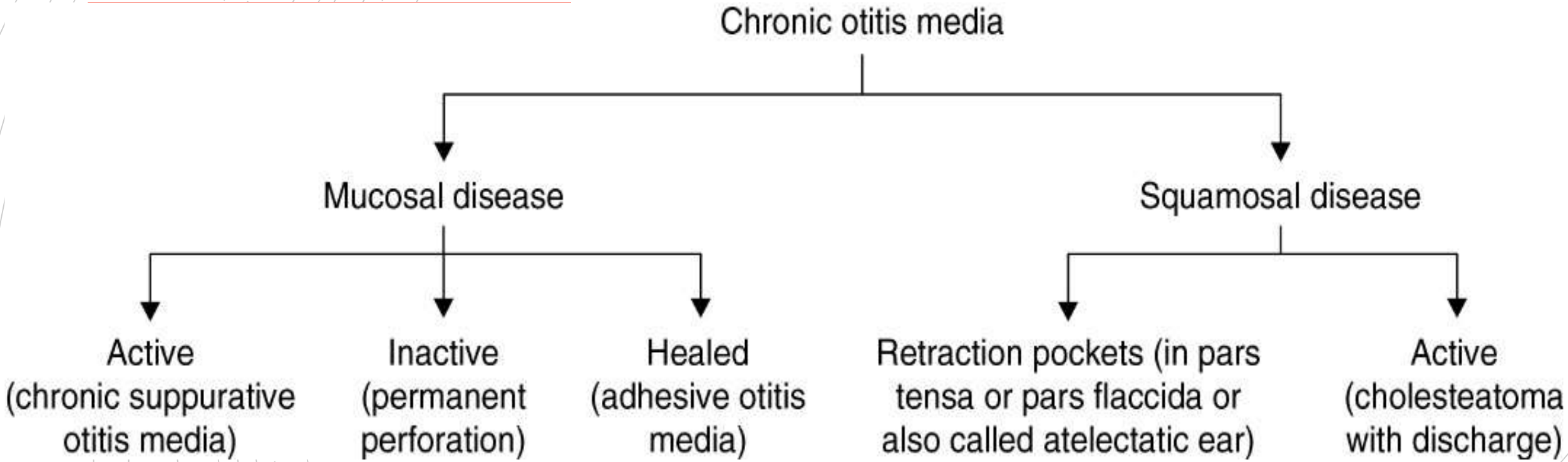
Chronic Otitis Media with and without Cholesteatoma

Dr. Mohammed Tawalbeh

Definition

- Chronic otitis media (COM) is a long standing infection of part or whole of the middle ear cleft characterized by ear discharge and a permanent perforation.

- A perforation becomes permanent when its edges are covered by squamous epithelium and it does not heal spontaneously.


Chronic otitis media
Mucosal disease
Squamosal disease
Active (chronic suppurative otitis media)
Inactive (permanent perforation)
Healed (adhesive otitis media)
Retraction pockets (in pars tensa or pars flaccida or also called atelectatic ear)
Active (cholesteatoma with discharge)

	Tubotympanic or safe type	Atticoantral or unsafe type
Discharge	Profuse, mucoid, odourless	Scanty, purulent, foul smelling
Perforation	Central	Attic or marginal
Granulations	Uncommon	Common
Polyp	Pale	Red and fleshy
Cholesteatoma	Absent	Present
Complications	Rare	Common
Audiogram	Mild to moderate conductive deafness	Conductive or mixed deafness

Tubotympanic Disease

Types of Perforations Seen in CSOM

Central perforation (anterior)

Central perforation (medium sized)

