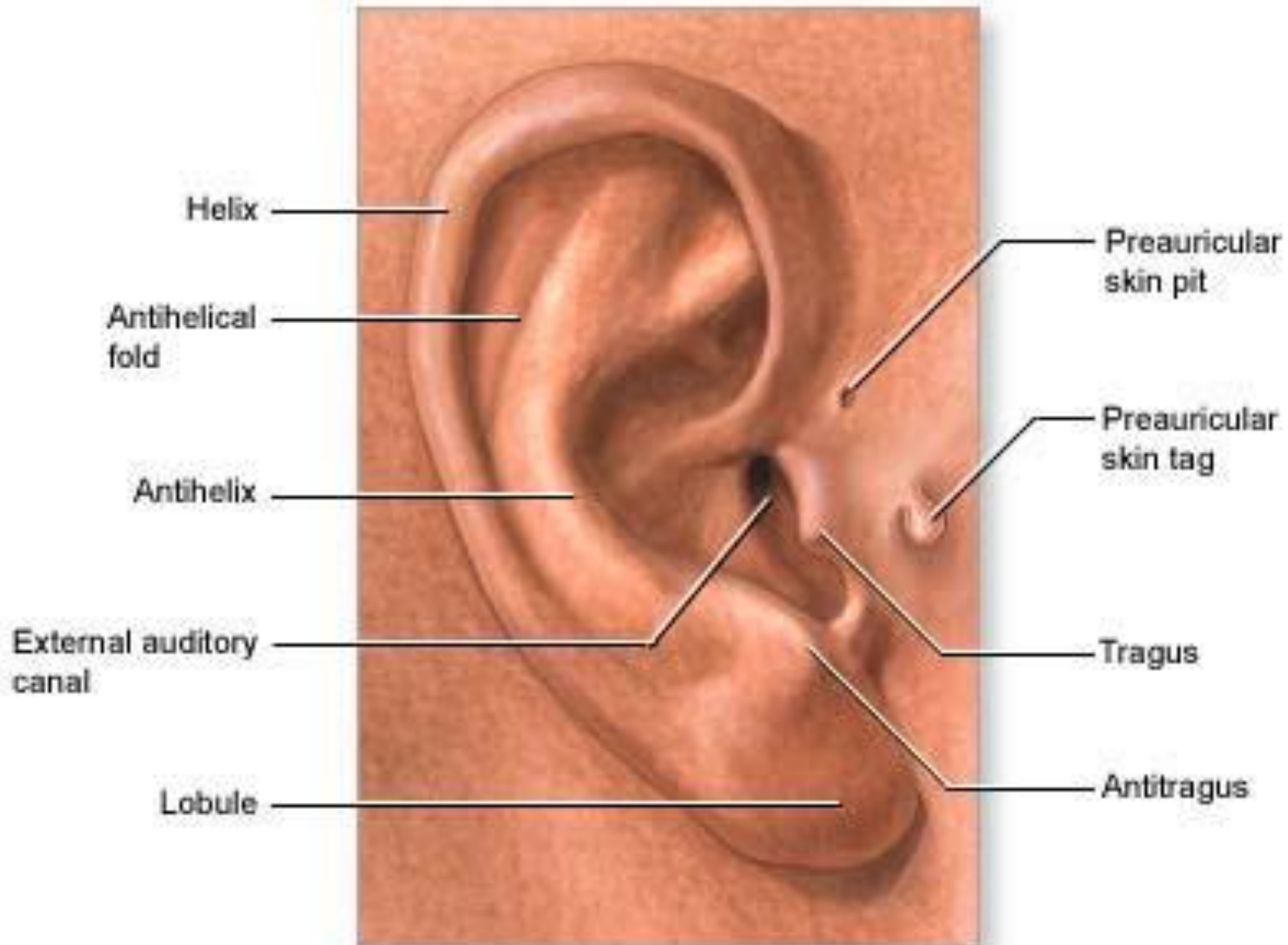
Otology

Dave Pothier
St Mary's 2003

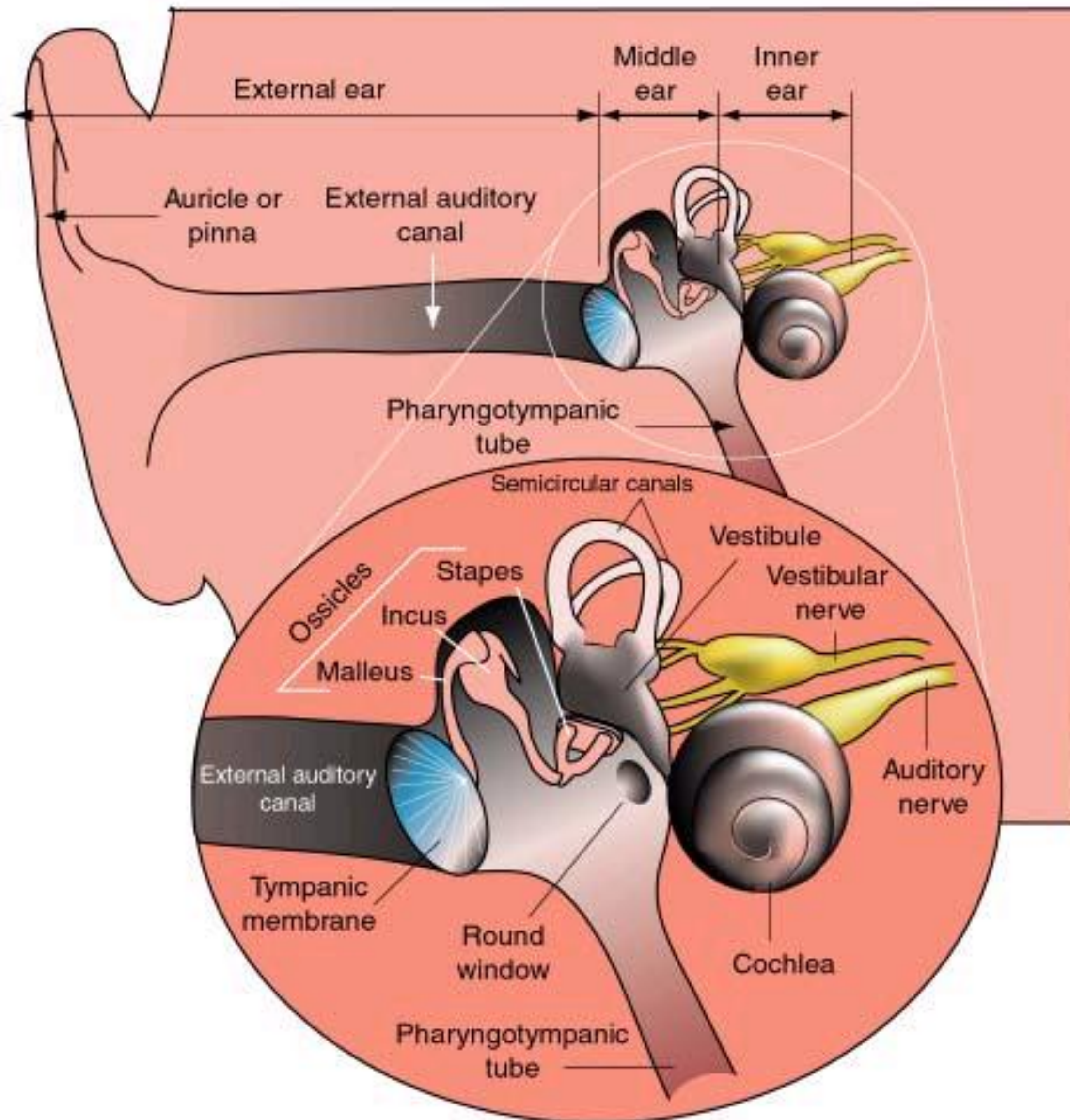
Anatomy

- Not a big place
- Lots of bits
- NB concepts only

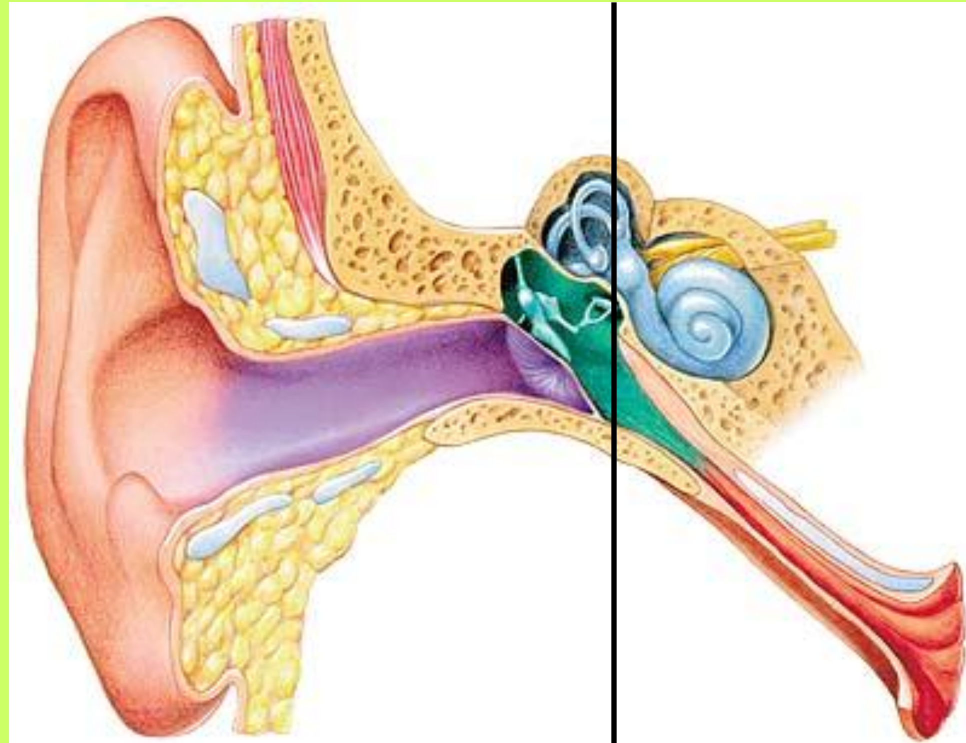
External ear



Internal structures



