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Pharyngo Tonsillitis

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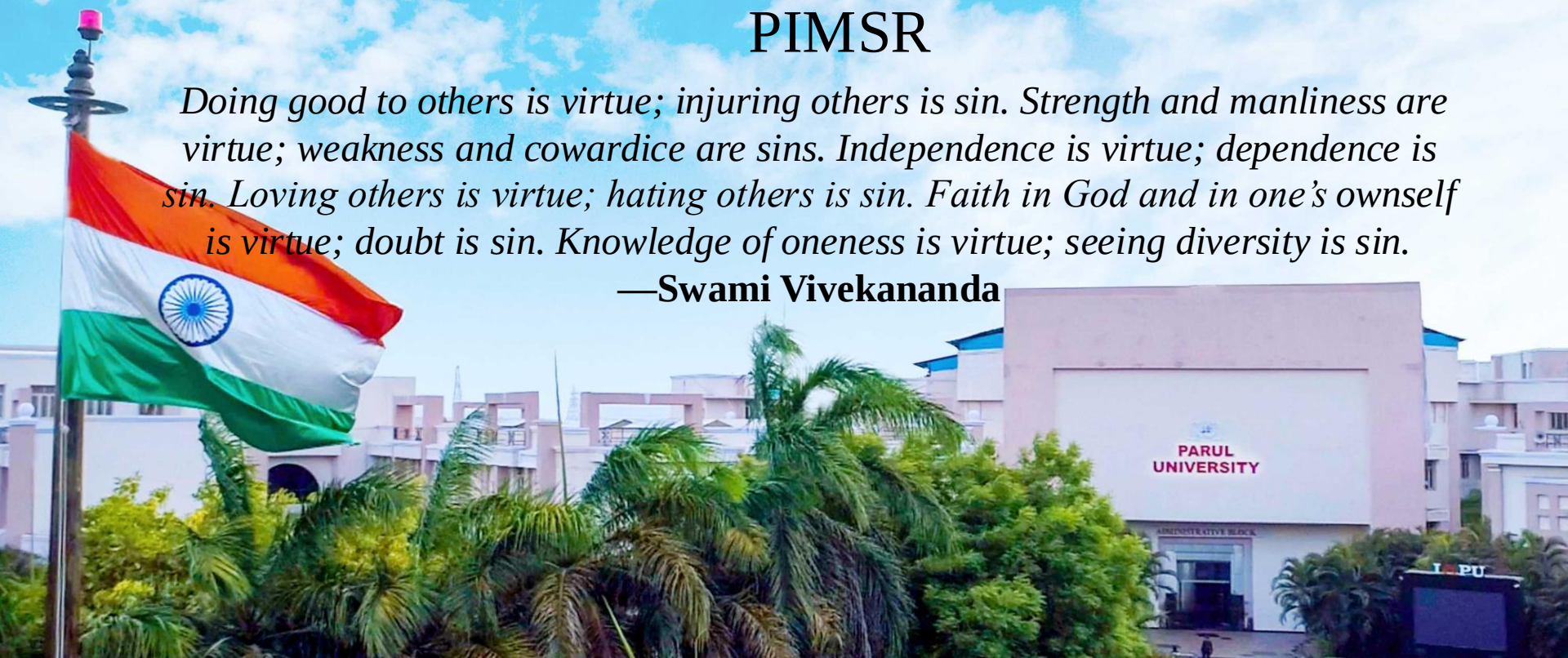
Doing good to others is virtue; injuring others is sin. Strength and manliness are virtue; weakness and cowardice are sins. Independence is virtue; dependence is sin. Loving others is virtue; hating others is sin. Faith in God and in one's ownself is virtue; doubt is sin. Knowledge of oneness is virtue; seeing diversity is sin.

—Swami Vivekananda



PHARYNGITIS

- **Irritative Pharyngitis:** Postnasal drip, Laryngopharyngeal reflux, Occupational and environmental exposures
- **Bacterial Pharyngitis: More common in children**
  - Group A-β hemolytic *Streptococcus pyogenes* (GABHS).
  - Hoarseness and cough are not suggestive of pharyngitis.
  - Majority of acute pharyngitis cases do not have Streptococcal tonsillitis-pharyngitis.
- Viral Pharyngitis
  - **Treatment:** Nonspecific and symptomatic.
  - Antibiotics for secondary bacterial colonization (Gram-negative and *S. aureus*)

