, Herpes simplex virus, Influenza viruses, Parainfluenza viruses Respiratory syncytial virus.**
- **Infrequent:**
- **Coronaviruses, Rhinoviruses.**

Microbiology

Bacterial Pathogens in Tonsillo-pharyngitis

- **Acute tonsillitis:** the commonest is group A β-hemolytic streptococci (GABHS); isolated in 30-36.8% of children.
- **Recurrent tonsillitis:**
  - Aerobic: *Streptococcus pneumoniae*, *Staphylococcus aureus*, and *Haemophilus influenzae*.
  - Anaerobic : *Bacteroides fragilis*.
- **Hypertrophic tonsils:** *H influenzae*.
- **Chronic tonsillitis:** A polymicrobial bacterial population including: *Staphylococcus aureus, Moraxella catarrhalis*, and *Hemophilus influenzae.*

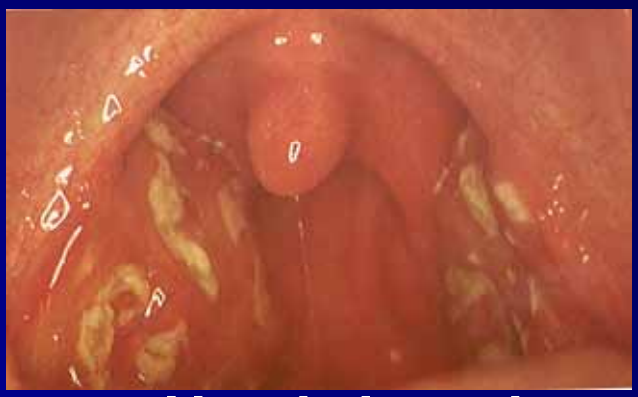
- In polymicrobial infections beta-lactamase producing organisms can protect Group A strep from eradication with penicillins.

Some Clinical Presentations

- Acute Follicular Tonsillitis.
- Chronic Tonsillitis.
- Obstructive Tonsillar Hyperplasia.
- Unilateral Tonsillar Enlargement.
- Infectious Mononucleosis.
- Peritonsillar Abscess.
- Thrush Tonsillitis.

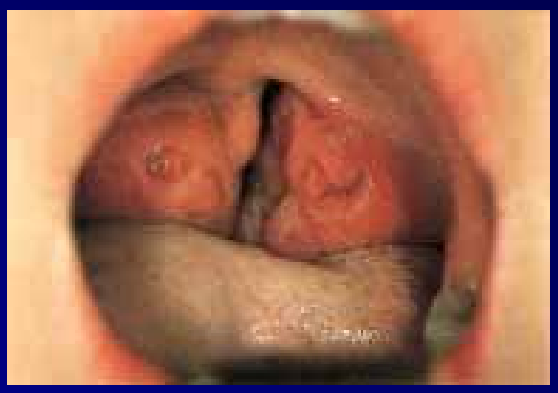
Acute Follicular Tonsillitis

- Signs and symptoms:



  - Fever.
  - Sore throat.
  - Dysphagia.
  - Enlarged tender cervical lymphadenopathy.
  - Erythematous tonsils with exudates.