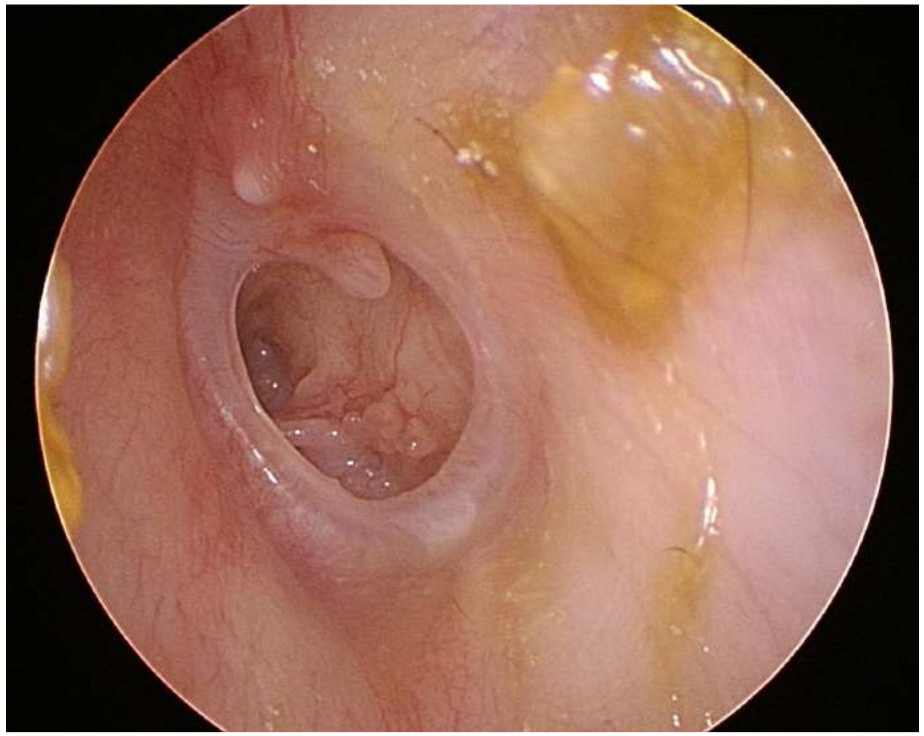
Subtotal perforation

Total perforation with destruction of even the fibrous annulus

Attic perforation

Posterosuperior marginal perforation

Clinical Manifestations



1. Ear Discharge
2. Hearing Loss
3. Perforation

Clinical Assessment

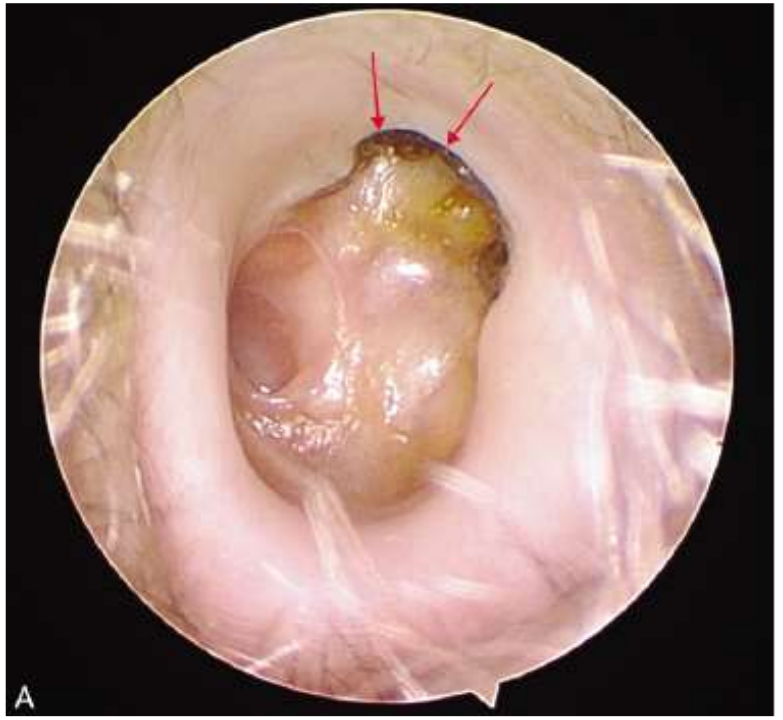
- History
- Examination using Otoscope/Microscope
- Tuning Fork Tests + Audiogram
- Culture + Sensitivity of Ear Discharge
- Temporal Bone CT

Management

- Aural Toilet
- Ear Drops
- Systemic Antibiotics
- Precautions: keep ears dry + avoid nose blowing
- Treatment of Contributory Causes
- Surgical Treatment
- Reconstructive Surgery