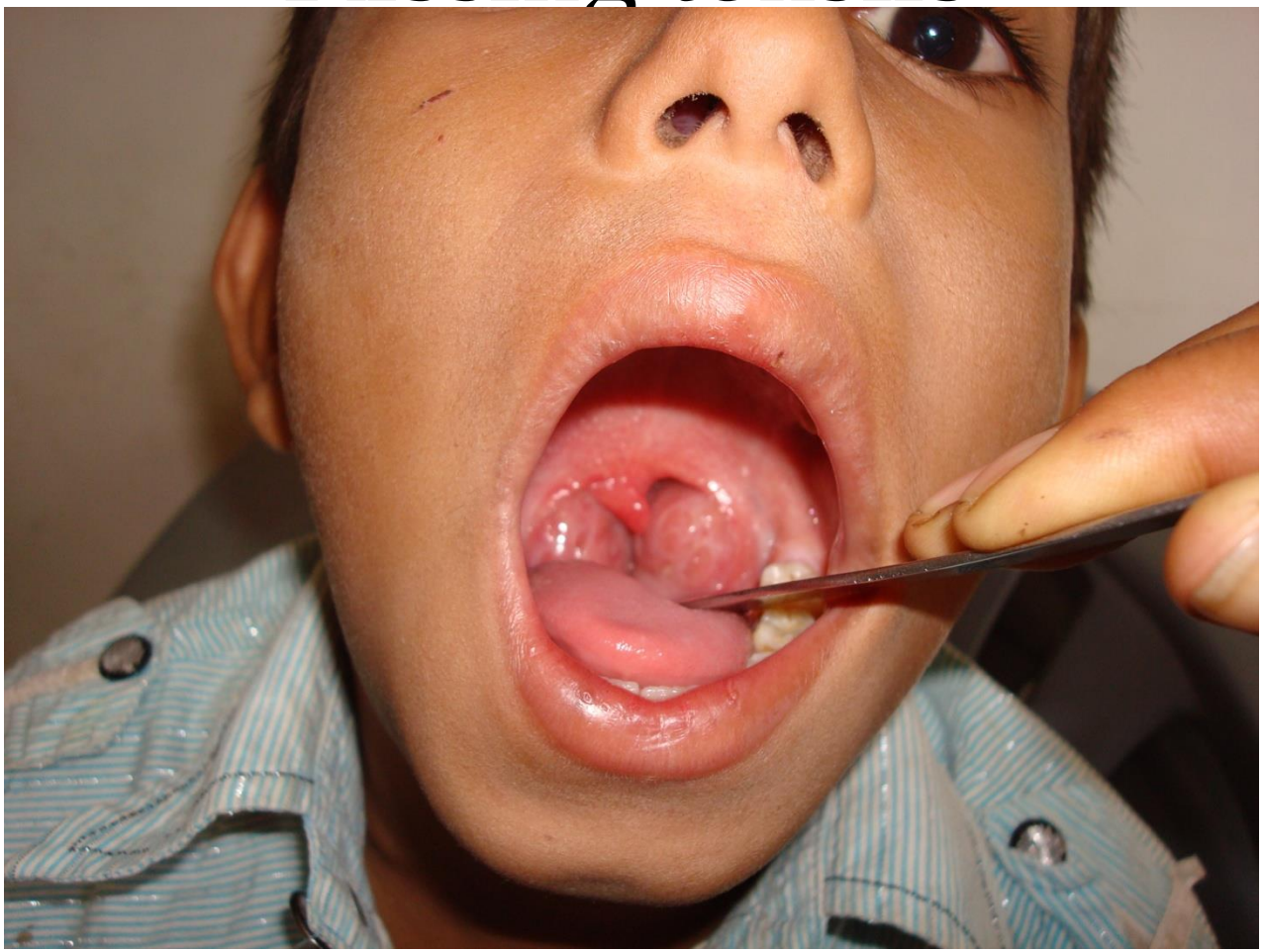
Viral Pharyngitis

- **Coxsackie virus infections**
  - **Herpangina:** Children with fever, sore throat and vesicular eruption surrounded by a zone of erythema on the soft palate and pillars.
  - **Acute lymphonodular pharyngitis:** Fever, malaise and sore throat. White yellow, solid nodules on the posterior pharyngeal wall
- **Cytomegalovirus:** Immunosuppressed transplant patients. Mimics infectious mononucleosis
- **Pharyngoconjuctival fever:** *Adenovirus*, sore throat, fever and conjunctivitis.
- **Measles:** Koplik's spots
- **Common cold** (*Rhinovirus*, *Corona virus*, *Parainfluenza virus*): sore throat, dysphagia and fever. Tonsils enlarged but no exudate.
- **Herpes simplex virus**: Exudative or nonexudative pharyngitis, with gingivostomatitis