Chronic Tonsillitis

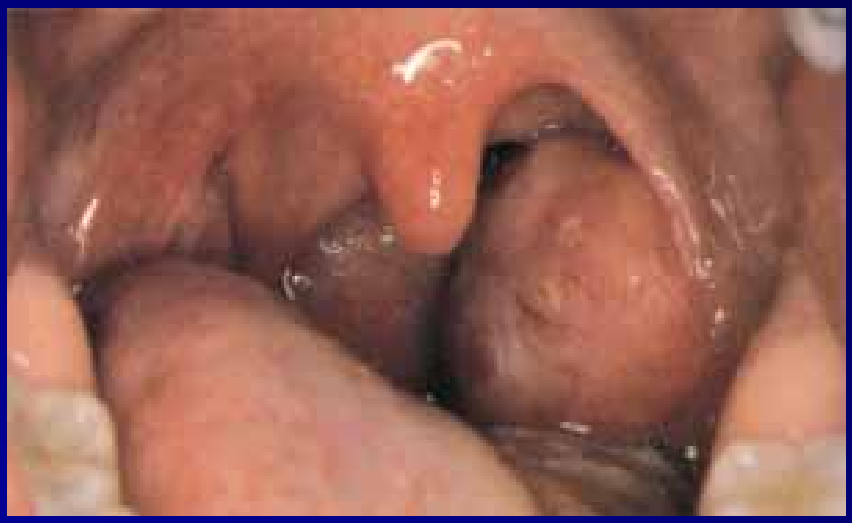


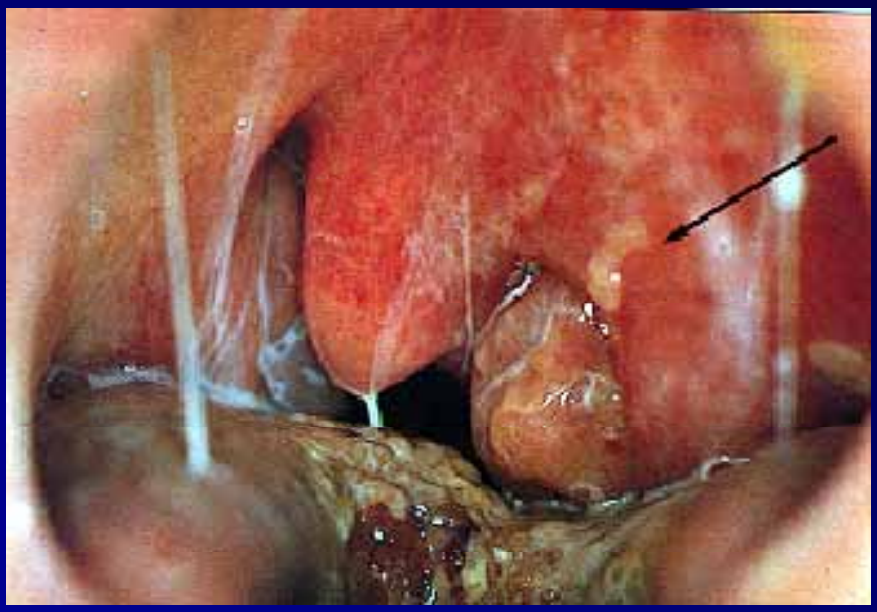
- Tonsils are unequal in size.
- Irregular cryptal pattern
- Malodorous breath.
- Peritonsillar erythema.
- Persistent enlarged firm cervical (JD) lymphadenopathy.