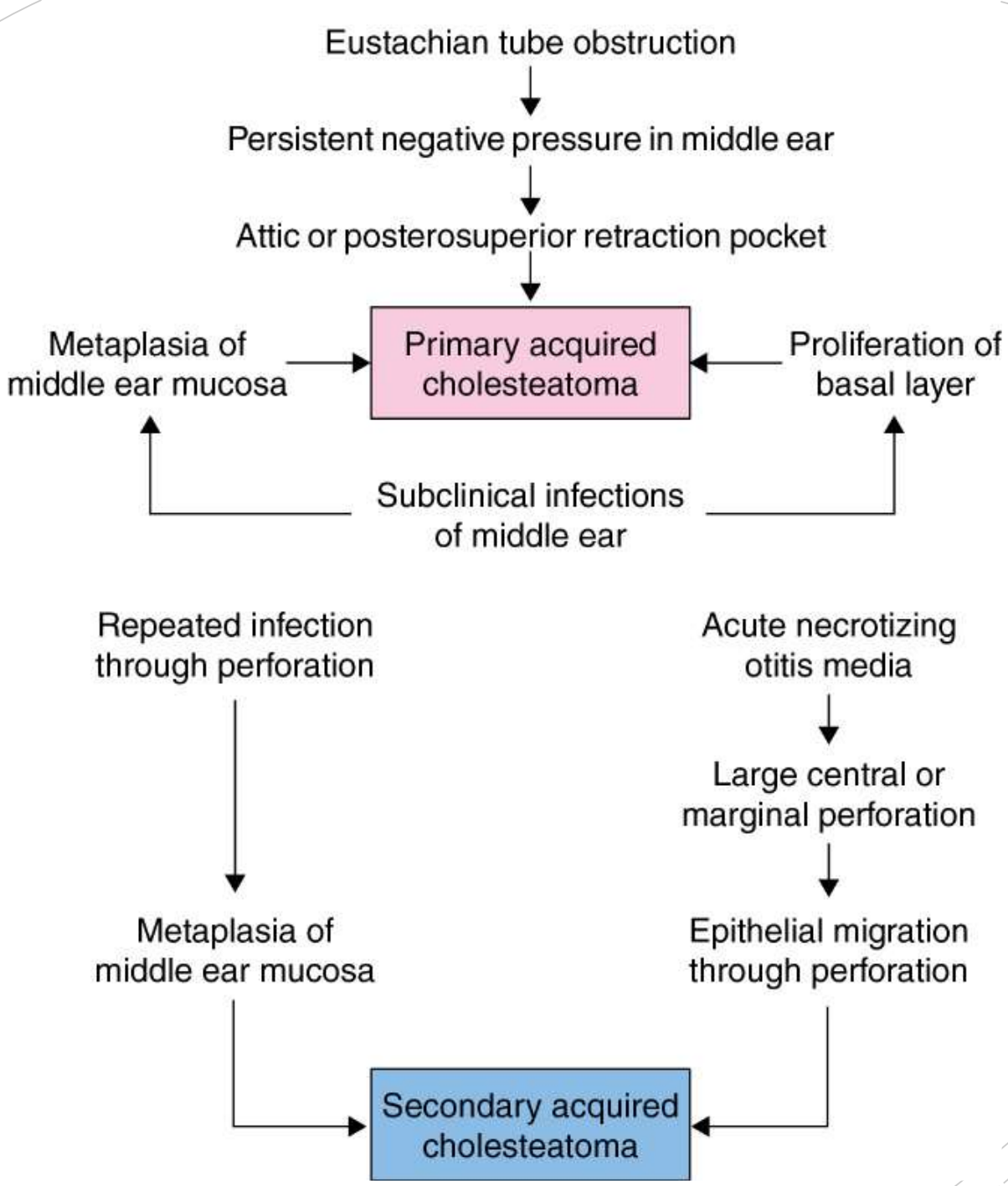
Atticoantral Disease

Atticoantral Disease

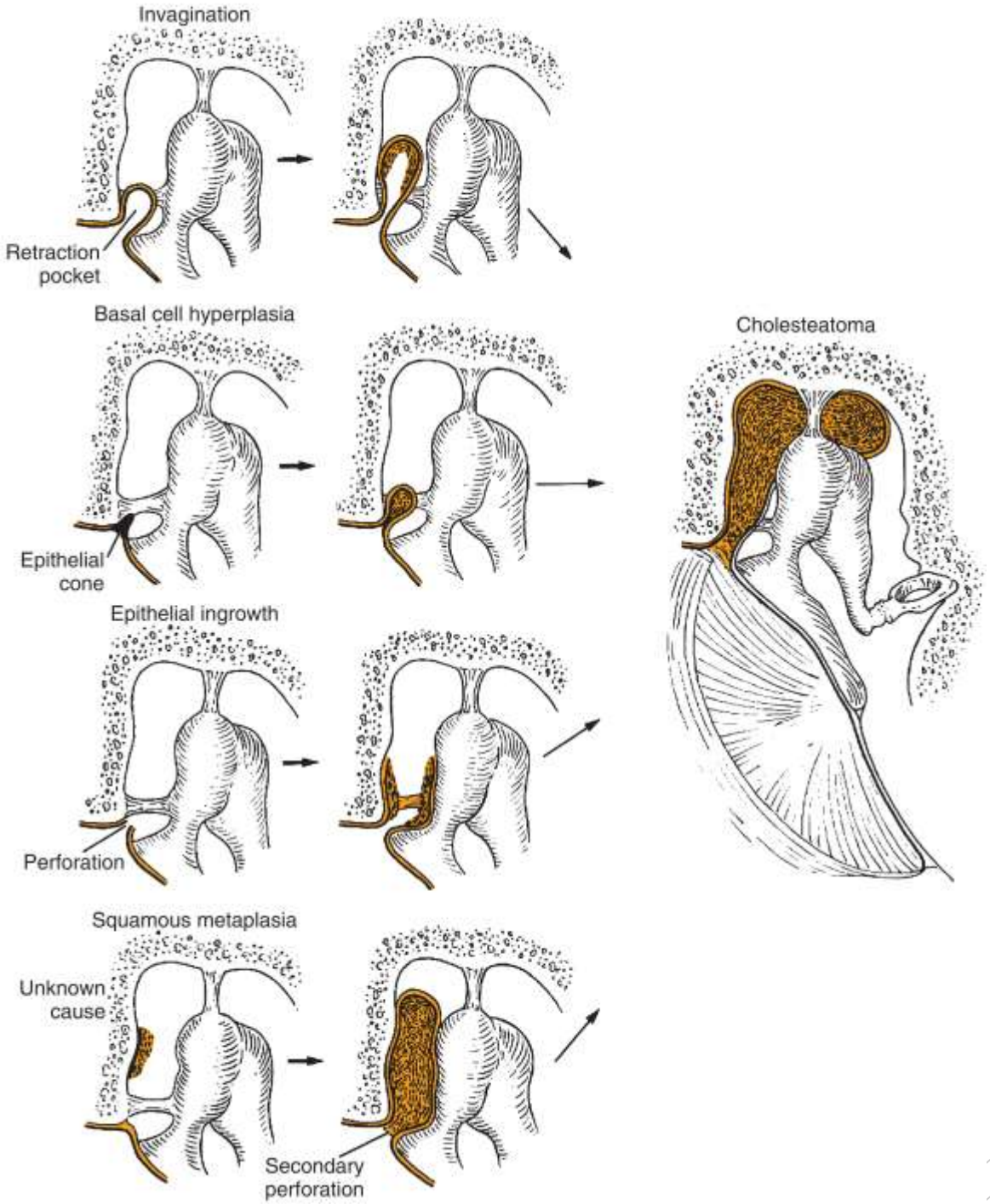


- Cholesteatoma
- Osteitis and Granulation Tissue
- Ossicular Necrosis
- Cholesterol Granuloma