INFECTIOUS MONONUCLEOSIS

- **Epstein-Barr virus**.
- **Clinical Features:** Older children and young adults
  - Fever, sore throat, exudative pharyngitis
  - Both tonsils are enlarged, congested and covered with membrane.
  - Marked local discomfort
  - Lymphadenopathy: Lymph nodes enlarged in the posterior triangle of neck
  - Hepatosplenomegaly.
- **Diagnosis:** Petechiae at the junction of hard and soft palate
- **CBC**: 50% lymphocytes, of which 10% are atypical. White cell count normal in first week and rises in second week.
- **Serological tests**: Monospot and Paul Bunnell or Ox-cell hemolysis test
- **Treatment: Symptomatic** and recovery may take weeks
- **Antibiotics**: No role except in secondary bacterial infection. Ampicillin, which causes skin rash in this condition, should be avoided.
- **Management of upper airway obstruction**: Airway obstruction can occur due to significantly enlarged tonsils: Managed with:
  - Nasopharyngeal airway
  - High dose steroids
  - Tonsillectomy or tracheostomy

Kissing tonsils



Bansal M. (2018) Diseases of Ear, Nose & Throat 2nd Ed. Jaypee Brothers

Acute TONSILLITIS

- ***Acute follicular tonsillitis:*** Crypts filled with purulent material. Yellowish spots of pus coalesce and form a membrane (*acute membranous tonsillitis*).
- **Etiology**
- **Group A-β hemolytic *Streptococcus pyogenes* (GABHS):** Acute rheumatic fever and poststreptococcal glomerulonephritis. Most common cause of *acute bacterial tonsillitis-pharyngitis*.
  - **Natural reservoir**: Skin, nasopharynx and oropharynx
  - **Spread**: Mostly through aerosolized microdroplets, less commonly by direct contact, and rarely through ingestion of contaminated non-pasteurized milk or food.
  - **Seasons**: Autumn and winter
- **Non-group A β-hemolytic streptococcal infection:** Clinically similar to GABHS. Less common.
- **Other bacteria:** S*taphylococci*, *pneumococci*, and *H. influenzae* mimic GABHS infection

GABHS Tonsillitis: **Clinical Feature**

- School going children (peak 5-6 years)
- **Throat pain**: Dry throat, fullness in throat or sore throat.
- **Dysphagia** or odynophagia
- **Fever:**
- **Earache**: Referred or acute otitis media.
- **Constitutional symptoms**: Headache, limb and back pain, malaise and constipation.
- **Abdominal pain**: Mesenteric lymphadenitis simulates acute appendicitis.
- **Tongue**: Dry and coated tongue.
- **Breath**: Fetid breath (halitosis)
- **Oropharynx**:
  - Hyperemia / edema of pillars, soft palate and uvula.
  - Tonsils red and swollen with yellowish spots of pus at the opening of crypts (*acute follicular tonsillitis*, *acute membranous tonsillitis*). Kissing tonsils.
- **Lymph nodes**: Enlarged and tender jugulodigastric lymph nodes.

Acute Tonsillitis: Diagnosis

- Sore throat and fever with cervical adenopathy and pharynx with exudative covering
- **Rapid strep tests for GABHS**: Latex agglutination or enzyme-linked immunosorbent assay (ELISA) from a swab. Specific (95%), sensitive (60-100%) than culture.
- **Throat culture**

Acute Tonsillitis: Treatment

- **Specific**: Antibiotics for 7-10 days
  - Penicillin or amoxicillin is drug of choice. No response (beta-lactamase producing organisms and anaerobes)
    - Amoxicillin + clavulanic acid or
    - Clindamycin or
    - Erythromycin + metronidazole
- **Symptomatic:** Analgesics and antipyretics aspirin or paracetamol.
- **General**: Bed rest and plenty of fluids.
- **Asymptomatic carriers:**
  - Family member having rheumatic fever
  - Family members getting recurrent streptococcal infection.

Acute Tonsillitis: Complications

- Scarlet fever
- Rheumatic fever
- Glomerulonephritis
- Acute otitis media
- Subacute bacterial endocarditis (SABE) streptococcus viridans.
- Chronic/Recurrent tonsillitis

- Peritonsillar abscess.
- Parapharyngeal abscess.
- Retropharyngeal space infection
- Cervical abscess: Suppuration of jugulodigastric lymph nodes

Differential Diagnosis of Membranous Pharyngitis-Tonsillitis

An exudative membrane forms over the medial surface of the tonsils due to pyogenic organisms.