Hearing



Conductive

Sensorineural

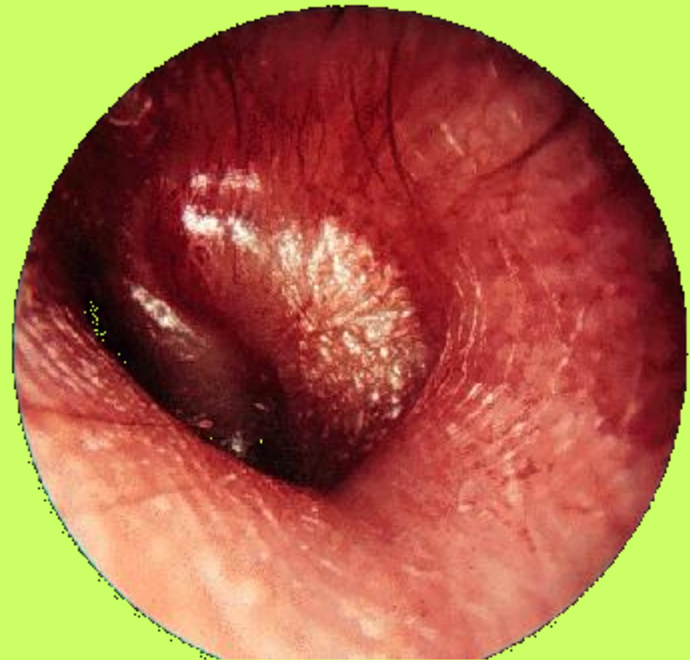
The ‘otitises’

- Acute Suppurate Otitis Media
- Chronic Suppurative Otitis Media
- Otitis Media with Effusion / Secretory Otitis Media
- Adhesive Otitis Media

+/- Cholesteatoma