Unilateral Tonsillar Enlargement

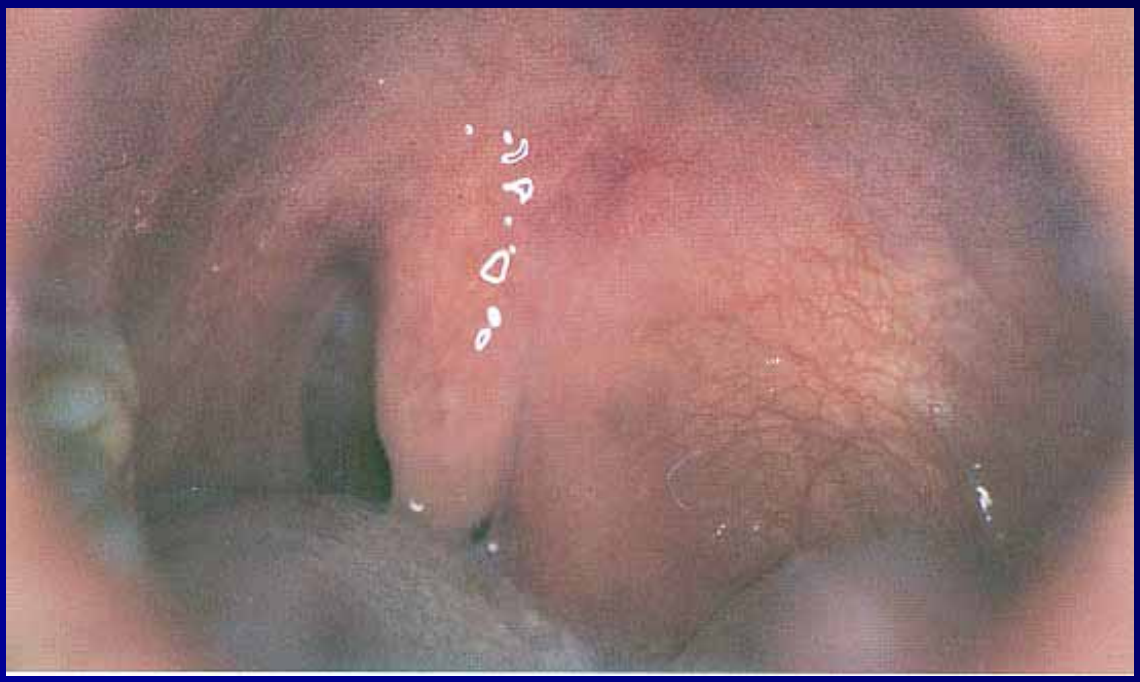
Non-neoplastic

Neoplastic



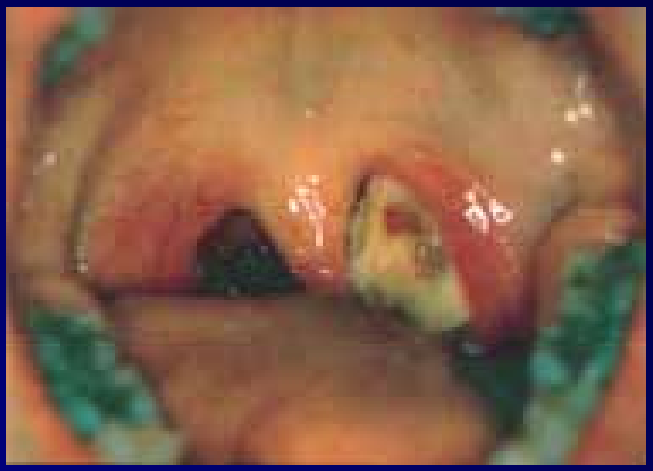


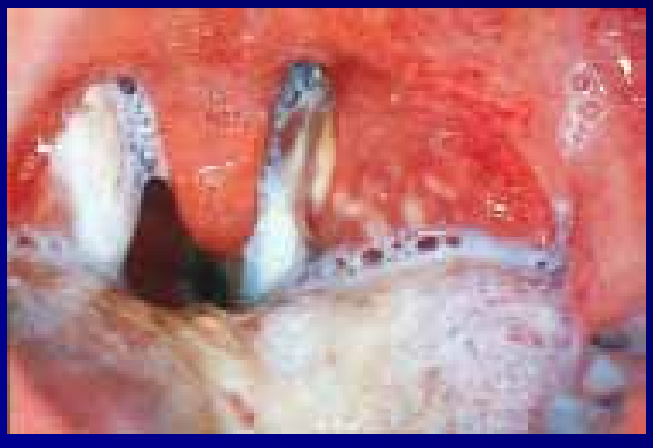
Peritonsillar Abscess



Infectious mononucleosis

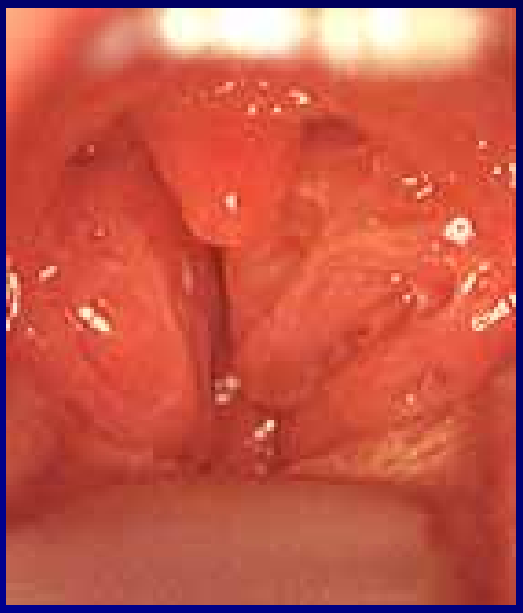
- White membrane covering one or both tonsils
- Positive Paul-Bunnell blood test
- Atypical mononuclear white cells are increased on the blood film.
- Huge CLNs

