Today's topics
Disease of the Middle Ear
OTITIS MEDIA

Presented By-

DR. G H M SHAHIDUL HAQUE

Disease of the Middle Ear

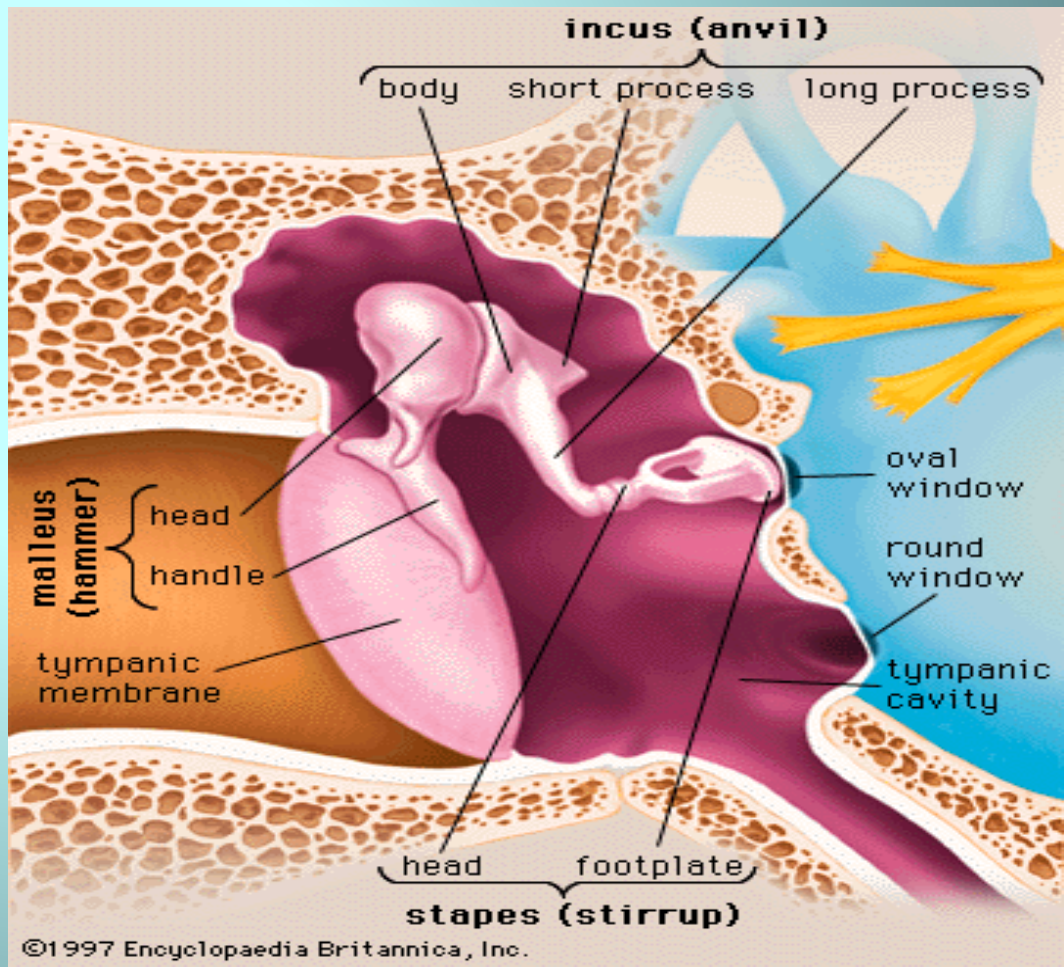
Congenital

Inflammatory

Traumatic

Neoplastic

Others



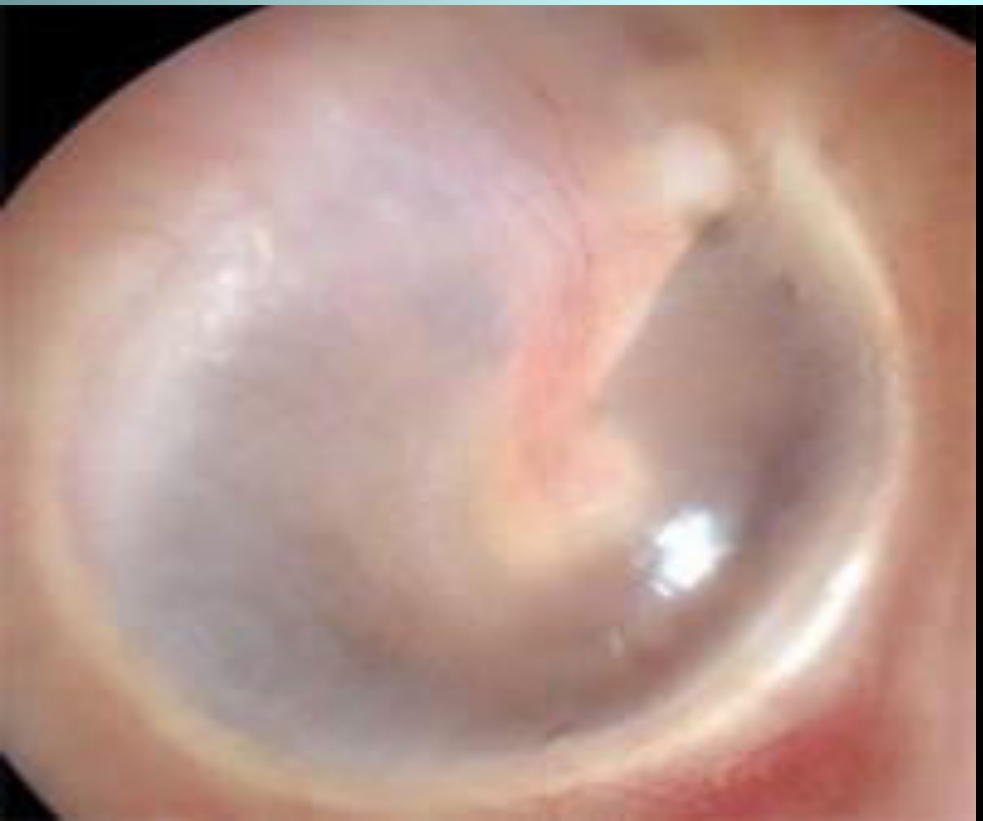
Otitis media

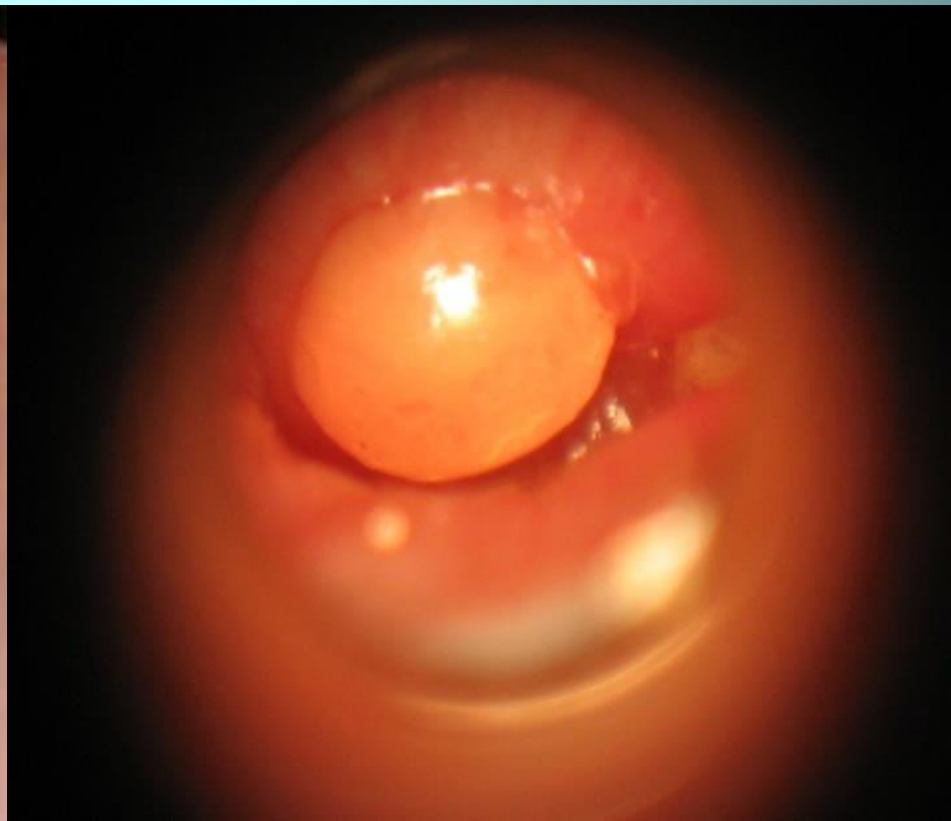
Definition- an inflammation of part or all of the mucosa of the middle ear cleft.