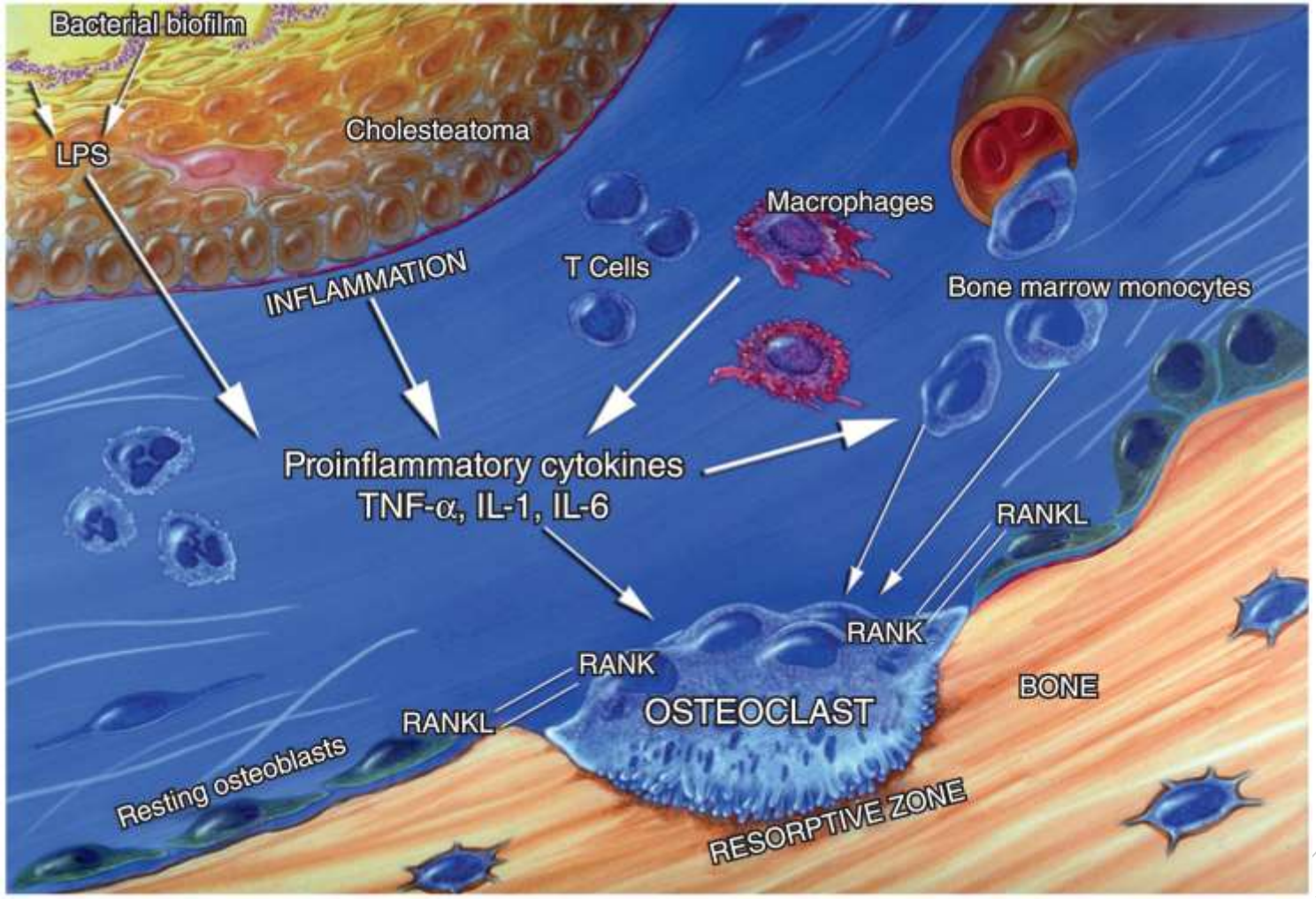
Primary VS Secondary Cholesteatomas



Theories of Cholesteatoma Formation



Pathophysiology of Cholesteatomas

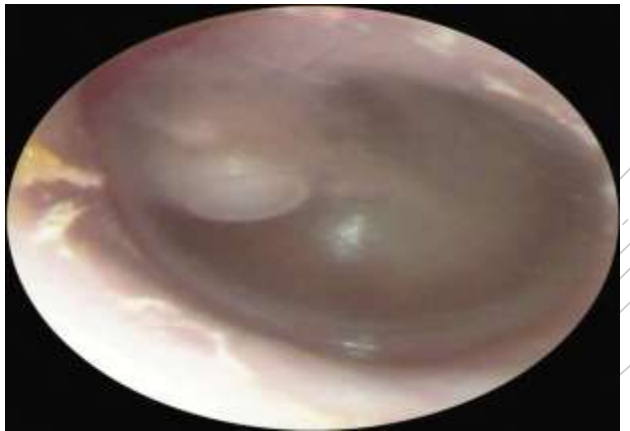


Cholesteatomas

- A typical attic retraction cholesteatoma **(primary acquired cholesteatoma).**

- Keratinizing epithelium has migrated through a perforation