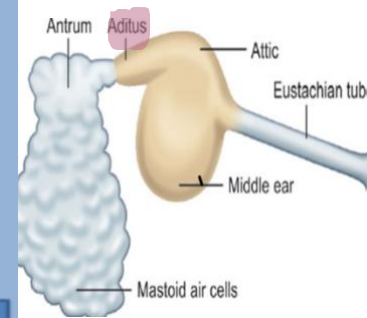
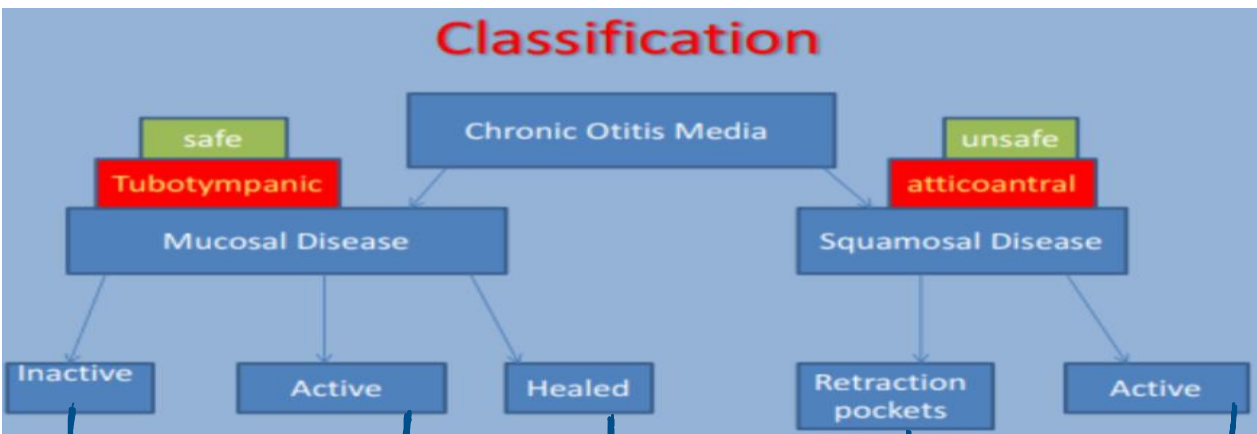


Chronic Otitis Media with and without Cholesteatoma

- Definition: persistent drainage from the middle ear through a perforated tympanic membrane lasting > 6–12 weeks.
- A perforation becomes permanent when its edges are covered by squamous epithelium and it does not heal spontaneously.
- In < 15 years old.

Classification



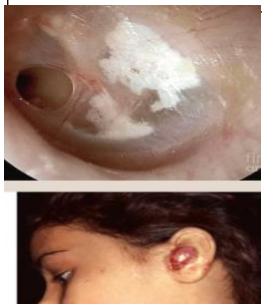
Permanent perforation

- Middle ear and mastoid mucosa is **not inflamed**.
- Lamina propria around the perforation may be **thickened**.



Persistent chronic suppurative otitis media

- **Aural polyp** / granulation tissue prolapsing through the TM perforation.
- It suggests the presence of a **cholesteatoma**.



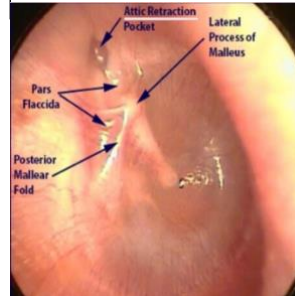
Adhesive otitis media

- it heals with a thin membrane (mucosal & squamous layers, without a fibrous middle layer (**dimeric membrane**))
- It is mistaken for an existing perforation.



ear drum atelectasis

- under go **epidermization** → replacement of middle ear mucosa by keratinizing squamous epithelium without retention of keratin debris.
- It remains quiescent and don't progress to cholesteatoma or active suppuration.