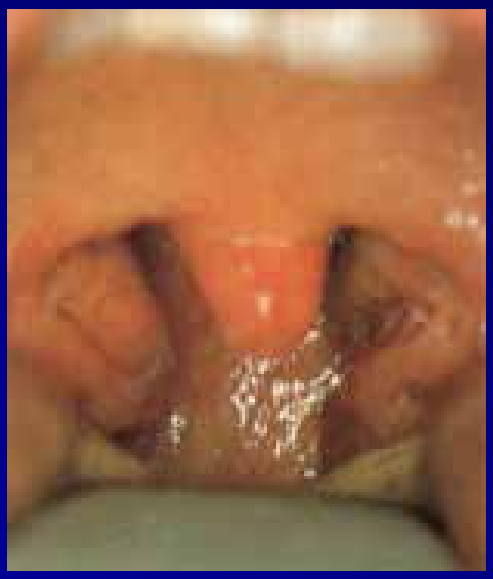


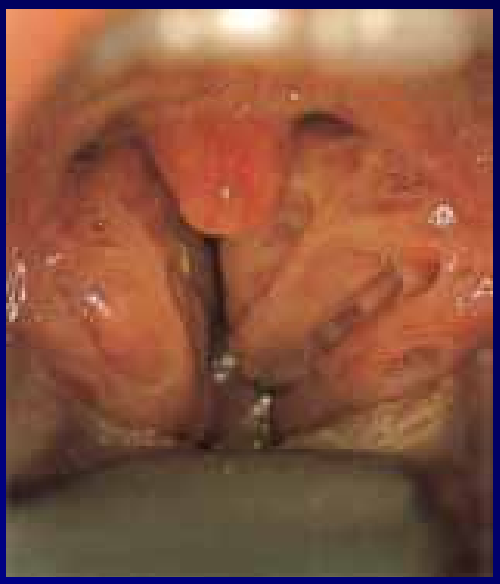


Obstructive Tonsillar Hyperplasia

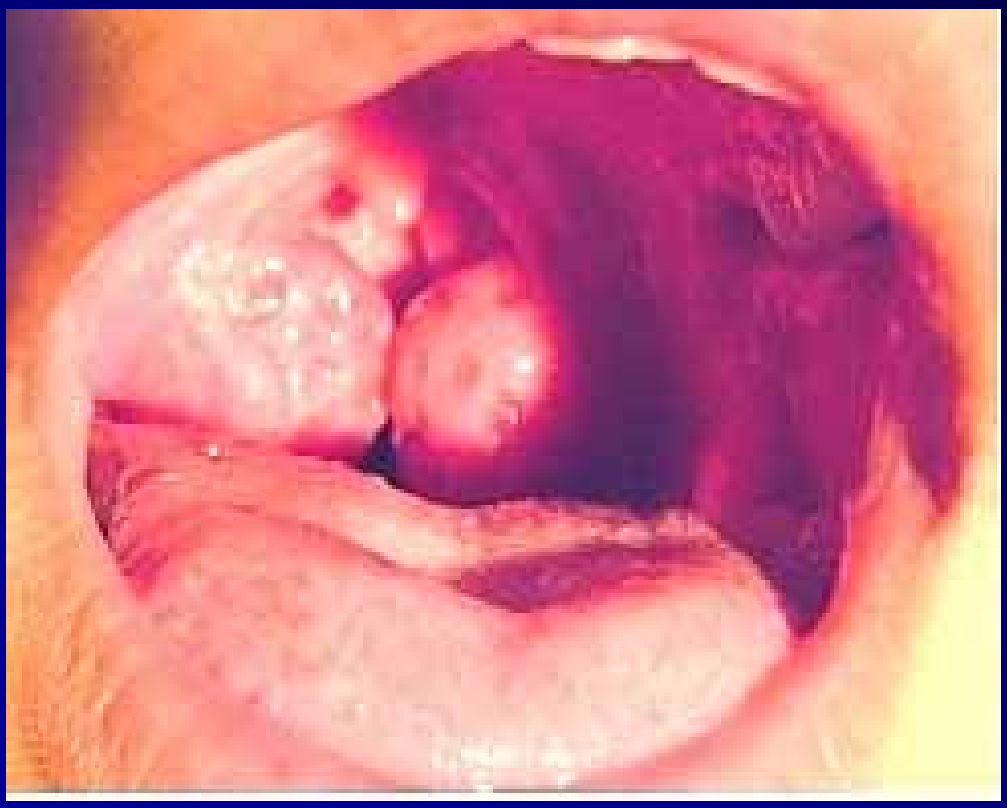
- Snoring and Sleep Apnoea (OSA).
- Muffled voice.
- Dysphagia.
- Kissing tonsils.

