3) Pharyngitis – Dr. Sherko

Inflammation of the pharynx can be classified into acute and chronic.

**ACUTE PHARYNGITIS**

- Acute inflammation of the pharyngeal mucosa may be an accompanying feature of many local and systemic diseases. It may follow an attack of common cold and may be a feature of other infections like measles, chicken pox, or influenza. Acute inflammatory lesions of the pharynx may develop after trauma by a foreign body or after instrumentation.
- The patient's main symptom is sore throat, associated with fever and other constitutional symptoms. Examination reveals diffuse congestion of the pharyngeal wall, uvula and adjacent faucial tissues. Depending upon the severity of infection, there may be oedema of the lining mucosa and uvula and enlargement of the glands of the neck.
- Treatment consists of bed rest, analgesics and antibiotics preferably penicillin or erythromycin.

**CHRONIC PHARYNGITIS**

- Chronic inflammation of the pharynx may be due to non-specific or specific lesions.

**Chronic non-specific Pharyngitis**

- Various aetiological factors in the nose or oral cavity may produce secondary effects in the pharynx.
- The infected discharge from the nose and paranasal sinuses as in rhinitis and sinusitis constantly irritates the pharyngeal mucosa, and often results in chronic inflammatory changes. Similarly obstructive lesions in the nose like deflected septum, nasal polypi and adenoids lead to a habit of mouth breathing which is an important predisposing cause of pharyngitis.
- Caries the teeth and infected gums may also lead to pharyngeal infection. External conditions may play an important role in pharyngitis. People working in dusty atmosphere and smokers are the usual victims. Sometimes pharyngitis may be a manifestation of dyspepsia or chronic suppurative lung diseases.
- Clinical Features
  - The most common symptom is discomfort in the throat with a foreign body sensation. Spasms of coughs and tendency to clear the throat are common. Tiredness of voice and difficulty of swallowing may occur.
  - Diffuse congestion of the pharyngeal wall may be seen and prominent vessels are seen through the inflamed mucosa. This type of pharyngitis is called chronic catarrhal pharyngitis. Sometimes the chronic infection result is hypertrophy or lymph nodules on the pharyngeal wall presenting a granular pharyngitis. This form of pharyngitis usually occurs in persons who use their voice excessively, particularly when the voice production is faulty like clergyman (clergymen's throats).
- Treatment of Chronic Pharyngitis
  - It is rather difficult to reverse the chronic changes once they have set in. However, the symptoms can be alleviated to a greater extent.
  - The primary aetiological factor in the nose, nasopharynx or oral cavity should receive proper treatment. Such patients are usually in the habit of making frequent swallowing attempts in order to clear the throat. This should be forbidden as such attempts at clearing the throat or hawking only add to the misery. Cough suppressants like codeine phosphate linctus should be given to relief the cough. Temporary relief may be achieved by local application of various soothing paints like Mandl's paint.
- Alcohol, smoking, irritants and spicy food should be avoided.
KERATOSIS PHARYNGIS

- It is a condition of unknown aetiology which is characterized by whitish horny outgrowths on the faucial tonsils, base of the tongue and posterior pharyngeal wall. It results from hypertrophy and keratinisation of the superficial epithelium. The lesions are hard and cannot be removed easily. There is no surrounding erythema and no constitutional discomfort except mild discomfort.
- There is no specific treatment of this condition; it may subside in a few months. The patient only needs reassurance.

SPECIFIC INFECTIONS OF THE PHARYNX

**Tuberculosis**

- Tuberculosis of the pharynx usually results as a secondary manifestation to advanced chronic pulmonary tuberculosis. Mucosal ulceration with undermined edges occurs in the oropharyngeal region. The chief complaint of the patient is pain with dysphagia. Treatment is by antitubercular drugs.

**Lupus Vulgaris**

- Lupus of the nose may extend posteriorly to involve the pharynx, soft palate and fauces. Tubercles appear in the pharyngeal mucosa which break down with subsequent cicatrisation and scarring of the fauces and soft palate.

