UPPER RESPIRATORY TRACT INFECTIONS
INTRODUCTION

• Most common problem in children below 5 years.

• In this age group they get about 6-8 episodes per year.

• It includes infections of nasal cavity, throat, nasopharynx, ears, sinuses.
ACUTE PHARYNGITIS

• Nasopharyngitis:- Nasal symptoms are more prominent.

• Tonsillopharyngitis:- Throat symptoms are more prominent
ETIOLOGY

• Viruses:- rhinoviruses, influenza, parainfluenza, corona, adenoviruses are common.

• Bacterial:- Group A-beta hemolytic streptococci, (GABHS) is commonest. Others are H. influenza, C.diptheriae.
CLINICAL FEATURES

• Fever
• Running nose
• Sore Throat
• Conjuctival congestion
• Pain in deglutition
• Cough

Depending on the presenting symptoms one should try to differentiate between viral & bacterial etiology, even though exactly not possible.
ACUTE PHARYNGITIS
• Acute onset,
• Red eyes
• Rhinorrhea
• Exanthema,
• Diarrhea may be present.
• Cough more prominent.
• Pharyngeal exudates & cervical lymphadenopathy less often

Indicates involvement of more than one mucus membrane
BACTERIAL

• Acute onset, pain in throat, little nasal discharge & less cough

• More pharyngeal congestion, thick exudates, patchy tonsils & tender cervical lymphadenopathy
COMPLICATIONS

• Suppurative:- Retropharyngeal abscess, peritonsilar abscess, otitis media, mastoiditis, sinusitis.

• Nonsuppurative:- Acute rheumatic fever & acute glomerulonephrits.
• Diagnosis is essentially **clinical**

• Blood count, ESR, CRP level can help but have a low predictive value
• **Throat culture is gold standard** but a positive result does not reliably distinguish acute streptococcal pharyngitis from asymptomatic carriage.

• **Rapid antigen detection test (RADTS)** is also available.

• **ASO** has **NO** role in diagnosis of acute pharyngitis as it takes several weeks to become positive.
TREATMENT

• Supportive treatment

• Rest, antipyretics, normal saline nasal drops, sometimes first generation antihistaminics for troublesome coryza.
• Viral pharyngitis does not need antimicrobial treatment

• GABHS is self-limiting disease but antibiotics are given to prevent morbidity & mortality.
• **Penicillin** is the drug of choice

• But **Amoxicillin** is a good alternative & widely used 40 mg/kg/day is given for 10 days.

• **Erythromycin, Azithromycin** and **First Generation Cephalosporins** can also be given.
TONSILLECTOMY

Indicated only if seven or more infections of the tonsils per year
ACUTE SUPPURATIVE OTITIS MEDIA

• OTITIS MEDIA is defined as inflammation of the middle ear.

• Children are more prone for ASOM because, the Eustachian tubes communicating throat with ears are straight & short
TYPES

1. Acute otitis media (AOM)
2. Chronic supportive otitis media (CSOM)
3. Recurrent otitis media: Three or more episodes of AOM in six months, 4 or more in one year.
ETIOLOGY

• BACTERIA:-
  – Streptococcus pneumonia,
  – Haemophilus influenzae
  – Moraxella catarrhalis

• VIRUSES:-
  – RSV,
  – Influenza.
DIAGNOSIS

Diagnosis is done by clinical examination

by Otoscope
The eardrum is inflamed & tense.
COMPLICATIONS

Two major complication

1. Pyogenic Meningitis

2. Deafness
TREATMENT

• It is treated with Antibiotics **Amoxicillin** (40mg/kg/day)

• If severe 3rd **Generation Cephalosporins** are used.
• Treatment is continued for complete 10 days to prevent complications & chronicity.

• For relief of pain, paracetomol is used.

• No role of local antibiotic drugs in ASOM.
• Partially treated or untreated cases may lead to **middle ear effusion** (MEE)

• MEE if not monitored can give rise to DEAFNESS.

• To avoid this **TYMPANOMETRY** is done every two weekly till it resolves

• Sometimes **TYMPANOCENTESIS** is needed
ACUTE SINUSITIS

• In children Maxillary & Ethmoid sinuses are fully developed at birth. The Sphenoid sinus by 3 years & Frontal sinus at 7 to 8 years.

• So infection of sinuses is common & associated by NASOPHARYNGITIS
CLINICAL FEATURES

- Nasal Congestion
- Purulent Nasal Discharge
- Fever
- Cough
- Halitosis
- Headache and Facial pain – rare in children
TREATMENT

• **Amoxycillin or Amoxy-clav** - 40mg / kg / day or **3rd generation cephalosporins** if severe.

• Treatment should be given for 14 days or 1 week beyond symptom resolution.
Thank You