- **Agranulocytosis:** Ulcerative necrotic lesions
  - Patient very ill, TC (50 to 2000), Polymorph neutrophil 5% or less.
- **Leukemia:** Children (acute lymphoblastic leukemia), adults (nonlymphocytic leukemia)
  - TC (>100,000), Progressive anemia, Bone marrow (Blasts cells)
- **Aphthous ulcers, Malignancy tonsil, Traumatic ulcer**
- **Diphtheria**
- **Infectious mononucleosis**
- **Vincent's angina**

Ac Follicular Tonsillitis vs Diphtheria

Features	Acute Follicular Tonsillitis	Diphtheria
Past History	Recurrent sore throat with fever	Contact with diphtheria patient
Diphtheria vaccination	Taken	Not taken
Age	No age bar	Children
Onset	Acute	Insidious
Throat Pain	Severe	Mild
Fever	High grade	Low grade
Hoarseness of voice and respiratory distress	Never	Present in advanced disease
Neck swelling due to cervical lymphadenopathy	Absent	Bull neck not uncommon
Pulse Rate	In proportion to fever	Out of proportion to fever and weak
Toxemia	Absent	In advanced disease
Tonsillar membrane	tonsil and easily removed	adjacent structures and leaves raw bleeding area.
Throat swab	Streptococci	*Corynebacterium diphtheriae*
Urine	No albumin	Albumin often present
First line of treatment	Antibiotics	Antidiphtheric serum
Mortality	Nil	High

Differential Diagnoses of White Patches on Tonsils

- **Trauma**: thermal injuries, radiotherapy
- **Bacterial infections**: Acute tonsillitis, diphtheria, Vincent's angina,
- **Fungal infections**: Candidiasis
- **Viral infections**: Herpes, infectious mononucleosis
- **Blood dyscrasias**
- **Chronic infections**: Tuberculosis, syphilis
- **Benign tumors**: Papilloma
- **Malignant:** Irregular white patch with everted margin and induration
- **Tonsillar cyst (Congenital or acquired):** Yellowish white
- **Tonsillar keratosis**: Whitish horny outgrowths
- **Tonsillolith:** Hard whitish lesion
- **Aphthous ulcer**: Intensely painful

FAUCIAL DIPHTHERIA

- Gram-positive *Corynebacterium diphtheriae*
- Child ill and toxic, slow onset of local discomfort, Fever
- Dirty gray tenacious membrane extends beyond the tonsils and leaves a raw bleeding surface.
- Larynx and nasal cavity can also be affected.
- Cervical lymph nodes (jugulodigastric): enlarged and tender "bull-neck" appearance.
- Urine may show albumin.
- **Smear and culture of throat swab will reveal *Corynebacterium diphtheriae***

FAUCIAL DIPHTHERIA – Complications & Treatment

- **Heart:** Myocarditis, cardiac arrhythmia, and acute circulatory failure;
- **Neurological**: Paralysis of palate, diaphragm and ocular muscles.
- **Laryngeal:** Airway obstruction
- **Treatment: Antidiphtheric serum (ADS)**: **20000 to 40000 units; 80000 to 120000 units**
- **Antibiotics**: Benzyl penicillin 600 mg, Erythromycin 500 mg 6 hourly

TONSILLAR CONCRETIONS / TONSILLOLITHS

- Tonsillolith (calculus of the tonsil): Blocked tonsillar crypt, retention of debris, inorganic salts of calcium and magnesium
- **Clinical Feature:** ulcerate on medial surface of tonsil; bacterial growth (halitosis and sore throat), Whitish foul-tasting, foul-smelling cheesy material expressed from tonsils.
- Diagnosed by palpation or probing.
- **Treatment: Conservative (**Expression of concretions/cheesy material and cauterization with silver nitrate
- **Tonsillectomy**: Persistent pain, halitosis, or foreign body sensation.

INTRATONSILLAR ABSCESS

- Accumulation of pus within the blocked tonsillar crypt can occur in cases of acute follicular tonsillitis.
- ..**Clinical Features**
- Marked local pain and dysphagia.
- Tonsil swollen and red.
- ..**Treatment**
- Antibiotics
- Drainage of the abscess
- Tonsillectomy.

TONSILLAR CYST

- Blocked tonsillar crypt may present as a yellowish swelling over the tonsil
- ..Usually they are asymptomatic.
- ..If symptomatic, it is drained.

KERATOSIS PHARYNGITIS

Clinical Features

- Benign condition
- White or yellowish dots or horny excrescences on the surface of tonsils, pharyngeal wall or lingual tonsils.
- Excrescences: Firmly adherant and cannot be wiped off. They are the result of hypertrophy and keratinization of epithelium.
- No features of acute follicular tonsillitis such as sore throat, fever, cervical nodes and exudates.
- Patients just notice them during their self throat examination and get alarmed.