**Syphilis**

- The pharynx is usually involved in the secondary stage of syphilis. It shows diffuse congestion and there occur mucous patches and snail-track-ulcers with lymphadenitis. Spirochaetes can be seen on smears from the mucous patches and ulcers.
- In tertiary syphilis, the gumma may sometimes be a presenting feature on the fauces, palate and pharynx. The diagnosis is by biopsy and serological tests. Penicillin is the drug of choice for the treatment of syphilis.

TONSILLITIS

The palatine tonsils are subepithelial lymphoid collections situated in between the faucial pillars. These help in protecting the respiratory and alimentary tracts from bacterial invasion and are thus prone to frequent attacks of infection.

ACUTE TONSILLITIS

- Acute tonsillitis is mainly a disease of childhood but is also frequently seen in adults.
- **Aetiology**
  - It may occur as a primary infection of the tonsil itself or may secondarily occur as a result of infection of the upper respiratory tract usually following viral infections.
  - Common causative bacteria include haemolytic Streptococcus, Straphylococcus, Haemophilus influenza and pneumococcus.
  - Poor orodental hygiene, poor nutrition and congested surroundings are important predisposing factors for the disease.
- **Pathology**
  - The process of inflammation originating within the tonsil is accompanied by hyperaemia and oedema with conversion of lymphoid follicles into small abscesses which discharge into crypts. When tonsils are inflamed as a result of generalized infection of the oropharyngeal mucosa, the condition is termed catarrhal tonsillitis.
When the inflammatory exudates collects in the tonsillar crypts, these present as multiple white spots on an inflamed tonsillar surface, giving rise to a clinical picture of follicular tonsillitis. Sometimes exudation from crypts may coalesce to form a membrane over the surface of the tonsil, giving a clinical picture of membranous tonsillitis. When the whole tonsil is uniformly congested and swollen, it is called acute parenchymayous tonsillitis.

**Clinical features**
- The patient represents with discomfort in his throat, difficulty in swallowing and generalized body symptoms like malaise, anorexia, fever and body ache. On examination the patient is febrile and has tachycardia. The tonsils appear swollen, congested with exudates in the crypts. There may occur oedema of the uvula and soft palate.
- The jugulodigastric (tonsillar) lymph nodes are enlarged and tender.

**Treatment**
- General management of the patients include bed rest, and giving plenty of fluids. Analgesics are given to relieve pain and fever. Antibiotics are prescribed according to the culture sensitivity report. However, penicillin is the drug of choice. Erythromycin and ampicillin may be needed for resistance cases.

**Complications of Acute Tonsillitis**
1. *Chronic tonsillitis:* Repeated attacks of acute tonsillitis result in chronic inflammatory changes in the tonsils.
2. Peritonsillar abscess: Spread of infection from the tonsil to the paratonsillar tissues result in development of abscess between the tonsillar capsule and the tonsil bed.
3. Parapharyngeal abscess: Infection from the tonsil or peritonsillar tissues may involve the parapharyngeal space with abscess formation.
4. Acute otitis media: Infection from the tonsil may extend to the Eustachian tube and result in acute infection of the middle ear.
5. Acute nephritis and rheumatic fever are the other complications of streptococcal tonsillitis.

**CHRONIC TONSILLITIS**
- Chronic inflammatory changes in the tonsil are usually the result of recurrent acute infections treated inadequately. Recurrent infections lead to development of minute abscesses within the lymphoid follicles. These becomes walled off by fibrous tissue and surrounded by inflammatory cells.
- The commonest and most important cause of recurrent infection of the tonsils is persistent or recurring infections of the nose and paranasal sinuses. This leads to postnasal discharge which then infects the tonsils as well.

