**OTORHINOLARYNGOLOGY**

 **د حيدر السرحان**

**TONSILS AND ADENOIDS**

The tonsils are paired secondary lymphatic organs situated on the side of the oropharynx between the palatoglossal (anterior tonsil pillar) and palatopharyngeal folds (posterior tonsil pillar). They are part of Waldeyer's ring, a ring of lymphoid tissue consisting of the adenoids,the

palatine tonsils and the lingual tonsils (which are embedded in the posterior third of tongue). The ring as a whole is thought to have some protective function as a barrier against infection in the first few years of life. The tonsil is enclosed by a fibrous capsule, outside of which is a layer of areolar tissue. This separates the capsule from the pharyngobasilar fascia covering the superior constrictor muscle that forms the tonsil bed.

**Aetiology of acute tonsillitis**

Although this is a common disease, its aetiology and pathogenesis are poorly understood. Acute tonsillitis is an infection which primarily affects the palatine tonsil. It is regarded as being distinctive from acute pharyngitis, which is most often a viral infection involving the lymphoid tissue on the posterior pharyngeal wall and *may* include the tonsil. Although the disease is seen in adults, it is most frequent in childhood, presumably because immunity to common childhood organisms has not been fully established. There is some doubt regarding the most common causative organisms in acute tonsillitis. It has been suggested that viruses (e.g. influenza, paraininfluenza, adenovirus, enteroviruses and rhinoviruses) may be responsible for tonsillitis in up to 50% of occasions. In many other cases it is felt that an initial viral tonsillitis may predispose to a super-infection by bacteria *(B heamolytic streptococcus, Streptococcus pneumonias, Haemophihis influemaeasae* anaerobic organisms).

**Clinical features**

There may be a prodromal illness with pyrexia, malaise and headache for **a day**  before the onset of the predominant symptom, which is a sore throat. Pain may radiate to the ears or may occur in the neck due to cervical lymphadenopathy. Swallowing maybe painful (odynophagia) and the patient's voice may sound muffled. There may be trismus and dribbling. Some children may have abdominal pain and occasionally vomiting. The tonsils are found to be hyperaemic on examination with pusand debris in the crypts. There will be tender cervical lymphadenopathy, particularly in the jugulodigastric nodes. Glandular fever, agranuiocytosis, leukaemia and diftheria must always be borne in mind

**Investigations:**

Paul-Bunnell test

white cell count

throat swab.

**Management**

Even though viruses are implicated as the pathogenic organisms in many cases, ***it is*** likely any patient who attends a medical practitioner with the clinical features **of** tonsillitis will be treated with antibiotics. Penicillin V is still the drug of choice, with erythromycin reserved for those patients allergic to penicillin. Ampicillin should never be used to treat acute tonsillitis in case the patient has infectious mononucleosis, when a generalized maculopapular rash may develop. The patient should have paracetamol for analgesia. Aspirin is contraindicated in children because of the risk of Reye's syndrome. Fluid replacement and bed rest may be required in the severe attack.

**Complications of acute tonsillitis**

***1. Local.***

• Severe swelling causing respiratory obstruction.

• Abscess formation:

Peritonsillar (quinsy).

Parapharyngeal.

Retropharyngeal.

• Acute otitis media.

• Recurrent acute tonsillitis (chronic tonsillitis).

**2. *General.***

• Septicaemia.

• Meningitis.

• Acute rheumatic fever.

• Acute glomerulonephritis.

**Tonsillectomy**

Indications for tonsillectomy

• Recurrent episodes of acute tonsillitis.

• Previous episodes of peritonsillar abscess (quinsy).

• Suspected neoplasm (unilateral enlargement or ulceration)

• Part of another procedure ( access to glossopharyngeal nerve **or styloid** Process).

• Gross enlargement causing airway obstruction (sleep apnoea syndrome).

Contraindications

• Recent episode of tonsillitis or upper respiratory tract infection (within 2 weeks).

• Bleeding disorder.

• Oral contraceptives.

• Cleft-palate.

• During certain epidemics (e.g. polio).

**Complications of tonsillectomy**

*1. Peroperative.*

• Anaesthetic **reaction.**

• Haemorrhage.

• Damage to teeth.

• Trauma to the posterior pharyngeal wall (careless insertion of the tongue blade).

• Dislocation of the temperomandibular joint by over-opening the mouth gag.

2. *Immediate.*

*•* Reactionary haemorrhage.

• Anaesthetic complications.

**3. *Early.***

*•* Secondary haemorrhage.

• Haematoma and oedema of the uvula.

• Infection (may lead to secondary haemorrhage).

• Earache (referred pain or acute otitis media).

• Pulmonary complications (pneumonia and lung abscess are rare).

• Subacute bacterial endocarditis (if the patient has a cardiac defect).

•

**4. Late.**

• ' Scarring of the soft palate (limiting mobility and possibly affecting voice).

• Tonsillar remnants (which may be the site of recurrent acute infection).

**THE ADENOID**

The adenoids are a mass of lymphoid tissue found at the junction of the roof and posterior wall of the nasopharynx. The size of the adenoids varies, but in general they attain their maximum size between the ages of 3 and 8 years and then regress.

**Pathology**

Inflammation due to acute viral and bacterial infections results in hyperplasia with enlargement and multiplication of the lymphoid follicles. Most of the pathological effects related to the adenoids are due to this increase in size. The symptoms caused by hypertrophy result not from the actual size of the lymphoid mass, but from the relative .disproportion in size between the adenoids and the cavity of the nasopharynx. The effect of the enlargement is to produce obstruction of the nasal airways and possibly obstruction of the Eusiachian tubes.

**Clinical Feature**

*Nasal obstruction* leads to mouth breathing, snoring, and hyponasal speech. Infants may have difficulty in feeding because they have to stop sucking intermittently to take breath. Nasal discharge and postnasal drip or catarrh may develop as a result of secondary chronic rhinitis and sinusitis. Besides snoring, some children may suffer from episodes of sleep apnea. The child with the characteristic adenoid facies appearance (an open lip posture, prominent upper incisors, a short upper lip. a thin nose and ahypoplastic maxilla with a high arched palate is rarely seen.

*Eusiachian tube obstruction* may result in earache, and deafness due to recurrent bouts of acute otitis media and otitis media with effusion (glue ear).

**Investigations:**

Lateral soft tissue of the neck

**Treatment:**

Medical Treatment: Antibiotics and antihistamines for 3 weeks

Indications for Adenoidectomy

1. Nasal obstruction.

2. Otitis media with effusion (glue **ear).**

3. Recurrent acute otitis media.

4. Chronic rhinosinusitis.

5. Sleep apnea

Contra-indications

1. Recurrent upper respiratory tract infection
2. Uncontrollable bleeding
3. Cleft palate

Complications:

 *Immediate:*

• Anaesthetic complications. ;

• Soft palate damage.

• Dislocation of the cervical spine.

• Reactionary haemorrhage.

Early:

• Secondary hemorrhage.

• Subluxasion of the atlanio-occipital joint

Late:

• Eustachian tube stenosis.

• Hypenasal speech (rhinolalia **aperta).**

• Persistence of symptoms.