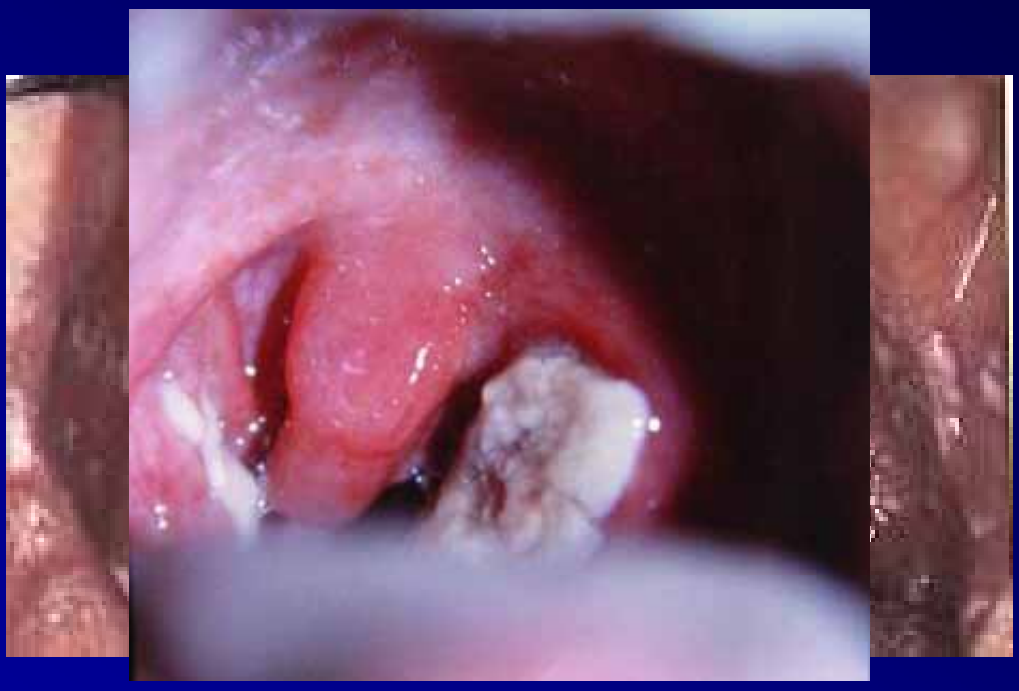






Beware of the gag reflex





Candidiasis

Management of Pharyngo-tonsillitis

- **Investigations**
- **Treatment of Acute attacks**
- **Treatment of recurrent attacks**
- **Prophylactic treatment**
- **Surgery**

Investigations

- ESR
- ASOT
- CRP
- Throat swab / C&S.

Treatment of Acute attacks

- Penicillin
- Amoxycillin

- Usually the causative organism is non- B lactamase-producing Streptococcus and will respond well to penicillins.

Treatment of Recurrent attacks

•Usually, Recurrent tonsillitis is a polymicrobial infection, in which beta-lactamase producing organisms coexist and can protect Group A streptococci from eradication with penicillins.

•*Streptococcus pneumoniae*, *Staphylococcus aureus*, and *Haemophilus influenzae* are the most common bacteria isolated in recurrent tonsillitis. These are generally more resistant pathogens and are better faced with Beta-Lactamase stable antibiotics .

Treatment of Recurrent attacks

- **Combinations**

Ampicillin-sulbactam
Amoxicillin-clavulanate

- **Second-generation cephalosporins**

Cefdinir (Cefdin)
Cefprozil

- **Third-generation cephalosporins**

Cefixime
Ceftriaxone

- **Macrolide/azalide**

Azithromycin
Clarithromycin

Vaccination

- **Pneumococcal conjugate vaccine**
- **H influenzae vaccine**
- **Flu vaccine**
- **Oral bacterial vaccine (Buccaline, bronchovaxom)**
- **Immune-stimulant: (Echinacea)**

Indications for Tonsillectomy

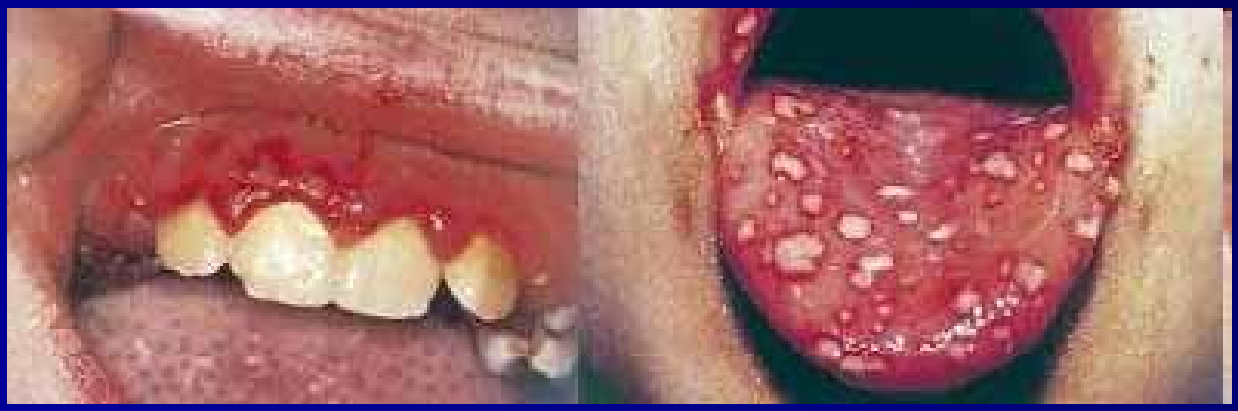
AAO-HNS / Guidelines for Tonsillectomy1995 :