**Clinical Features**
- Symptoms include discomfort in the throat, recurrent attacks of sore throat, unpleasant (cacagus) and bad smell in the mouth (halitosis). Sometimes there occurs difficulty in swallowing and change in the voice. On examination, the tonsils may appear hypertrophic and protruding out of the pillars. These are diffusely congested, mouths of crypts appear open from which epithelial debris may be squeezed on pressure. The anterior pillars are hyperaemic. Sometimes the symptoms of sore throat and dysphagia are associated with small fibrotic tonsils (chronic fibrotic tonsillitis). Enlargement of the jugulodigastric lymph nodes is an important sing of tonsillar infection.
- The diagnosis is based on the history of repeated attacks of sore throat or acute tonsillitis, associated with symptoms of dysphagia and discomfort. These symptoms are seen with enlarged tonsils, hyperaemic pillars and enlarged neck nodes, a diagnosis of chronic tonsillitis is well considered.
Treatment

- As already mentioned, infections of the nose and paranasal sinuses forms the most important factor leading to chronic or recurrent infection of the tonsils. Treatment of these factors in the form of antibiotic cover, decongestants, mucolytics, muco kinetics and antihistaminics as well as surgical management like septoplasty for a deviated nasal septum, antral washouts, removal of nasal polypi if any, etc. might reduce or actually prevent any further infection of the tonsillar tissue.
- If the above measures fail and the patient continues to have recurrent attacks of tonsillitis, surgical removal of the tonsils (tonsillectomy) might be needed.

Complications

- These include peritonsillar abscess, parapharyngeal abscess, intratonsillar abscess, tonsillar cyst, tonsillolith, rheumatic fever and acute nephritis.

TONSILLECTOMY

Indications of Tonsillectomy

- The tonsils get infected because of bad oral hygiene, unhygienic eating habits, and constant postnasal discharge, mouth breathing and irritant eatables. Control of these, thus, can prevent infection. However, the following cases do need tonsillectomy:
  1. Carriers of diphtheria and Streptococcus hemolyticus as proved by repeated throat swabs, who are a potential source of infection.
  2. Cases with chronic enlargement if regional lymph nodes in association with sore throat.
  3. Tonsillectomy is indicated when it is thought that tonsillar infection is producing secondary effects in other organs. Rheumatic fever and acute glomerulonephritis develop as an antigen antibody reaction to streptococcal infections. Though tonsillectomy does not help an established rheumatic heart disease or nephritis, recurrent attacks can be prevented by tonsillectomy. However, in such cases before undertaking tonsillectomy there should be no evidence of active throat infection.
  4. In cases of recurrent attacks of acute tonsillitis when the source of infections from the nose, paranasal sinuses, etc., has been eliminated and the patient does not respond to specific conservative treatment.
  5. Rarely tonsillar hypertrophy may cause difficult in swallowing, breathing or speaking and may require removal to restore normal function.

- Previously, peritonsillar abscess (quinsy) was thought to be an indication but now it has been observed that if the abscess is drained well and proper antibiotic cover given for adequate time, usually there is no recurrence of the abscess, hence tonsillectomy is not required.

Postoperative Care

- Normal unaided respiration should be established before the patient leaves the operation theatre. The patient is placed in tonsil position. This position allows free respiration and permits any blood and secretion, which may collect, to run out of the nose and mouth.
- A strict watch should be kept on the pulse and respiration of the patient. A rising pulse rate indicates a haemorrhage. Cold drink and soft diet are prescribed for the initial few days. Analgesics are given for pain. Antiseptic mouth washes help to keep mouth clean.

Postoperative Complications

- Haemorrhage besides the complications that may, arise because of anaesthesia, the main surgical problem is haemorrhage. It could be primary (during operation), reactionary (within the first 24 hours), or secondary (between fifth to tenth postoperative day) haemorrhage.
- Excessive bleeding at the time of the operation usually arises because of trauma to an aberrant vessel or paratonsillar vein.
Reactionary Haemorrhage usually arises as a result of slipping or a ligature or because of the postoperative rise in blood pressure. If a clot has formed in the fossa, it is removed. This allows the muscular contraction and retraction of the blood vessel.

A gauze pack may also be held in the fossa for a few minutes to control the bleeding. However, if the bleeding does not stop, the patient is reanaesthetised and the bleeding vessel is ligated. Sometimes, the tonsillar pillars may need to be stitched over a pack to control the bleeding.