Middle ear cleft comprises- of the eustachian tube, tympanic cavity, attic, mastoid antrum, mastoid air cells, and aditus.

OTITIS MEDIA

- Suppurative -
  - Acute
  - Chronic
- Non- Suppurative-





Acute Suppurative otitis media

Definition:

It is the acute inflammation of middle ear mucosa by pyogenic organism.

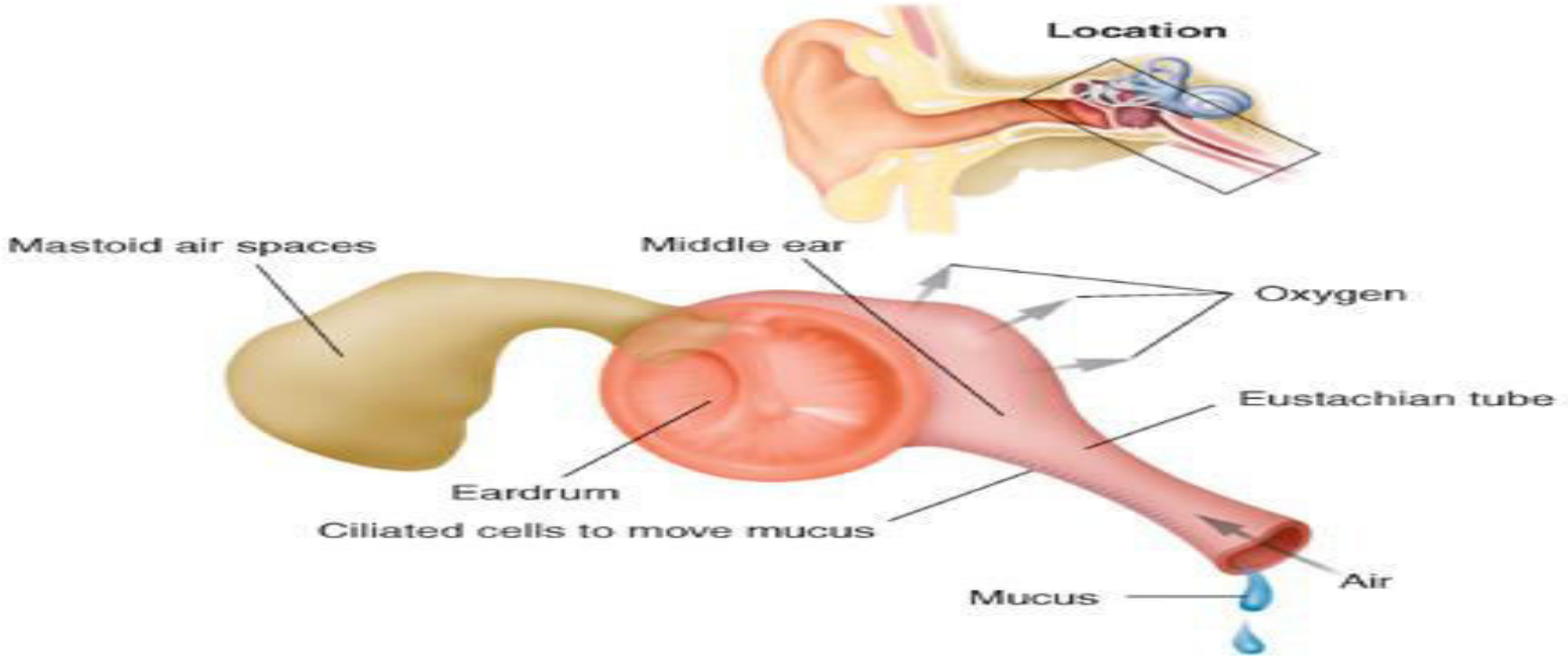
Aetiology:

- More common in infant and children of lower socio-economic group.
- following viral infection of upper respiratory tract.

Predisposing Factors:

1. Recurrent attacks of common cold , RTI infection and viral infections.
2. Infections of tonsils and adenoids.
3. Chronic rhinitis and sinusitis.
4. Nasal allergy.
5. Nasopharyngeal infection/ tumours.
6. Packing of nose or nasopharynx
7. Cleft palate.
8. Malnutrition
9. Over crowding
10. Operation in the nose & throat.

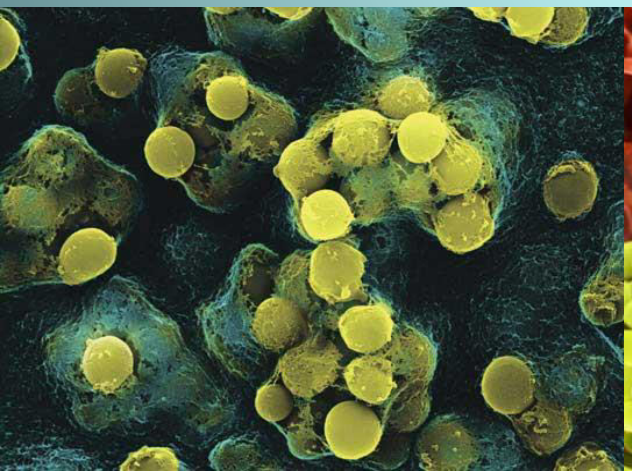
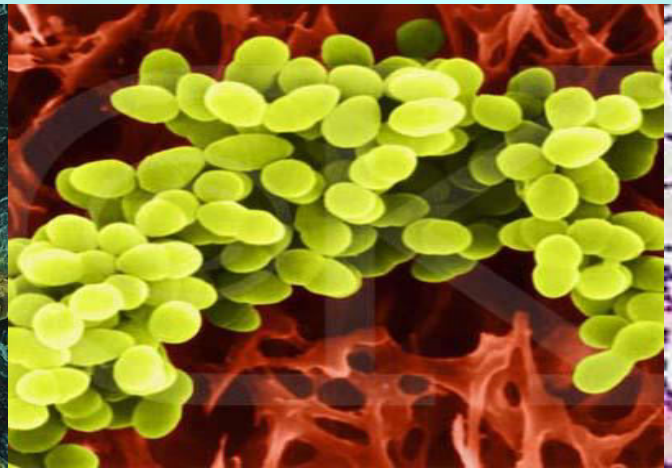
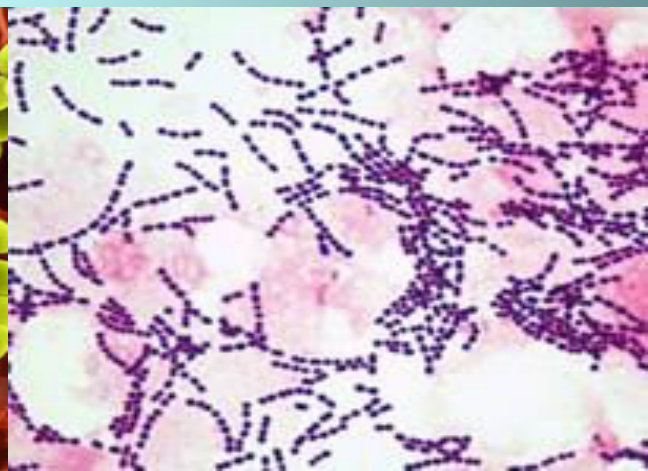
Virus infection of upper respiratory tract breaks the mucosal barrier of middle ear cleft and pyogens invade as 2ndary invaders.



The eustachian tube connects the middle ear with the back of the nose. It functions to allow oxygen into the middle ear and mucus produced in the middle ear to drain away into the nose.