into the middle ear **(secondary acquired cholesteatoma)**

- Behind or within an intact tympanic membrane (**congenital cholesteatoma)**

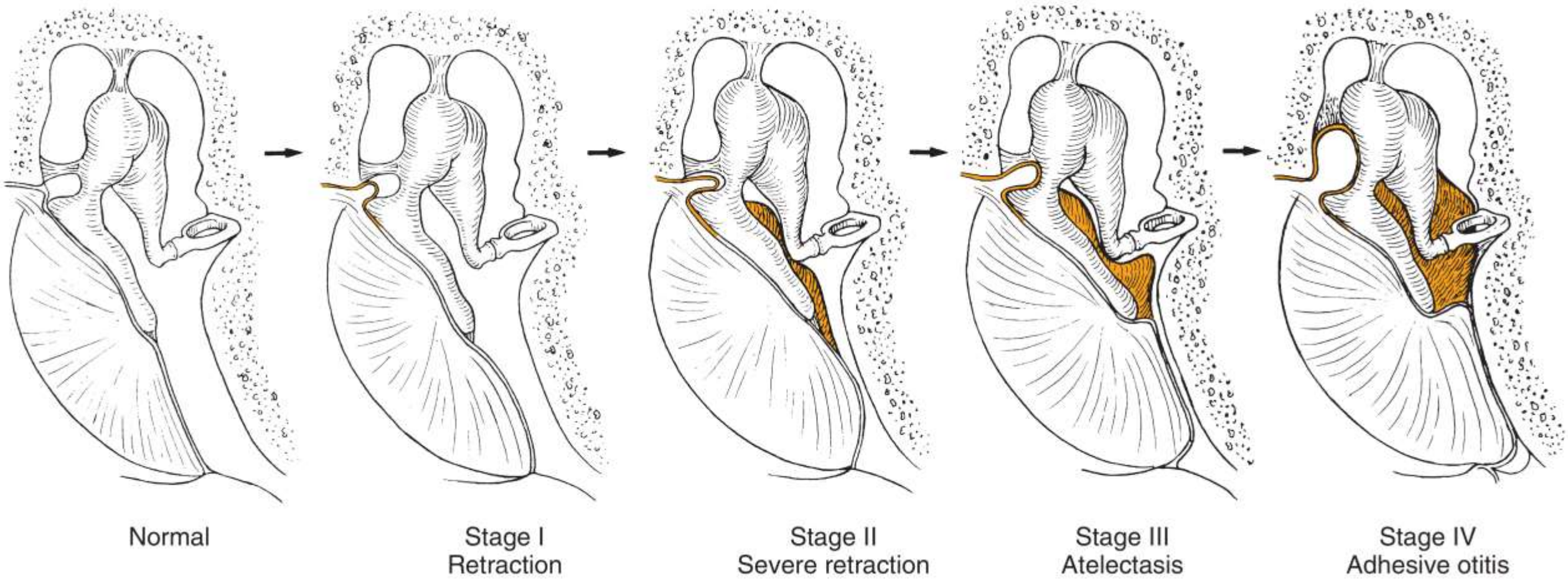


Common Pathogens

- Pseudomonas aerugenosa (48-98%)
- Staph. Aureus (15-30%)
- Klebsiella (15-30%)
- Proteus (10-15%)
- Polymicrobial (5-10%)
- Anearobes (20-50%)
- Fungi