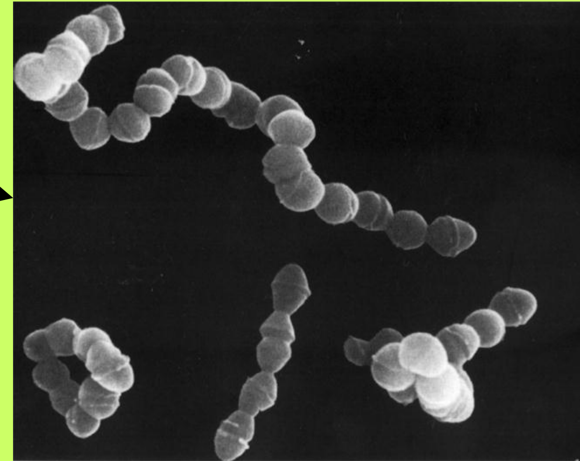
ASOM

- Common ear infection
- Pus in middle ear
- Organisms from ET
- Pain, fever, deafness
- Often perforated TM

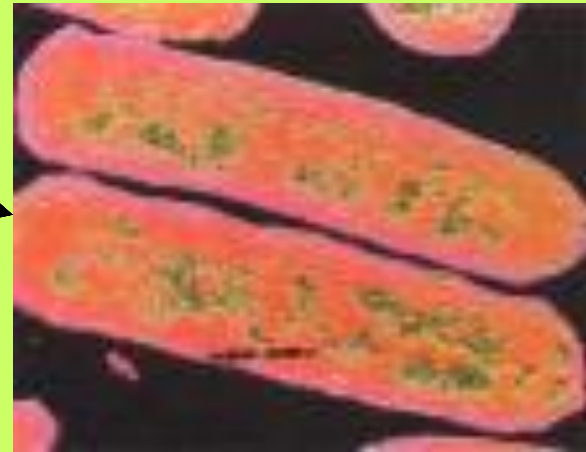


Organisms

- Strep pneumoniae



- Haemophilus Influenzae



Complications:

Intracranial

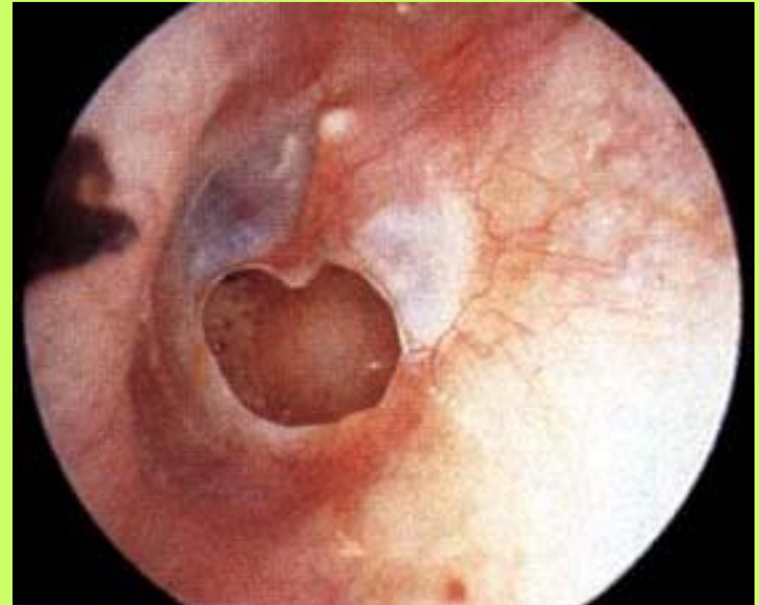
- Meningitis
- Intracranial abscess
- Sigmoid/lateral sinus thrombosis

Extracranial

- Mastoiditis and sequelae
- Facial nerve palsy
- Labyrithitis
- Sensorineural hearing loss

Sequelae

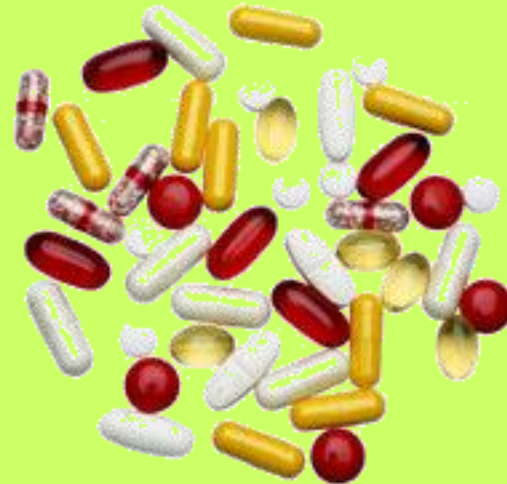
- Glue ear
- TM perforation
- Adhesions
- Tympanosclerosis
- Ossicular erosion



Rx

Conservative / medical / surgical

- Observe
- Analgesia
- Antibiotics (Amoxil)
- +/- myringotomy



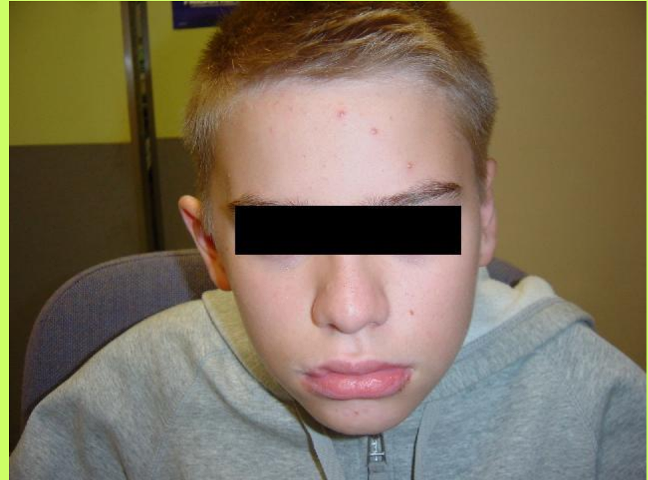
Mastoiditis

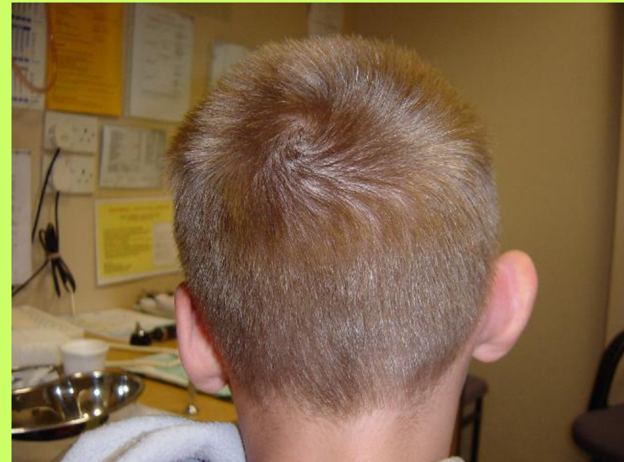
- Spread of infection to mastoid air cells form middle ear cleft – serious disease; easy spread to important structures
- From ASOM / cholesteatoma