- 3 or more episodes/year
- Hypertrophy causing dental malocclusion.
- Hypertrophy causing upper airway obstruction, severe dysphagia, sleep disorder, cardiopulmonary complications
- One attack of quinsy.
- Halitosis, not responsive to medical therapy
- UTE, suspicious for malignancy
- Chronic or recurrent tonsillitis associated with streptococcal carrier state .
- Individual considerations

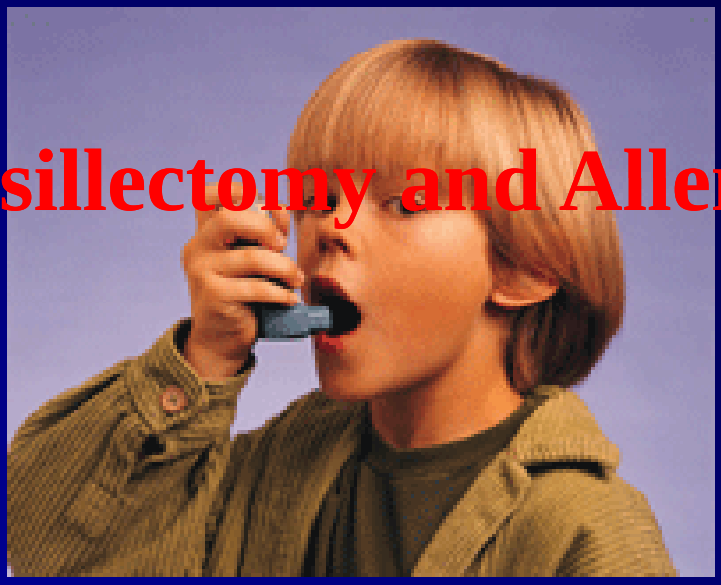
Other Indications for Tonsillectomy

Marshall's syndrome or PFAPA syndrome

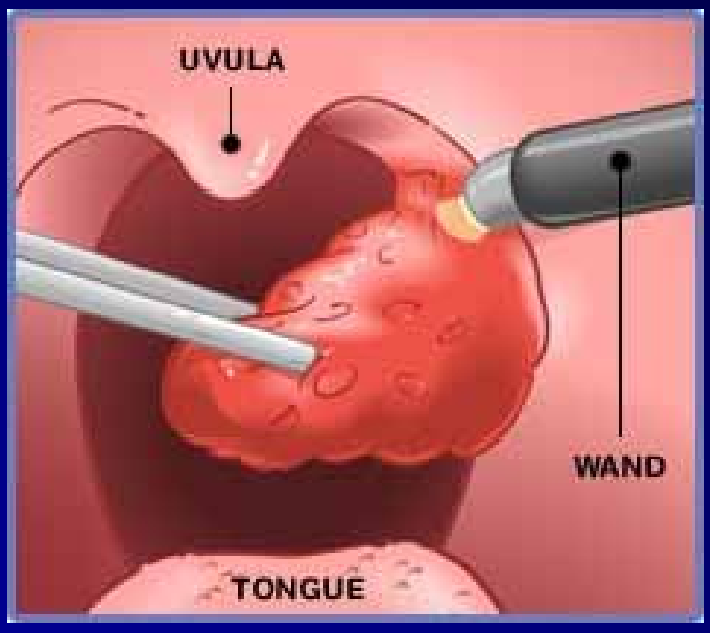
(periodic fever, aphthous stomatitis, pharyngitis, cervical adenitis)



Tonsillectomy and Allergy



- Does tonsillectomy potentiates the severity of bronchial asthma?