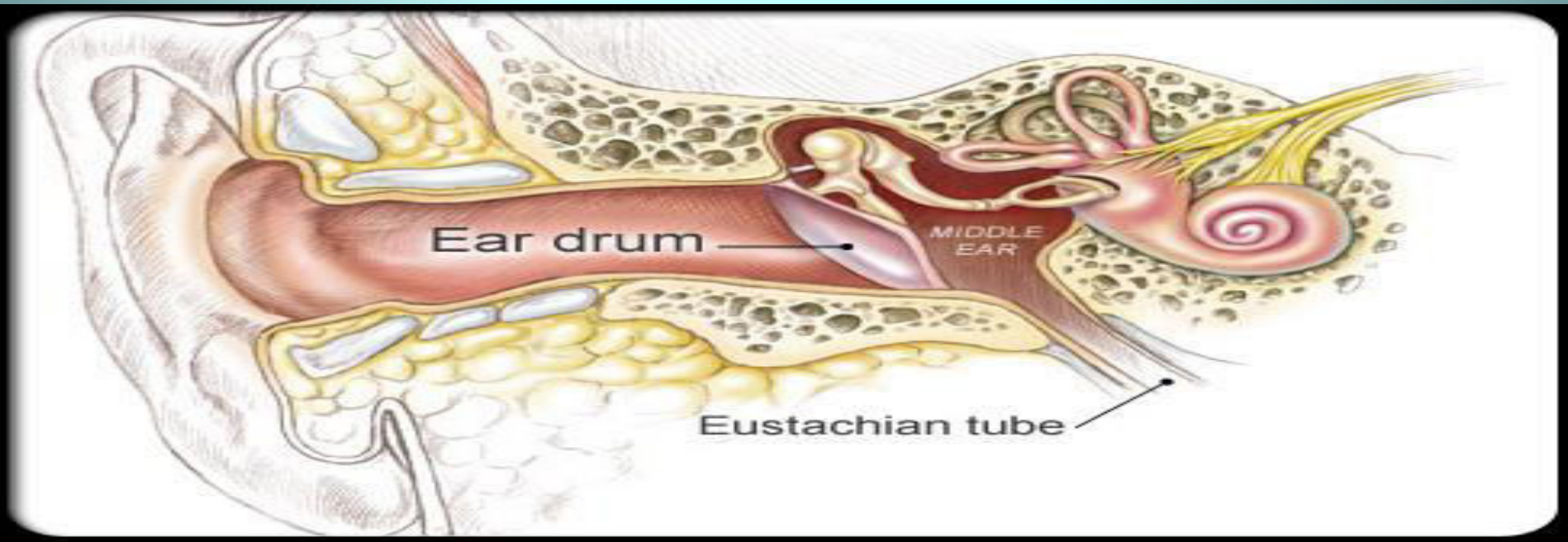
Bacteriology

- In infant and children most common organisms are - Streptococcus pneumoniae (30%),
  - Haemophylus influenzae (20%) and
  - Moraxella catarrhalis (12%)
- Other organisms include-
  Streptococcus pyogens,
  Staphycoccus aureus and
  Pseudomonas aeruginosa.

Routes of infection

1. Via Eustachian tube
   - -Lymphatic's
   - - Lumen
2. Via external ear-Traumatic perforation of TM
3. Blood born.

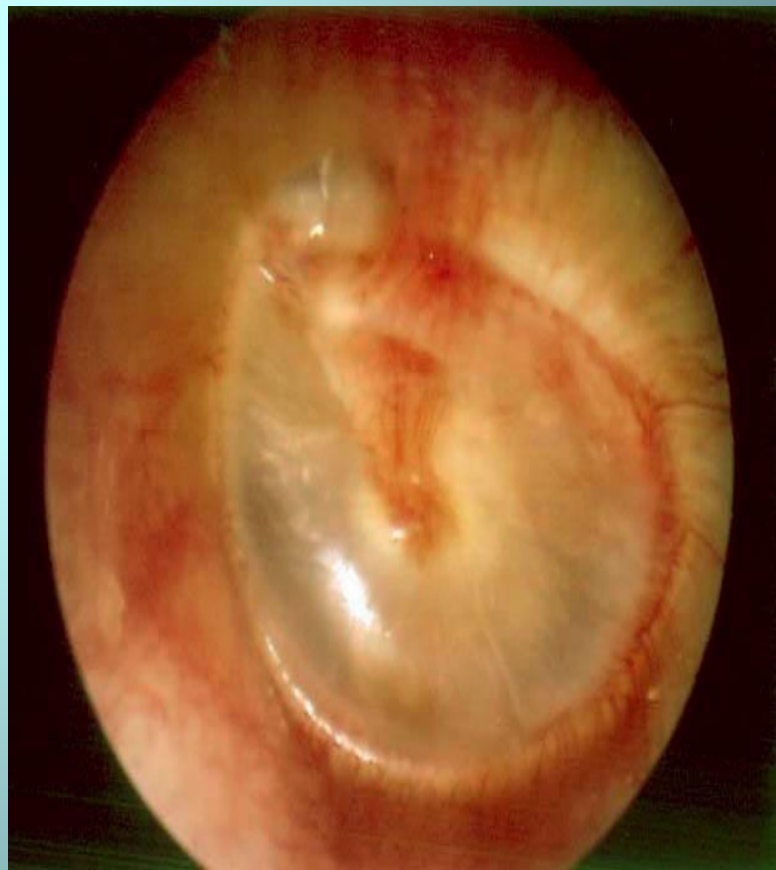


Stages of the Disease:

1. Stage of tubal occlusion- Oedema and hyperaemia of nasopharyngeal end of Est.tube blocks the tube > absorption of air and negative intratympanic pressure.
2. Stage of pre-suppuration- if tubal occlusion is prolonged, pyogenic organism invade tympanic cavity causing hyperaemia > inflammatory exudate > TM congested.
3. Stage of suppuration- marked by formation of pus in the middle ear. TM starts bulging to the point of rupture.
4. Stage of resolution- TM ruptures with release of pus and subsidence of symptoms. Inflammatory process begins to resolve.
5. Stage of complication- resolution may not take place if the organism is virulent or resistance of patient poor.

