



ACUTE OTITIS MEDIA AND OME.

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Introduction.

- ▶ Acute inflammation of the middle ear, <3 weeks.
- ▶ Often associated with viral URTI.
- ▶ Most common in children <5 years.
- ▶ Recurrent AOM is :
 - ✓ atleast 4 episodes/year
 - ✓ Atleast 3 episodes in 6 months

Epidemiology

- ▶ 50-85% of children under 3 years will have at least 1 episode.
- ▶ Peak incidence 6-15 months of age
- ▶ Most common in the cold seasons of the year
- ▶ Occurs in only 20% of adults

pathology

- ▶ Eustachian tube and nasopharynx are lined with respiratory mucosa.
- ▶ Both respond to triggers with : edema- narrowing of lumen- negative middle ear pressure
- ▶ Influx of pathogens from the nasopharynx

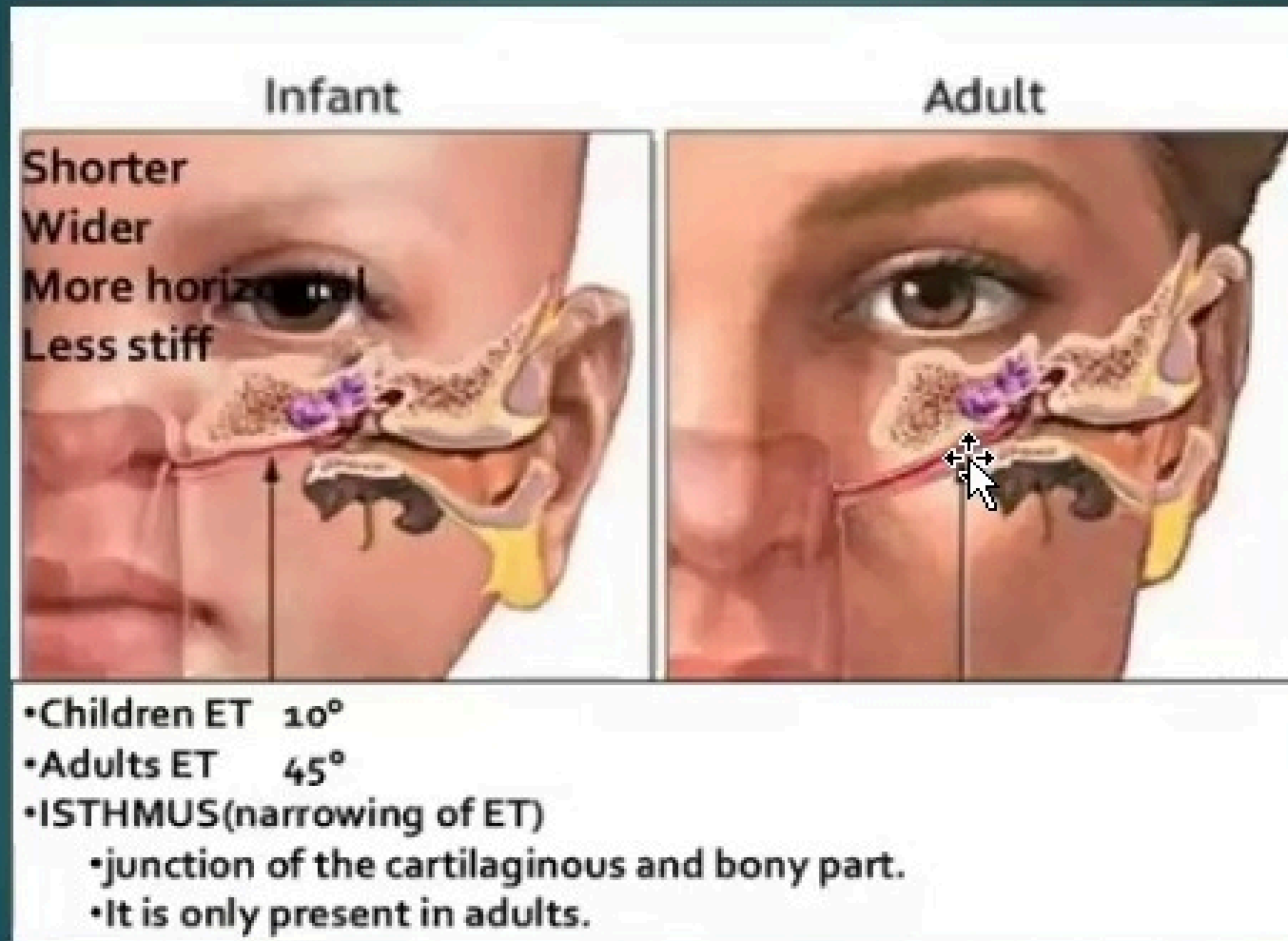
Triggers

1. URTIs
2. Allergy
3. GERD
4. Adenoid hypertrophy

Aetiological agents

1. Viruses (30-70%)
 - ▶ rhinovirus
 - ▶ RSV
 - ▶ Influenza/ parainfluenza
2. Bacterial (55%)
 - ▶ Strep. Pneumonia (44%)
 - ▶ H. influenza (41%)
 - ▶ M.catarrhalis (14%)
 - ▶ Gram negative enteric bacteria
 - ▶ Staph geuris
3. Combined (15%)

Risk factors in children



2. Genetic predisposition

- ❖ Eustachian tube dysfunction
- ❖ Allergy spectrum

3. Bottle feeding in the first 3 months.

- ❖ Breast milk has oligosaccharides, lactoferrin and surface immunoglobulin A which prevent bacteria colonization.

4. Incorrect posture while breast feeding

5. Cleft palate

6. Parental smoking

7. overcrowding- large families or daycare

8. immunosuppression

Signs and symptoms

1. Otalgia- not always common
2. Fever
3. Hearing loss/ delayed speech
4. Tagging of ears
5. Headache
6. nausea
7. Cough
8. Rhinitis
9. conjunctivites