Cholesteatoma

- Could be:
 - Dry: dry keratin debris
 - Wet: active bacterial superinfection malodorous otorrhea
- Osteitis, granulation tissue, aural polyp, Ossicular necrosis, Cholesterol granuloma / long-standing.

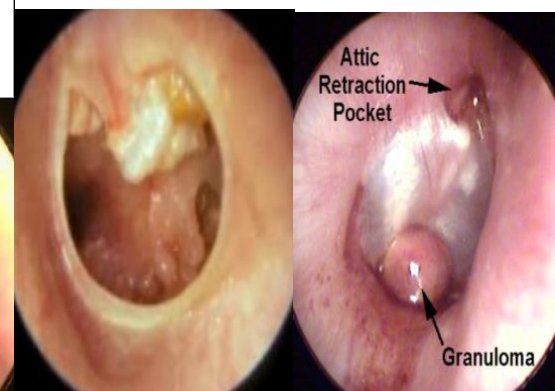


TABLE 11.1 DIFFERENCES BETWEEN TUBOTYMPANIC AND ATTICOANTRAL TYPE OF CSOM

	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

Pathogenesis of COM

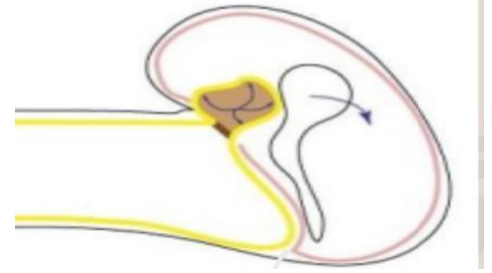
• Factors allow active infection to develop into chronic / unclear → Episode of active infection : irritation and inflammation of mucosa → mucosal edema and ulceration → breaking of epithelial lining → attempts to resolve infection → granulation tissue ,polyps → vicious circle destroy bony margins and complications.

Microbiology

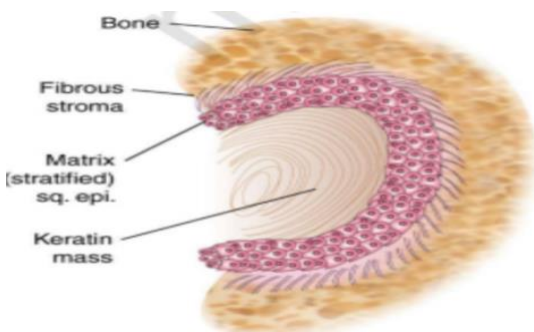
Pseudomonas aeruginosa >> Staph. Aureus >> Klebsiella

Etiology

Recurrent acute otitis media , Placement of ventilation tube , Trauma



- middle ear is nowhere lined by keratinizing squamous epithelium. If it presents in the middle ear or mastoid that constitutes a **cholesteatoma**..... "skin in the wrong place. "



Cholesteatoma

Histologically, the cholesteatoma is comprised by peri-matrix, matrix and cystic content.

Cystic content: **desquamated keratin center**

Matrix : keratinizing stratified squamous epithelium

Peri-matrix: granulation tissue (subepithelial connective tissue) that secrete multiple proteolytic enzymes capable of bone destruction

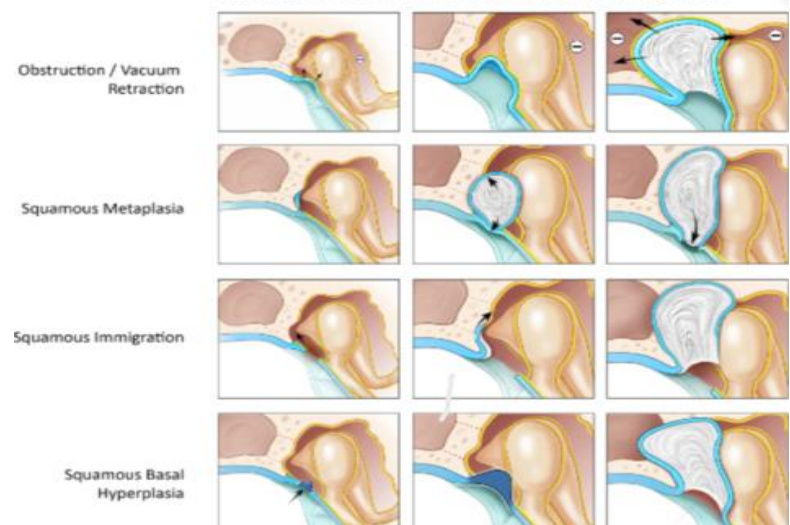
1) Congenital cholesteatomas.