Clinical Manifestations

- Ear Discharge
- Hearing Loss
- Bleeding
- Retraction pocket
- Cholesteatoma


Normal
Stage I
Retraction
Stage II
Severe retraction
Stage III
Atelectasis
Stage IV
Adhesive otitis

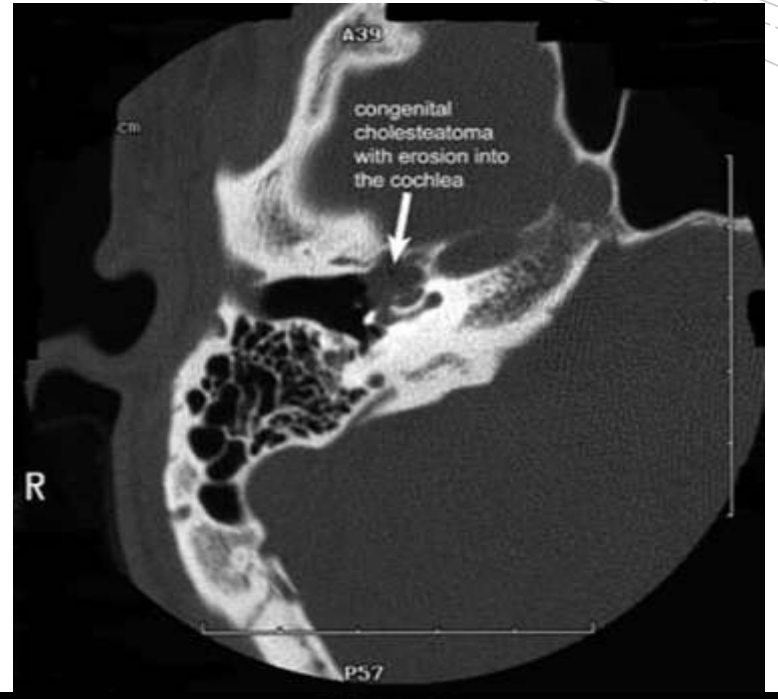
Clinical Assessment

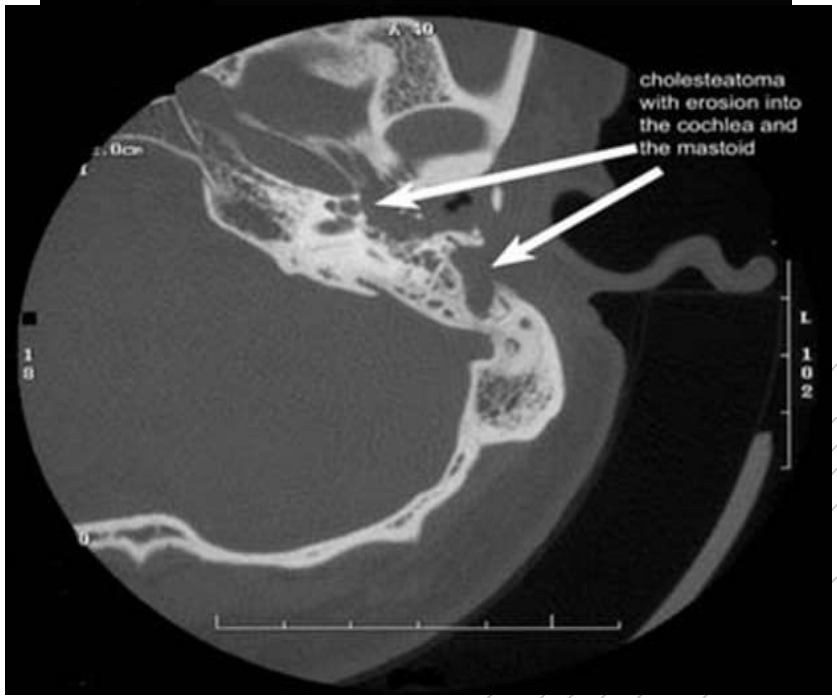
- History
- Examination using Otoscope/Microscope
- Tuning Fork Tests + Audiogram
- Culture + Sensitivity of Ear Discharge
- Temporal Bone CT

Imaging

Indications:

- Unresponsive to treatment.
- Cholesteatoma
- Suspected complications
- Prior to surgery