Physical examination

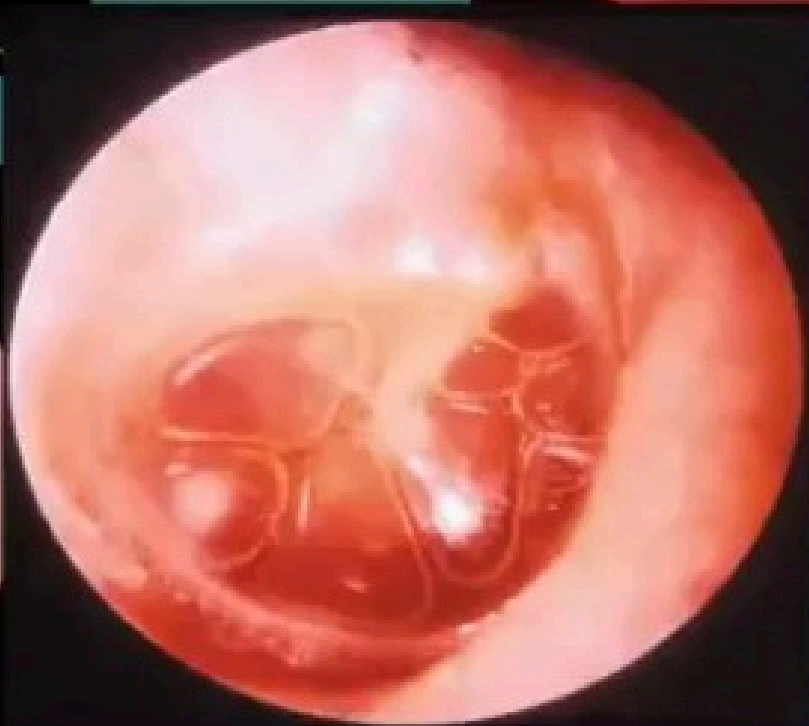
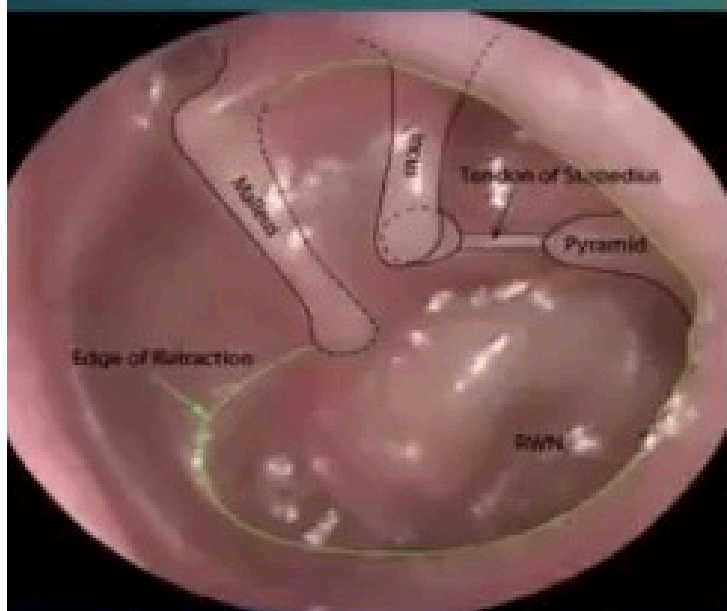
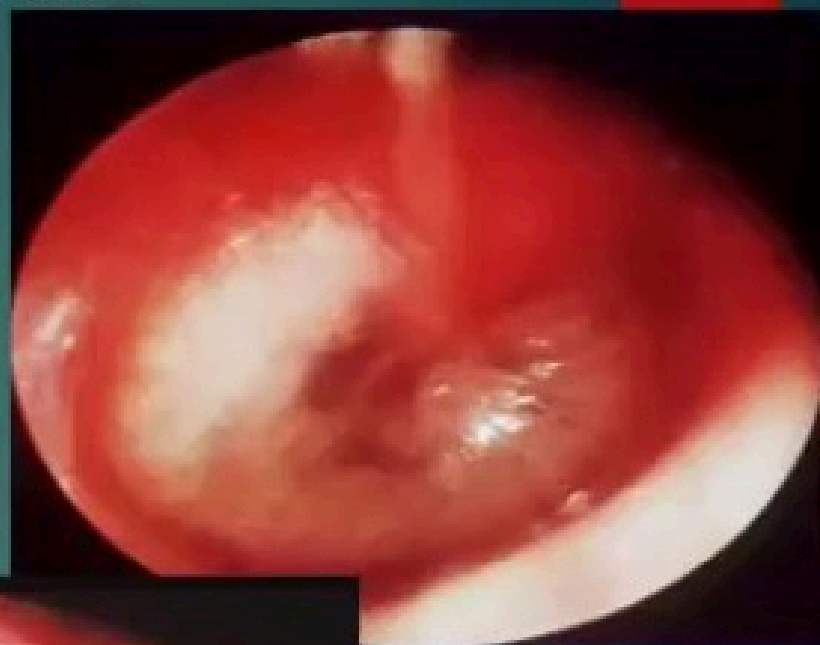


- ▶ Red/ opaque TM
- ▶ Retracted TM
- ▶ Immobile/ hypo- mobile TM
- ▶ Fluid effusion
- ▶ Retraction pockets
- ▶ Bullous myringitis

Images of tympanic



© earallas.



Physical examination

1. Anteriorly displaced pinna
2. Mastoid tenderness
3. otorrhoea



complications

1. Acute mastoiditis
2. Facial nerve palsy
3. Otitis media effusion
4. Hearing loss
5. Abscess formation
6. Recurrent otitis media
7. Perforation otitis media
8. Tympanic membrane perforation

Rare complications

1. Intracranial complications

- ▶ Meningitis
- ▶ Extradural abscess
- ▶ Lateral sinus thrombosis
- ▶ Otitic hydrocephalus
- ▶ Encephalitis

2. Intrtemporal

- ▶ Labyrinthitis
- ▶ petrositis

treatment

1. Antibiotics- indication

- ▶ Children less than 6 months
- ▶ Bilateral and/ or recurrent AOM
- ▶ Children 6 months to 2 years with severe illness
- ▶ Tympanic membrane perforation
- ▶ Persistent fever >72 hours