2) Acquired Cholesteatoma

- Less common
- white pearly lesion behind an **intact tympanic membrane** in the anterior-superior quadrant.
- originate from areas of keratinizing epithelium within the middle ear cleft.



Existing Theories of Cholesteatoma Pathogenesis



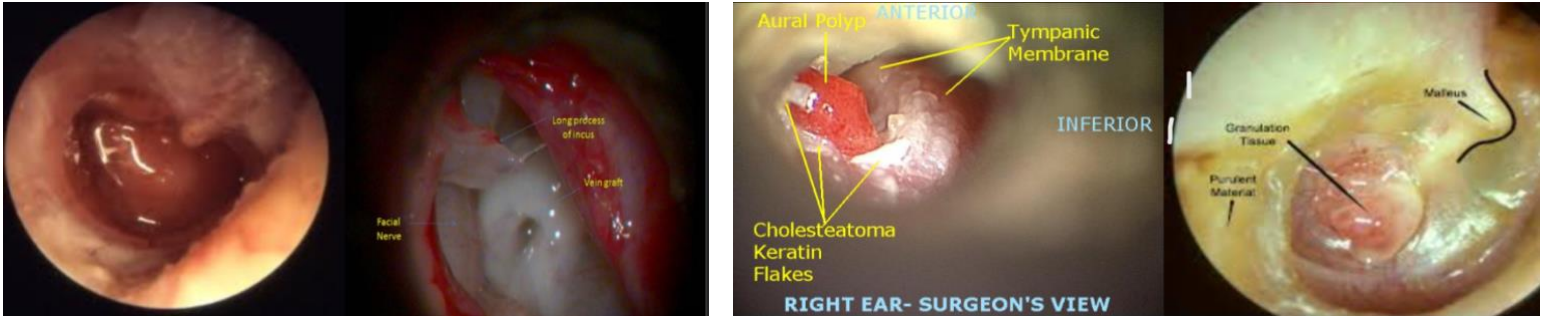
- cholesteatoma is prone to recurrent infections, and they characteristically erode ossicles and otic capsule.

→ **Complicated** : Facial paralysis, Labyrinthitis, Petrositis (**Gradenigo syndrome**)
Intracranial complications (lateral sinus thrombosis , Meningitis, Intracranial abscess)

→ Hearing impairment, Mucopurulent otorrhea (Active)

→ **Physical exam** : by otoscopic [TM perforation (Central, marginal, attic), Active or inactive, Granulation tissue, Polyps, Cholesteatoma, Necrosis of long process of incus Complications, Operation scars]

1. Otitis Media
2. Facial Pain
3. Abducens Palsy



→ Diagnosis

Audiology/ Pure tone audiometry..... Air bone gap depends on: **1.** Size of perforation **2.** Erosion of Ossicles
3. Significant granulation tissue around ossicles

Radiology / CT

→ Treatment

- Stop otorrhea, Heal TM, Eradication of current infections, Prevent Complications
- Aural toilet, Topical Abx, Granulation Tissue Control (drops , steroids , Excision), Systemic Abx.
- Surgical : Surgical excision + tympanoplasty + Mastoidectomy (Radical, Modified R)