Treatment

- The spontaneous regression does occur, so no specific treatment is required.
- Reassurance

Compensatory hypertrophy of Lingual Tonsils

- Compensatory hypertrophy of lymphoid tissue may occur in response to repeated infections especially in tonsillectomy patients.

Clinical Features

- ..Discomfort on swallowing
- ..Feeling of lump in the throat
- ..Dry cough
- ..Thick voice
- ..Lingual tonsil are enlarged, and congested or studded with follicles
- ..Cervical lymph nodes are enlarged.

Treatment

- ..Antibiotics
- ..Diathermy coagulation or excision of lingual tonsils (by conventional or laser surgery).

Lingual Tonsillar Abscess

Clinical Features:

- Severe unilateral dysphagia and excessive salivation
- Pain in the tongue
- Enlarged and tender jugulodigastric nodes.

Complications: Laryngeal edema.

Treatment: Antibiotics, analgesics, proper hydration and incision and drainage of the abscess.

Chronic Tonsillitis

- Children and young adults,
- Micro-abscesses in the lymphoid follicles of the tonsils, walled off by fibrous tissue.

Aetiology

- Subclinical infections of tonsils
- Improperly treated Acute tonsillitis: Chronic/Recurrent tonsillitis can occur due to incomplete resolution of tonsil infection
- Chronic infections of the neighbouring structures: Adenoids, sinusitis and dental carries.

Chronic Tonsillitis - Pathology

- **Chronic Follicular tonsillitis:** Yellowish spots are seen on medial surface of tonsils because of the infected cheesy debris filled in the tonsillar crypts.

- **Chronic Parenchymatous tonsillitis**: Hyperplasia of tonsillar lymphoid tissue results into enlargement of the tonsils. They can interfere with
  - swallowing,
  - speech and
  - Respiration: Obstructive sleep apnoea (OSA) and cor pulmonale

- **Chronic Fibroid tonsillitis**: Due to fibrosis, tonsils not enlarged but infected (septic) tonsils leads to recurrent episodes of sore throat.

Chronic Tonsillitis – Clinical Features

- **Enlarged tonsils and purulent debris in the tonsillar crypts**.
- **Chronic/recurrent sore throat**:
- **Halitosis**:Foul breath
- **Bad taste in mouth**
- **Speech**:Thick speech / rhinolalia clausa.
- **Dysphagia:**Difficulty in swallowing
- **Respiration**: Snoring and obstructive sleep apnoea (OSA)
- **Anterior tonsillar pillars**: Flushed and congested
- **Jugulodigastric lymph nodes**: Enlarged and tender
- **Chronic parenchymatous tonsillitis**: Enlarged tonsils **-** OSA, Cor pulmonale.
- **Chronic follicular tonsillitis**: Yellowish beads of pus
- **Chronic fibroid tonsillitis:** Tonsils not enlarged. Purulent debris or cheesy material can be expressed on pressing anterior tonsillar pillar.

Chronic Tonsillitis -Treatment

- **Conservative/medical treatment**: Rx of predisposing factors and infection of the neighbouring structures such as adenoids, nose, sinuses and teeth.
- **Surgical treatment**: Patients who are refractory to conservative treatment, and have recurrent infections or significant enlargement of the tonsils are advised for tonsillectomy

Chronic Tonsillitis - Complications

- **Peritonsillar abscess**: It can lead to **parapharyngeal abscess**.
- **Intratonsillar abscess**: It can lead to peritonsillar abscess
- **Tonsillar cyst and tonsilloliths**
- **Systemic infections:** Act as focus/nidus of infection that can cause rheumatic fever and heart disease, acute glomerulonephritis, and skin and eye diseases.

MCQs

1. Which of the following is not the feature of Vincent's angina?: **a.** Gingivitis; **b.** Stomatitis; **c.** Ulceration of tonsils; **d.** Herpes viral infection
2. Which is not true for infectious mononucleosis?: **a.** Sore throat and fever; **b.** Generalized lymphadenopathy; **c.** Splenomegaly; **d.** Atypical lymphocytes in peripheral smear; **e.** Herpes Zoster virus infection
3. Which is not true for herpangina?: **a.** Self limiting infection; **b.** Children; **c.** Sore throat; **d.** Fever; **e.** *Epstein-Barr virus* infection

MCQs Answers

- 1. d;
- 2. e;
- 3. e

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Thank You!