Secondary haemorrhage is the result of infection. Bleeding is usually mild. Antibiotics, antiseptic mouth washes are given in addition to bed rest.

Surgical Trauma During tonsillectomy, trauma may occur to the pillars, soft palate, teeth or uvula.

Pulmonary complications pulmonary complications may result because of inhalation of blood or tonsillar tissue, with the result collapse, pneumonia or lung abscess may occur.

PERITONSILLAR ABCESS (QUINSY, PARATONSILLAR ABCEESS)

- Peritonsillar abscess is a complication of acute or chronic tonsillitis.
- There occurs accumulation of pus between the tonsil capsule and the tonsil bed. In most of the cases, pus collection occurs anterosuperior to tonsil but may sometimes occur laterally or posteriorly. A mixed bacterial flora of streptococci, staphylococci and pneumococci grows on culture of the pus.

Clinical Features
- The condition usually affects adolescents and is mostly unilateral. The patient complains of unilateral throat pain after a few days of sore throat. The pain gradually becomes severe and may radiate to the ear. Swallowing is markedly painful so the patient even allows the saliva to dribble out. The patient feels extremely ill.
- Examination shows a toxic patient, with the head inclined to towards the side of the abscess. There is trismus because of spasm of the pterygoid muscles. There is a unilateral swelling of the palate and pillars on the side of the abscess. The tonsil is displaced downwards and medially. The oedematous uvula is pushed towards the opposite side of the lesion. Cervical lymph nodes on the affected side are enlarged and markedly tender.

Treatment
- When pus is suspected, it should be drained. The following are the sites of drainage.
  1. The most important part of the swelling should be selected and drainage done.
  2. Alternatively, the intersection of an imaginary line drawn from the base of the uvula and another imaginary line drawn along the anterior faucial pillar is the site of drainage.
  3. Sometimes drainage is done through the supratonsillar crypt.

Adenoids

- Hypertrophied nasopharyngeal tonsils (adenoids) are usually the seat of infections in children between 3 to 6 years of age. As the child grows the size of the nasopharyngeal tonsils diminishes and they disappear by puberty.

Clinical Features
- Hypertrophied nasopharyngeal tonsils may produce symptoms because of their size. The symptoms may be nasal or aural.
- The common nasal symptoms include recurrent attacks of earache. Deafness and ear discharge. The other important symptoms include headache possibly due to infected materials in the nasopharynx and nocturnal cough because of postnasal discharge. Lack of appetite and mental dullness have also been attributed to adenoids.
- Examination reveals mucoid or mucopurulent discharge in the nose.
Throat examination reveals postnasal discharge and in a cooperative child, posterior rhinoscopy allow enlarged mass of adenoids on the posterosuperior wall of the nasopharynx.

Palpation of nasopharynx, though troublesome, may sometimes be needed to arrive the diagnosis. Adenoids have a feel like bag of worms.

In a long standing case, the child presents with a typical appearance called "adenoid facies". There is a dull look, pinched nostrils, open mouth, narrow maxillary arch, retracted upper lip and protruding teeth.

A lateral view X-ray of the nasopharynx may sometimes be done to show an adenoid mass.

- Complications of Adenoids
  - These include recurrent attacks of otitis media, secretory otitis media, maxillary sinusitis and orthodontic disturbances. Besides, such patients are likely to encounter speech problems, like rhinolalia clausa (closed nose voice). Chronic infection may lead to the development of adenoid cysts.

- Treatment
  - Conservative management includes decongestants (systemic and locally in the nose), systemic antibiotics to control the infection and antihistaminic preparations.

- Surgery
  - The operation of adenoidectomy is advocated if the size of the adenoids is interfering with nasal and Eustachian tube function or causing difficulty in speech and feeding. Adenoidectomy may be needed if the adenoids are thought to be the cause of recurrent upper respiratory tract infection or recurrent otitis media.
  - Since the problem of adenoids and tonsils usually coexist, the operation of adenoidectomy is done in the same sitting as the tonsillectomy. The operation is performed under general anaesthesia and oral intubation is preferred.