Signs

- Unwell
- Deaf
- ASOM
- Ear protruding

Not always reliable





Rx

- Resus
- Admit
- IV abx
- Early surgery if no response

Glue ear / SOM / OME

NOT INFECTIVE

NOT INFECTIVE

NOT INFECTIVE

NOT INFECTIVE

NOT INFECTIVE

NOT INFECTIVE

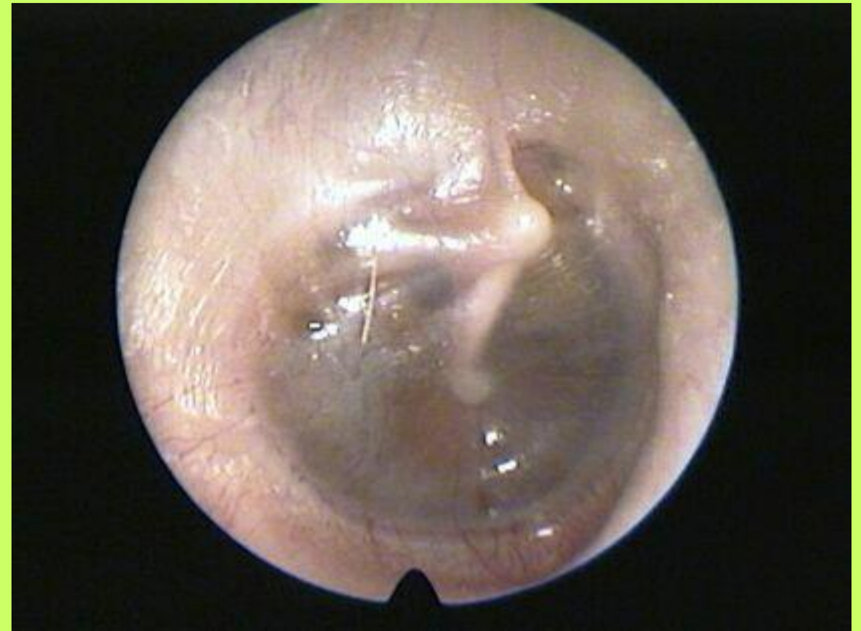
NOT INFECTIVE

Glue ear / SOM / OME

- Caused by ETD

(Eustacian tube dysfunction)

- Negative MEP
- Effusion of fluid in Middle ear
- No pain, no fever, not unwell
- Deafness, poor development of speech, behaviour