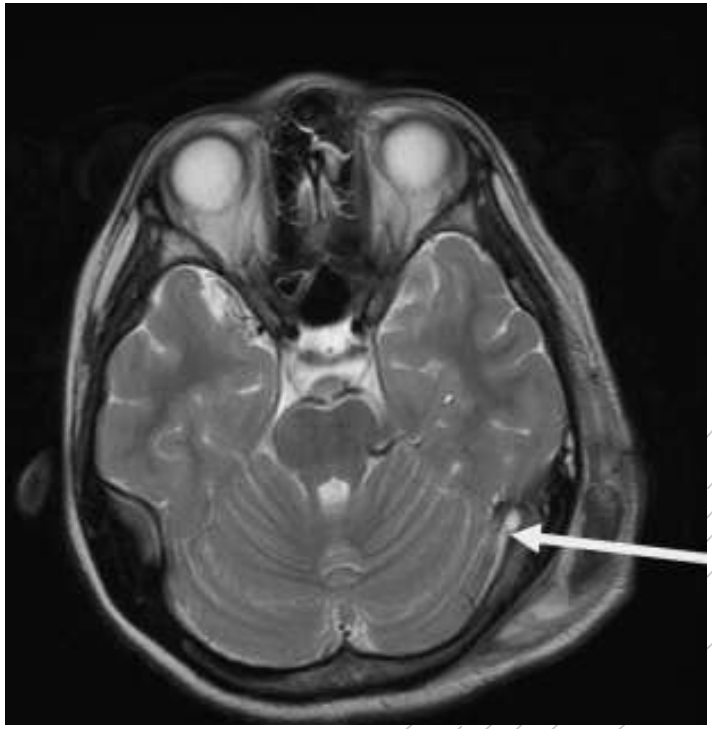


Imaging

- MRI:

Intratemporal or intracranial complications.

- Useful:
  - Dural inflammation
  - Sigmoid sinus thrombosis
  - Labyrinthitis
  - Abscesses



Complications

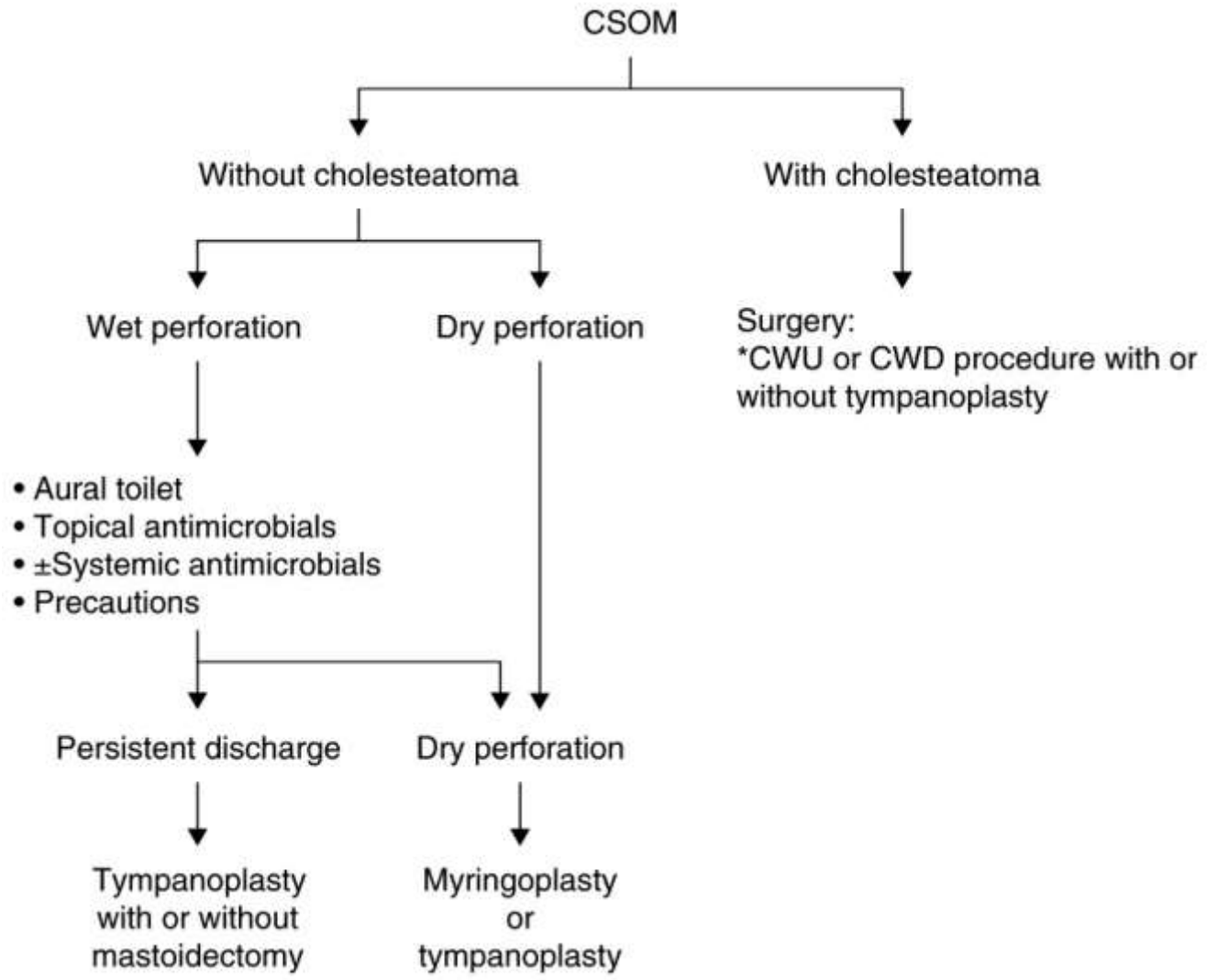
Intratemporal complications:

- Petrositis (Gradenigo syndrome)
- Facial paralysis
- Labyrinthitis

Intracranial complications:

- Lateral sinus thrombosis
- Meningitis
- Intracranial abscess

Management


CSOM
Without cholesteatoma
With cholesteatoma
Wet perforation
Dry perforation
Surgery:
*CWU or CWD procedure with or without tympanoplasty
• Aural toilet
• Topical antimicrobials
• ±Systemic antimicrobials
• Precautions
Persistent discharge
Dry perforation
Tympanoplasty with or without mastoidectomy
Myringoplasty or tympanoplasty

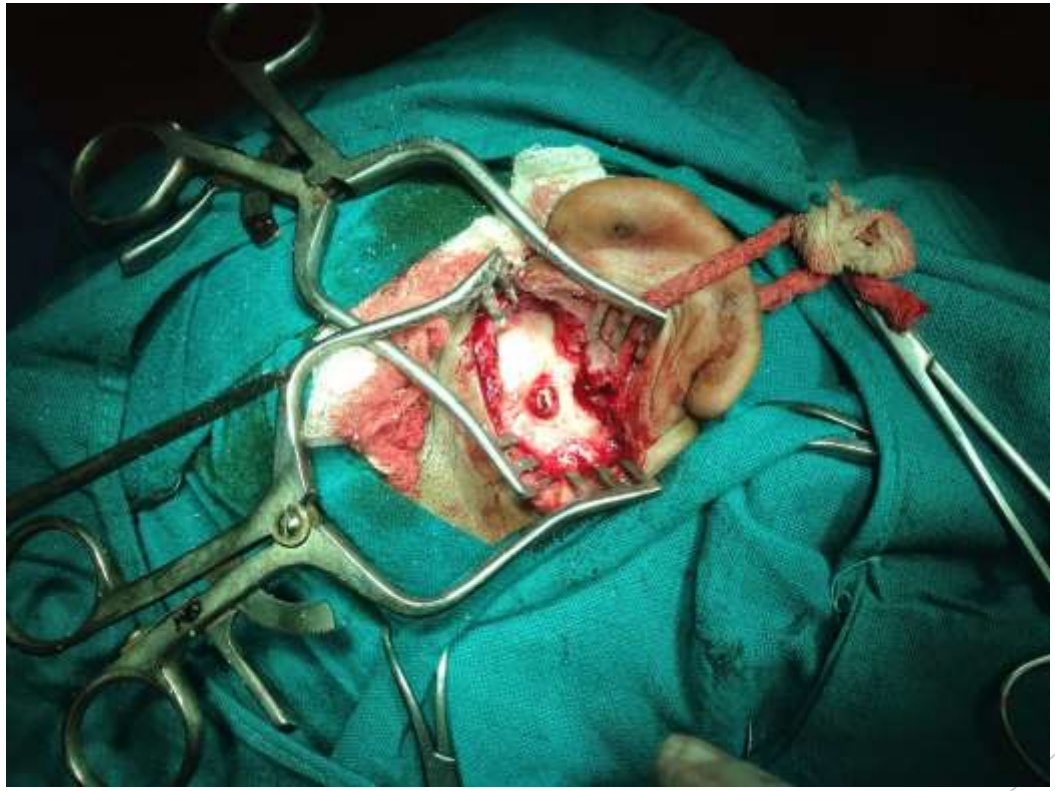
Mastoidectomy

- Cortical mastoidectomy:

Canal wall up (Closed-cavity)

Canal wall down(Open cavity procedure)

- Radical mastoidectomy
- Modified radical mastoidectomy.



	Canal wall up procedure	Canal wall down procedure
Meatus	Normal appearance	Widely open meatus communicating with mastoid
Dependence	Does not require routine cleaning	Dependence on doctor for cleaning mastoid cavity once or twice a year
Recurrence or residual disease	High rate of recurrent or residual cholesteatoma	Low rate of recurrence or residual disease and thus a safe procedure
Second look surgery	Requires second look surgery after 6 months or so to rule out cholesteatoma	Not required
Patients limitations	No limitation. Patient allowed swimming	Swimming can lead to infection of mastoid cavity and it is thus curtailed
Auditory rehabilitation	Easy to wear a hearing aid if needed	Problems in fitting a hearing aid due to large meatus and mastoid cavity which sometimes gets infected

Thank You