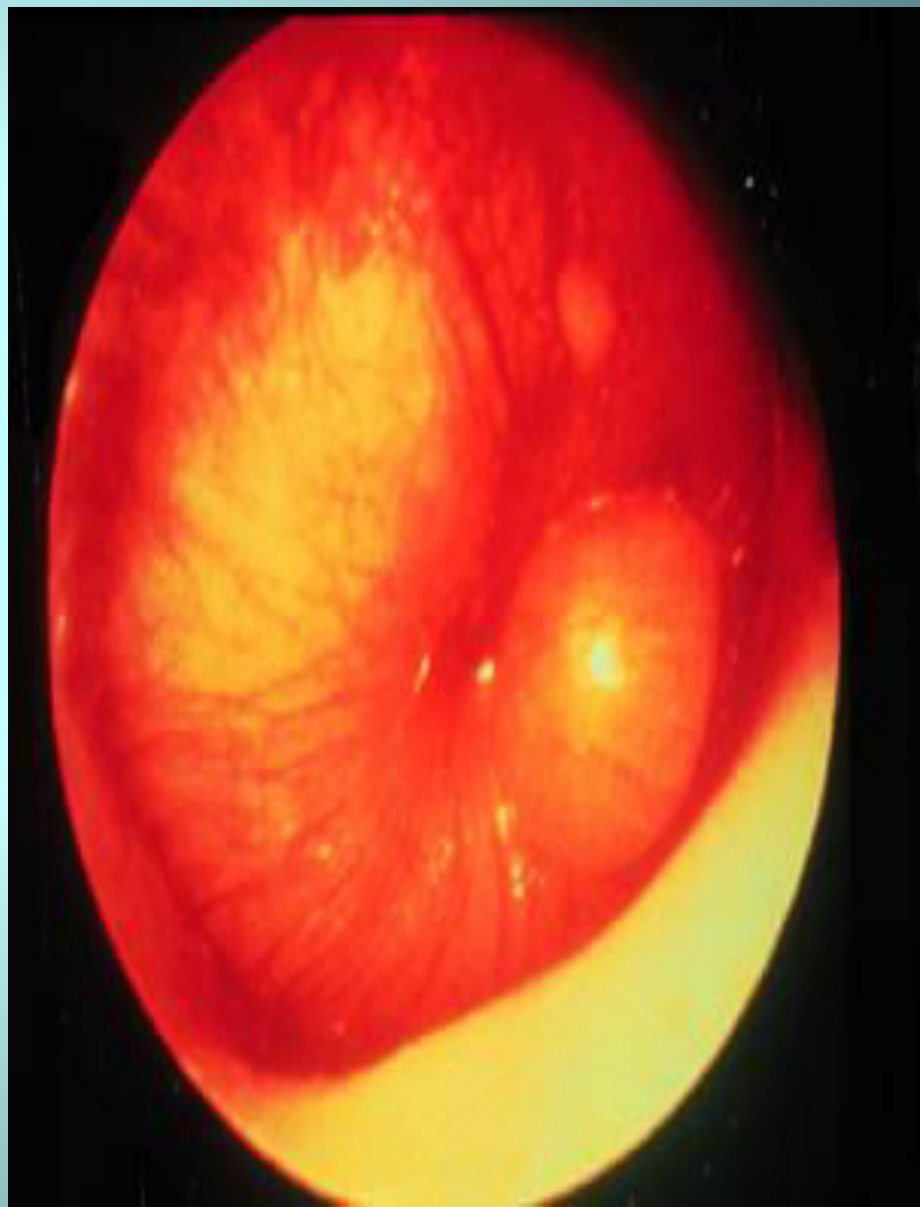
Stage of tubal occlusion:

- Fullness and blocked ear.
- Mild earache.
- Loss of hearing (Mild).
- Ear drum will be retracted.
- May be seen fluid in middle ear.



Stage of Suppuration:

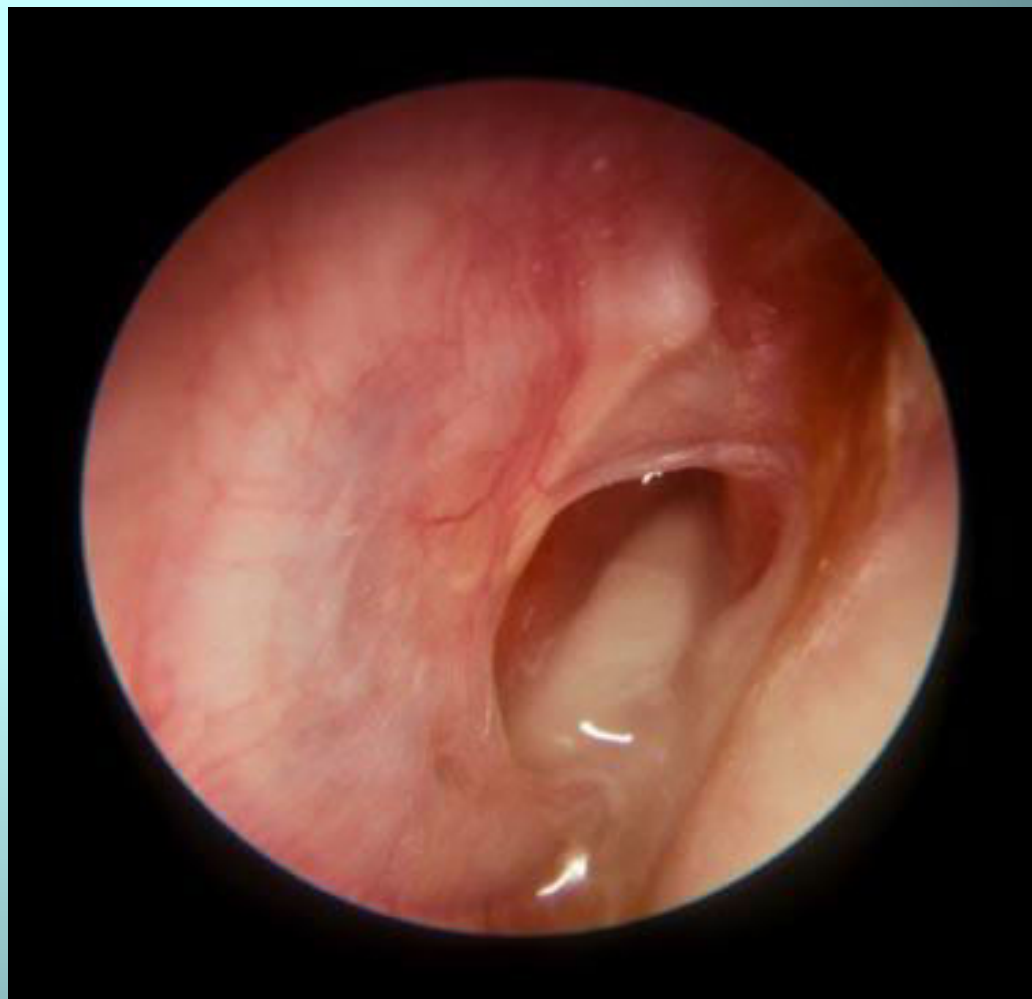
- *Before perforation-*
- Pain usually severe.
- Deafness increase.
- Raised temp.
- Children-restless, crying & passing sleepless night
- Red & bulged TM
- A yellow spot is seen in the TM where it will rupture mainly post inferior quadrant.



Stage of Suppuration

After perforation-

- Pain disappear.
- Deafness increases.
- Discharge in EAC.
- Perforation in the TM.



Stage of resolution :

- Discharge disappear.
- Congestion of TM subsides.
- Perforation heals.

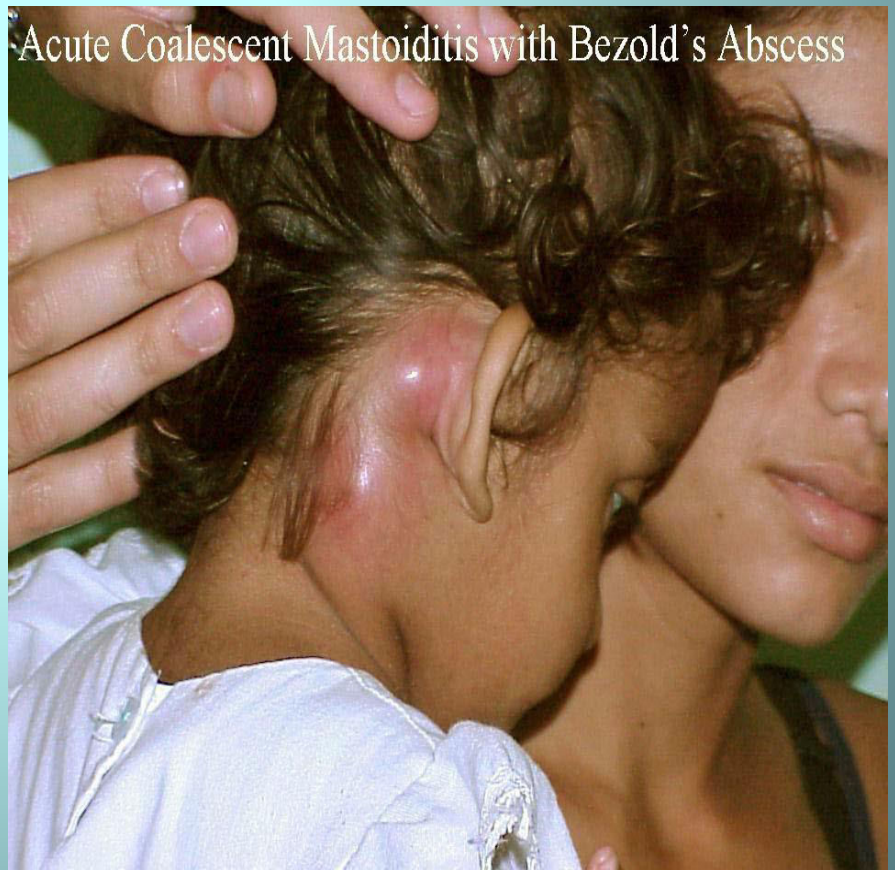
Stage of complications.

Acute mastoiditis.

Petrositis.

Facial nerve palsy.

Sub periosteal abscess.