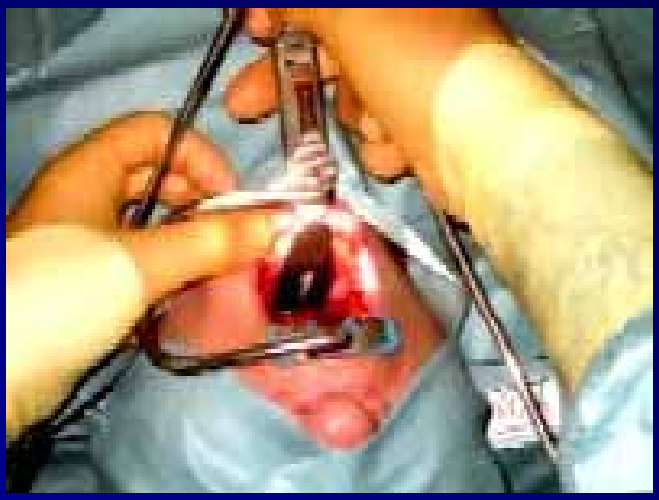


- Does bronchial asthma constitute an absolute/relative/or no contraindication to tonsillectomy?

•In a non-asthmatic atopic patient, does tonsillectomy increases the probability of developing asthma?

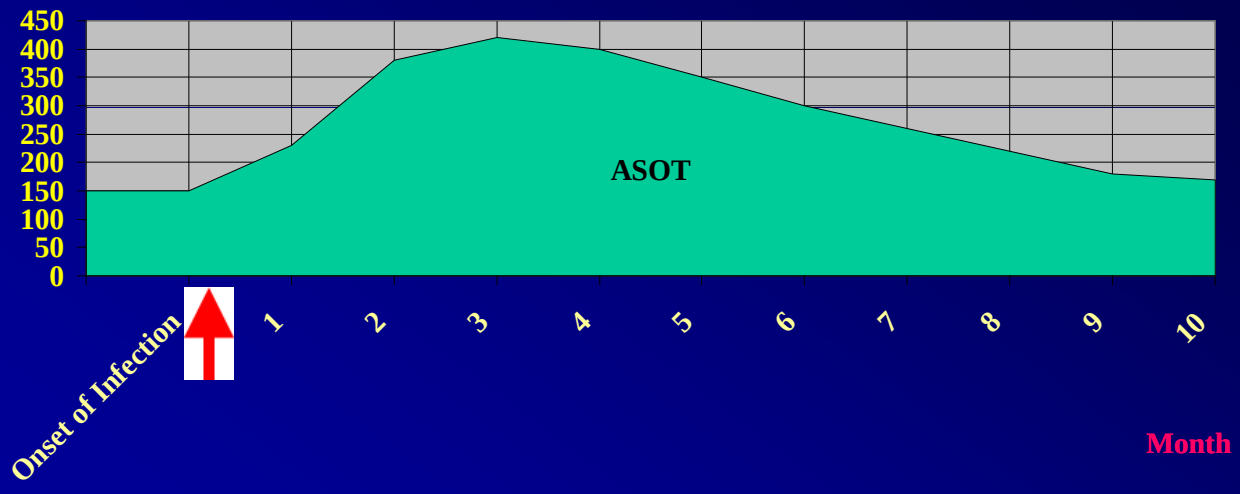
[Tonsillectomy in recent references]

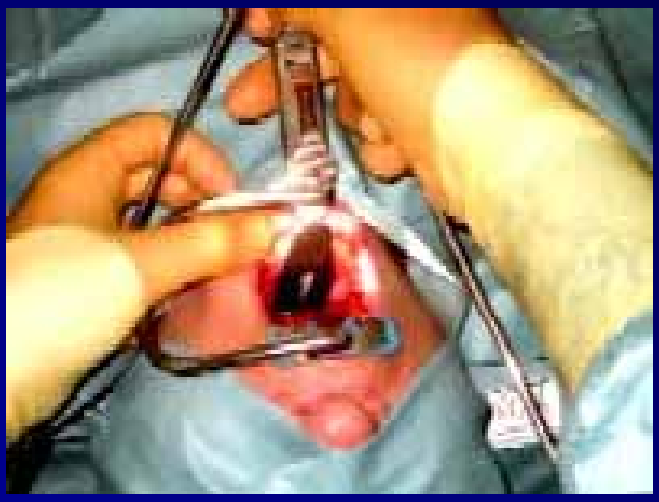
- Tonsillectomy has no general immune consequences.
- Pre-existing allergy or asthma is not a contraindication to tonsillectomy.
- Tonsillectomy doesn’t have a deleterious impact on allergic children.