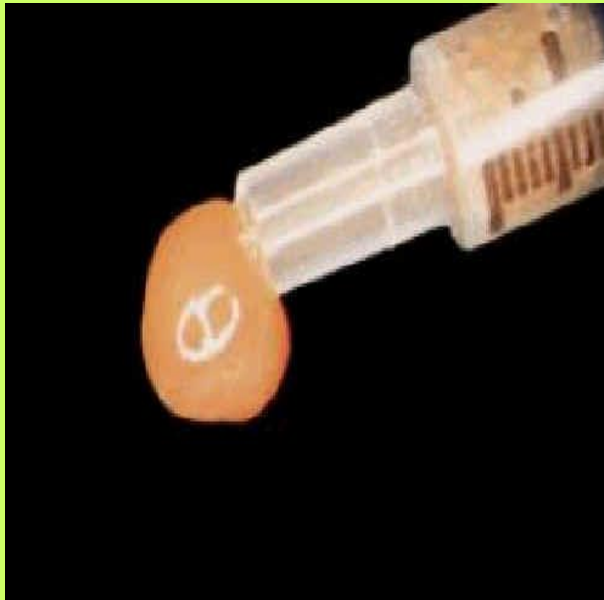
Rx

- Cons / Medical / Surgical

Watch & wait

Hearing Aid

Ventilation tube



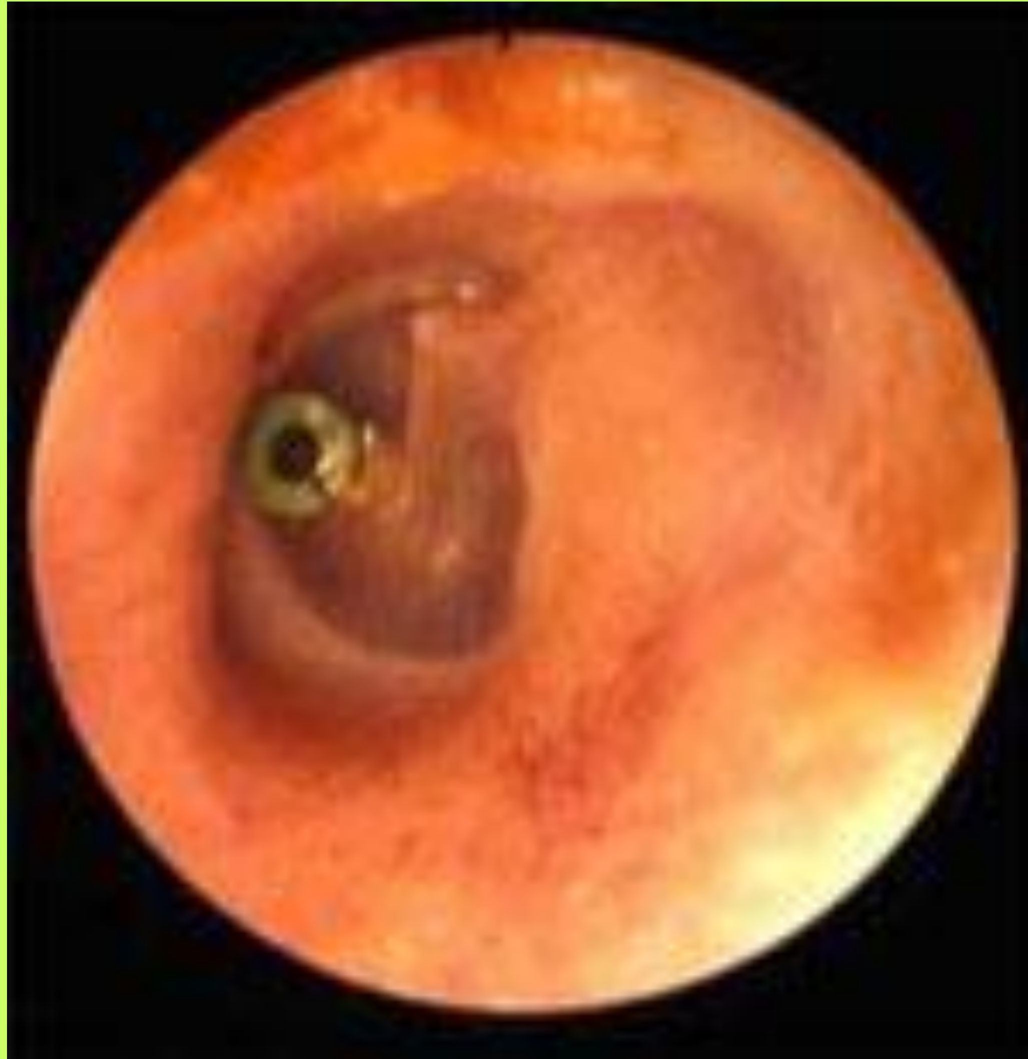
Conservative

- Hearing loss in context
- Speech / developmental issues
- Follow-up
- Seasonal
- Self limiting

Hearing aid

- Effective
- Compliance

Ventilation tubes (grommets)



NB

NO ANTIBIOTICS

Cholesteatoma

What is it?