2. analgesics- paracetamols, NSAIDs

3. Decongestants +/- antihistamines and nasal steroids

2-48 hours/ 48-72 hours

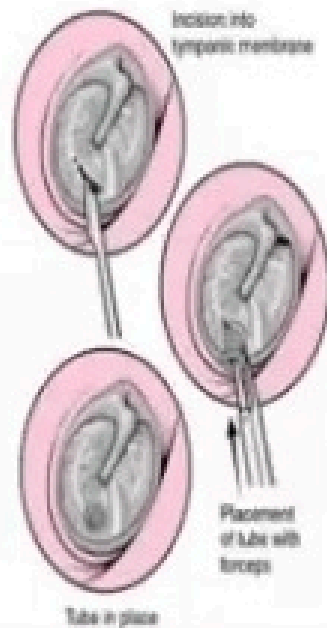
► If no Improvement

1. No antibiotics > antibiotics
2. On antibiotics > change antibiotics
 - ✓ Amoxicillin 50-100mg/kg body weight/day
 - ✓ Amoxicillin-clavulanic acid 875/125 mg/day ;
90/6.4mg/kg
 - ✓ Ceftriaxone 50mg/kg or 1-2 g in adults/day
 - ✓ Macrolides in patients with penicillin resistance
 - ✓ Treatment duration 5-10 days

Recurrent AOM

Recurrent AOM treatment

- +Tympanostomy



OTITIS Media with EFFUSION

- ▶ Also known as
 - ✓ Middle ear effusion
 - ✓ Serous otitis media
 - ✓ Secretory otitis media
 - ✓ Glue ear

definition

- ▶ Chronic accumulation of mucus within the middle ear cleft and sometimes mastoid air cells.
- ▶ Chronic = 12 or more weeks
- ✓ Fluid is sterile
- ✓ Inscidious onset
- ✓ Commonly occurs in children
- ✓ Tympanic membrane is intact but retracted
- ✓ Hearing loss fluctuating or constant

epidemiology

- ▶ Bimodal prevalence at 2 and 5 years.
- ▶ Occurs commonly cold season
- ▶ Male > females
- ▶ 50% children before the 1st birthday and 80% before the 5th birthday

Aetiology

- ▶ Eustachian tube obstruction due to;
 1. Adenoid hypertrophy
 2. Tumors- Nasopharyngeal carcinoma
 3. Palatal defects- cleft palate
 4. Barotrauma
 5. Hyperbaric oxygen therapy
 6. Edema secondary to radiation of HN
- ▶ Spread of Infections
 1. Chronic adenoiditis
 2. Chronic rhinosinusitis
 3. Chronic tonsillitis
 4. HIV

Contd.

- ▶ Increased secretions

1. Allergy
2. Smoking
3. GERD

- ▶ Infections

1. Unresolved AOM
2. Viral infections

Host risk factors

- ▶ Same as AOM
- ▶ Race- Caucasians
- ▶ Sibling with history OME
- ▶ Down's syndrome, cleft palate, ISS
- ▶ Cystic fibrosis
- ▶ Maxillectomy
- ▶ Prolonged intubation
- ▶ Poor mastoid pneumatisation

Environmental risk factors

- ▶ Same as AOM
- ▶ Daycare centres with >4 children
- ▶ Use of pacifiers
- ▶ Low SES

Clinical presentation

1. Deafness
2. Tinnitus
3. Aural fullness
4. Hearing loss
5. Poor school performance
6. Delayed speech

Otoscopy findings



Audiometry findings

- ▶ Conductive hearing loss with air- bone gap 20-



Medical treatment

1. Systemic and local decongestants
 - ▶ Pseudoephedrine, chlorpheniramine, oxymetazoline drops and xylometazoline drops
2. Antihistamines
3. Nasal steroid sprays and drops
4. Valsava maneuver- aeration of ET

Surgical management

- ▶ Insertion of grommets
- ▶ Adenoidectomy
- ▶ Tonsillectomy
- ▶ Cortical mastoidectomy
- ▶ Long stay VT in adults

Types of grommets



Angled Tab Bobbin Myringotomy Tubes



Armstrong Beveled Myringotomy Tubes



Armstrong Grommet Myringotomy Tubes



Baxter Bevel Bobbin Myringotomy Tubes



Baxter Bevel Button Myringotomy Tubes



Collar Button Myringotomy Tubes



Donaldson Myringotomy Tubes



Feuerstein Split Myringotomy Tubes



Mini-Grommet Myringotomy Tubes



Mini-Tef Myringotomy Tubes



Paperella II Myringotomy Tubes



Paperella Myringotomy Tubes

Sequelae of OME

- ▶ TM atelectasis
- ▶ TM atrophy- retraction pockets- cholesteatoma
- ▶ Ossicular necrosis
- ▶ tympansclerosis