Complications of ASOM

A. Exracranial –

1. Acuta mastoiditis.
2. Acute patrositis.
3. Labyrinthitis .
4. Facial nerve palsy.
5. Otitic hydrocephalus.

B. Intracranial-

1. Meningitis
2. Extradural and subdural abscess.
3. Brain abscess.
4. Lateral sinus thrombosis

Investigations:

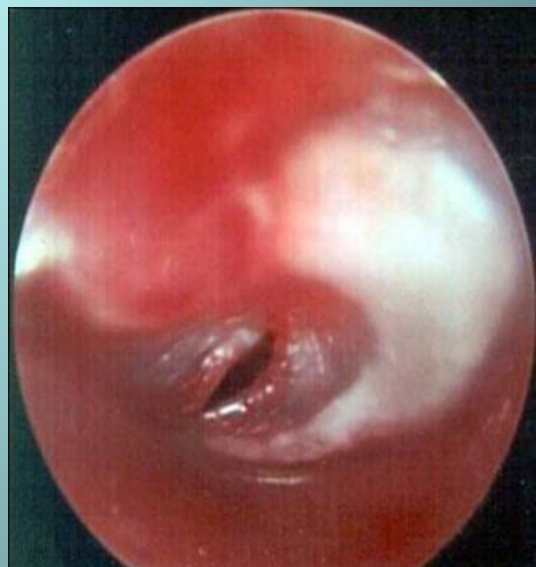
- Pus for C/S.
- X-ray mastoid (Towne's view).
- X-ray nasopharynx (L/V view).
- X-ray PNS (O/M view).
- PTA and Impedance.

TREATMENT

Depends upon clinical stages:

Before perforation:

1. Antibiotic-Amoxicillin/Amoxyclave drug of choice. 40mg/Kg/day in divided doses- 7 to 10 days.
2. Analgesic-paracetamol/ diclofenac in divided doses.
3. Nasal decongestent-xylometazoline/oxymetazoline to reduce nasal congection
4. Myringotomy- For Pts with severe AOM With associated complications.



TREATMENT (Cont.)

After perforation-

- Ear toileting- by dry mopping with sterile cotton buds, or by suction clearance.
- Antibiotics-
- Antihistamines-
- Nasal decongestant-
- Ear drop-

D/D:

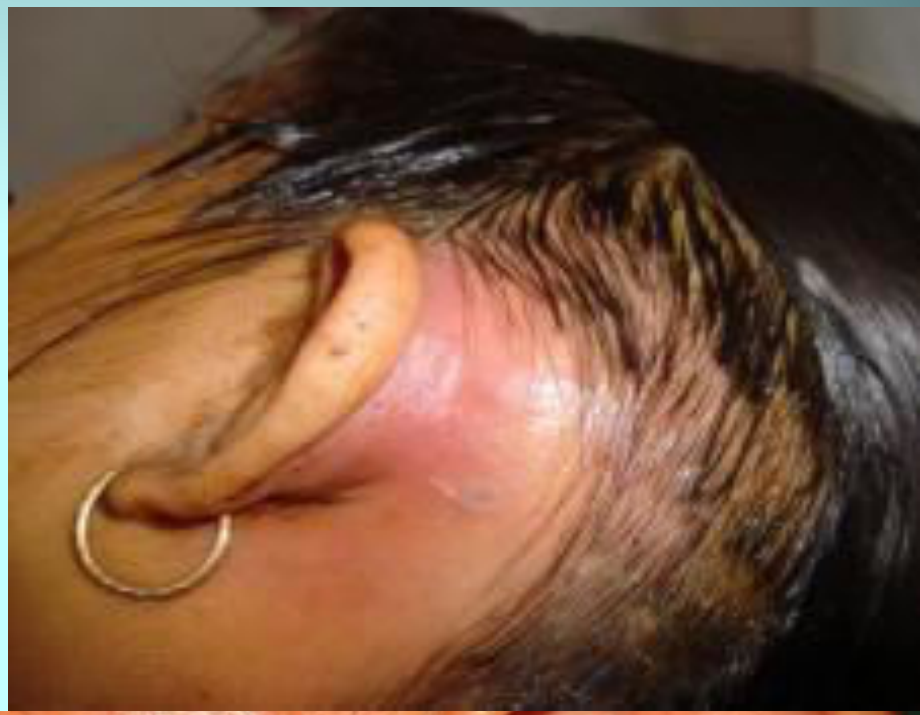
Furunculosis.

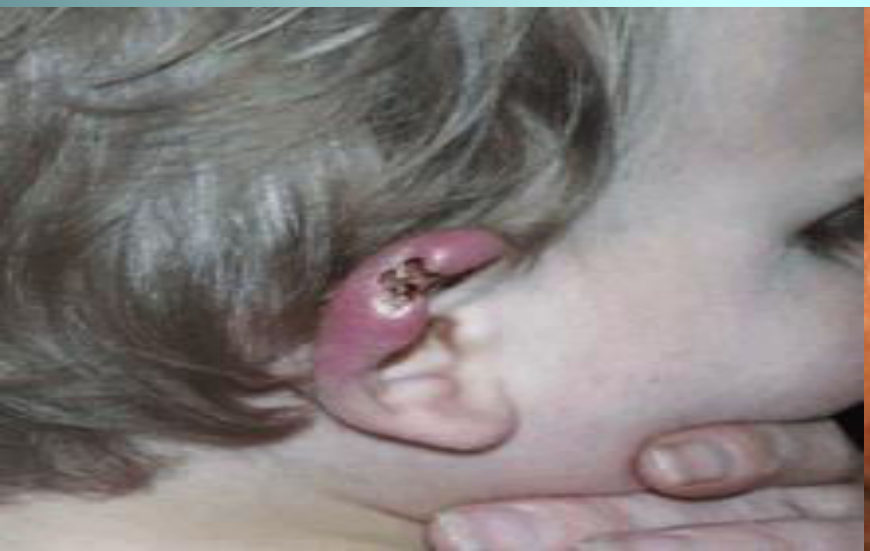
Diffuse ottitis externa.