Keritinising squamous epithelium in middle ear cleft

Cholesteatoma

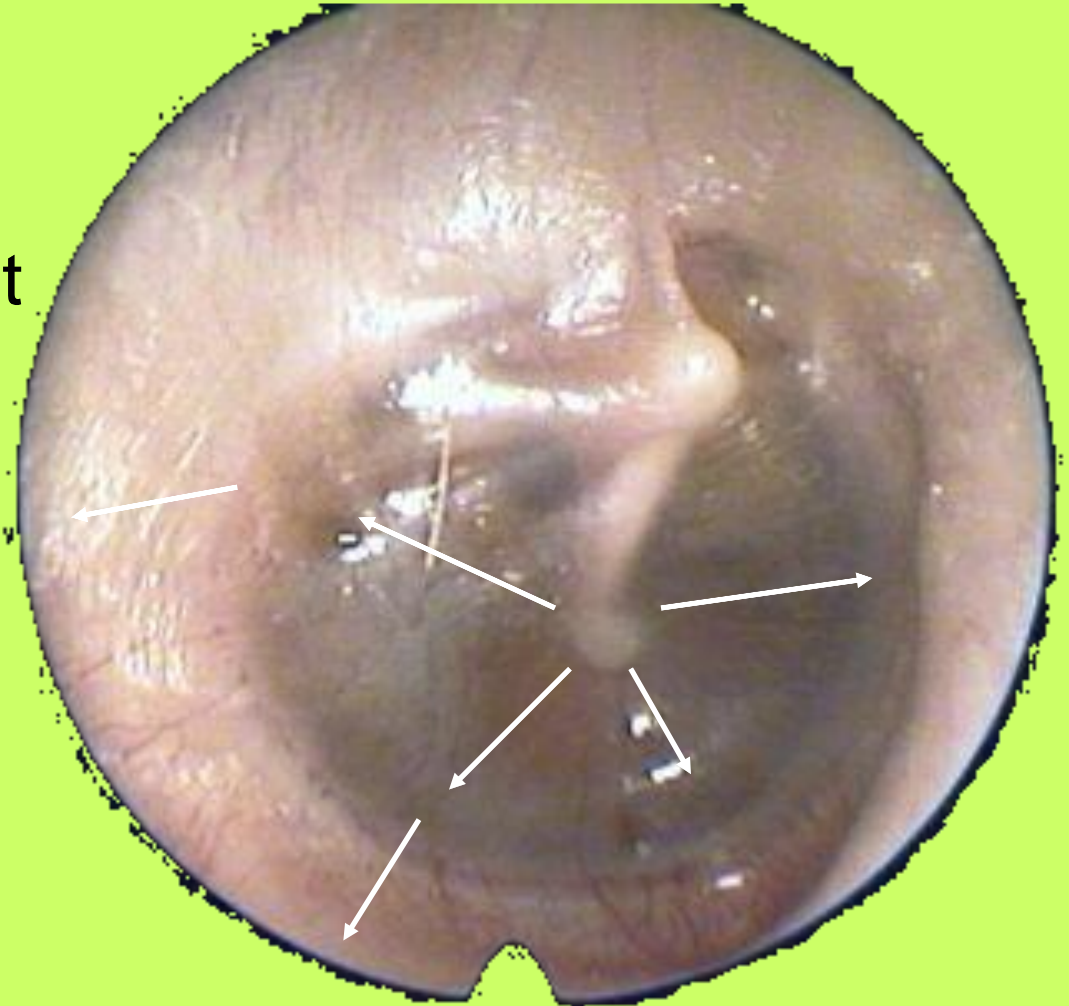
- How?

Congenital (rare)

Aquired - primary (retraction)
- secondary (implantation)

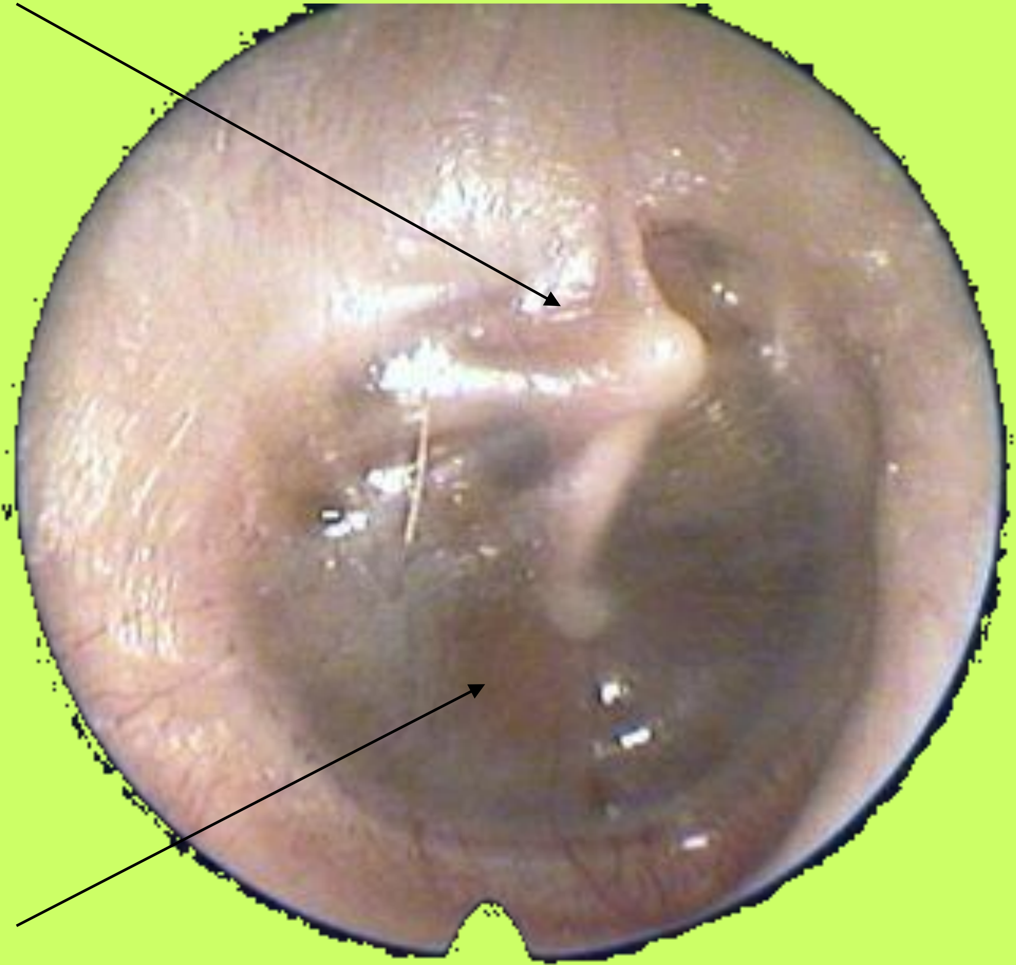
‘Conveyor belt’