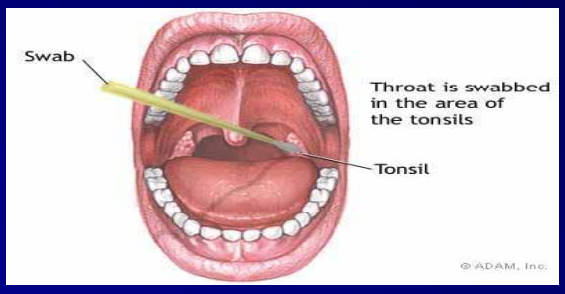
- Any role for ASOT in dictating indications for tonsillectomy?

- Does a very high ASOT, necessitates any treatment at all?





- Does a positive family history of rheumatic heart disease affects your decision about performing a tonsillectomy?



Is a throat swab a good diagnostic test?

- **The throat swab is currently recommended as a diagnostic aid in patients with sore throat.The quoted sensitivity is (26-30%) and specificity (73-80%)**
- **This low predictive value of throat swabs is probably due to a high symptomless carriage rate of group A ß haemolytic streptococcus (ranging from 6% to 40%).**
- **In approximately one-third of patients with pharyngitis or tonsillitis, even with elaborate culture techniques no microbiologic etiology can be detected.**
- **Furthermore, non-pathogenic resident flora frequently contaminate the microbiological specimen, making the results of laboratory culture reports of doubtful clinical value**

Indications for Tonsillectomy

AAO-HNS:

- 3 or more episodes/year
- Hypertrophy causing dental malocclusion.
- Hypertrophy causing upper airway obstruction, severe dysphagia, sleep disorder, cardiopulmonary complications
- One attack of quinsy.
- Halitosis, not responsive to medical therapy
- UTE, suspicious for malignancy
- Chronic or recurrent tonsillitis associated with streptococcal carrier state .
- Individual considerations

- Does prophylactic antibiotics have a role in the management of tonsillo-pharyngitis?

Potential Indications of Prophylactic Antibiotics

- Recurrent tonsillo-pharyngitis.
- High ASOT.
- Rheumatic fever.
- Conservative trial to preserve the tonsils before surgery is stated.
- Adeno-tonsillar hyperplasia may respond to one month of therapy with beta-lactamase resistant antibiotics

Prophylactic Antibiotics

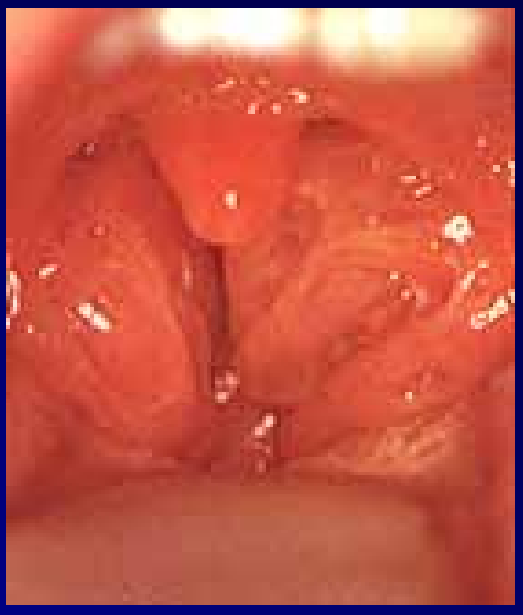
- **Long-acting penicillin**
- **Amoxycillin (20 mg/kg/day given either as a single dose)**
- **Azithromycin (10 mg/kg given weekly)**
- **Trimethoprim/sulfamethoxazole** (6.8/34 mg/kg/day divided into two daily doses)

Case Study

- A 3 y boy presents to your office whose parents complain that he snores loudly and stops breathing sometimes while sleeping. The child's pediatrician told the parents that his tonsils were "big" and that the child is under weight for his age

- Also has dysphagia and daytime somnolence
- Apneic spells last >10 seconds
- PMH:
  - otherwise healthy
  - Tonsillitis: Seldom
- No allergies

- PE:
  - Dark circles under eyes
  - Breathing with mouth open
  - Small amount of clear rhinorrhea
  - Tonsils are almost touching in the midline



Diagnosis

- Adenotonsillar hypertrophy.
- OSA.

Management

- Any role for conservative therapy?

Surgical choice

- Tonsillectomy
- Adeno-tonsillectomy
- Unilateral tonsillectomy
- Tonsillotomy