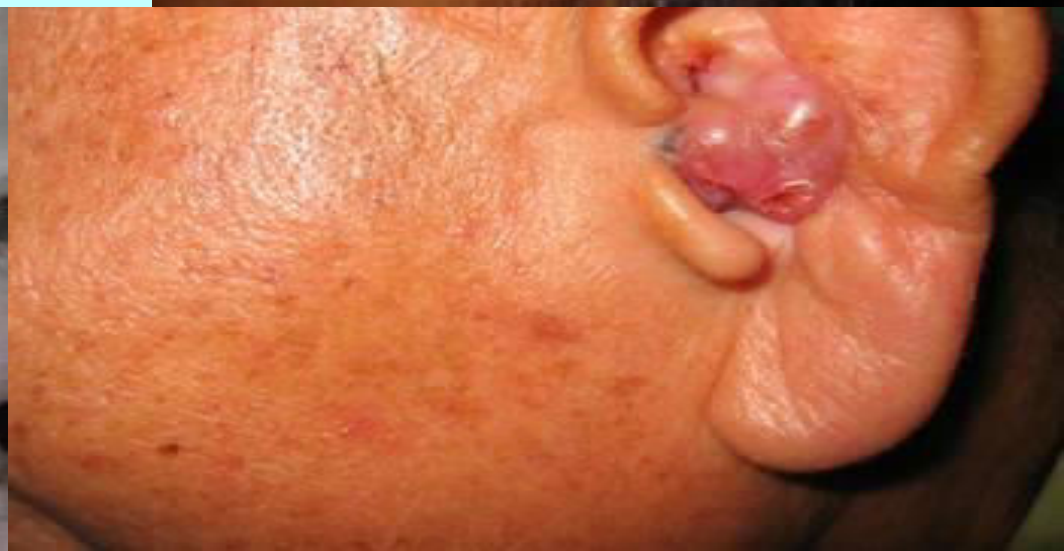
Referred otalgia.

Herpetic lesion of ear.

Post auricular adenitis.

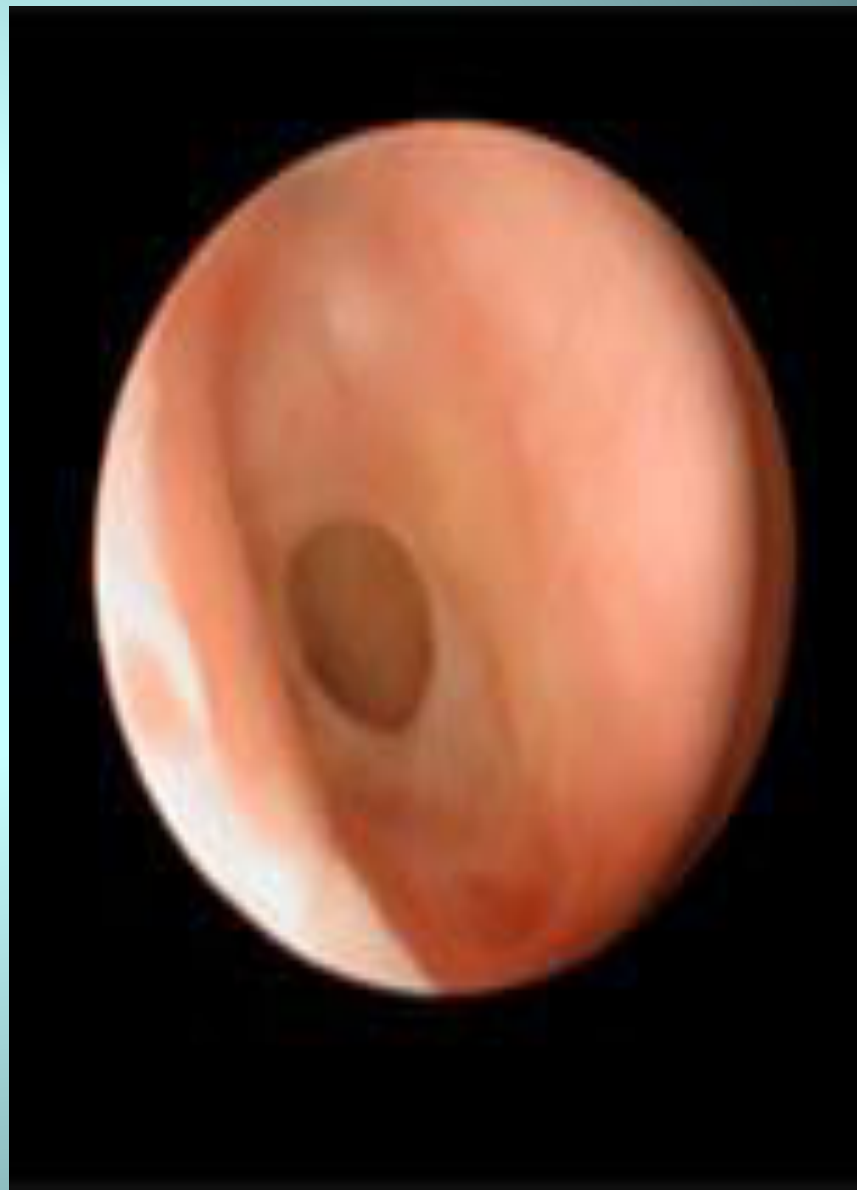






Fate/Sequelae of ASOM

- Resolution
- OME
- Healing
- Open perforation
- Residual deafness
- CSOM



Thank you All