Skin migrates from umbo outwards across TM and out along canal



Pars flaccida

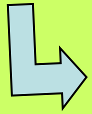
(2 layers)



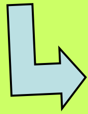
Pars tensa

(3 layers)

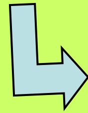
Eustacian tube dysfunction



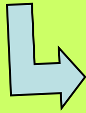
Negative MEP



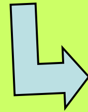
Retraction of pars flaccida



RP fills with debris

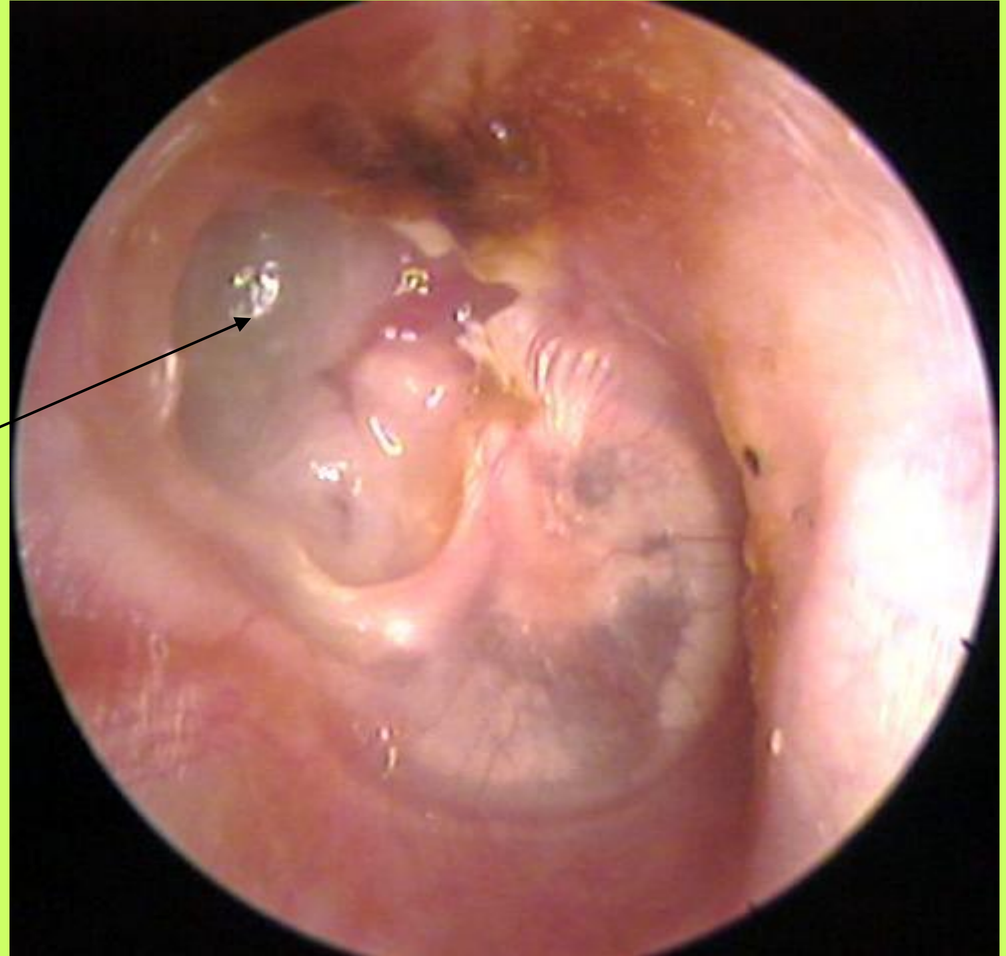


Infection



Erosion and spread

Cholesteatoma



Complications

- Same as ASOM + mastoiditis
- But more insidious
- Slow erosion more common

Rx

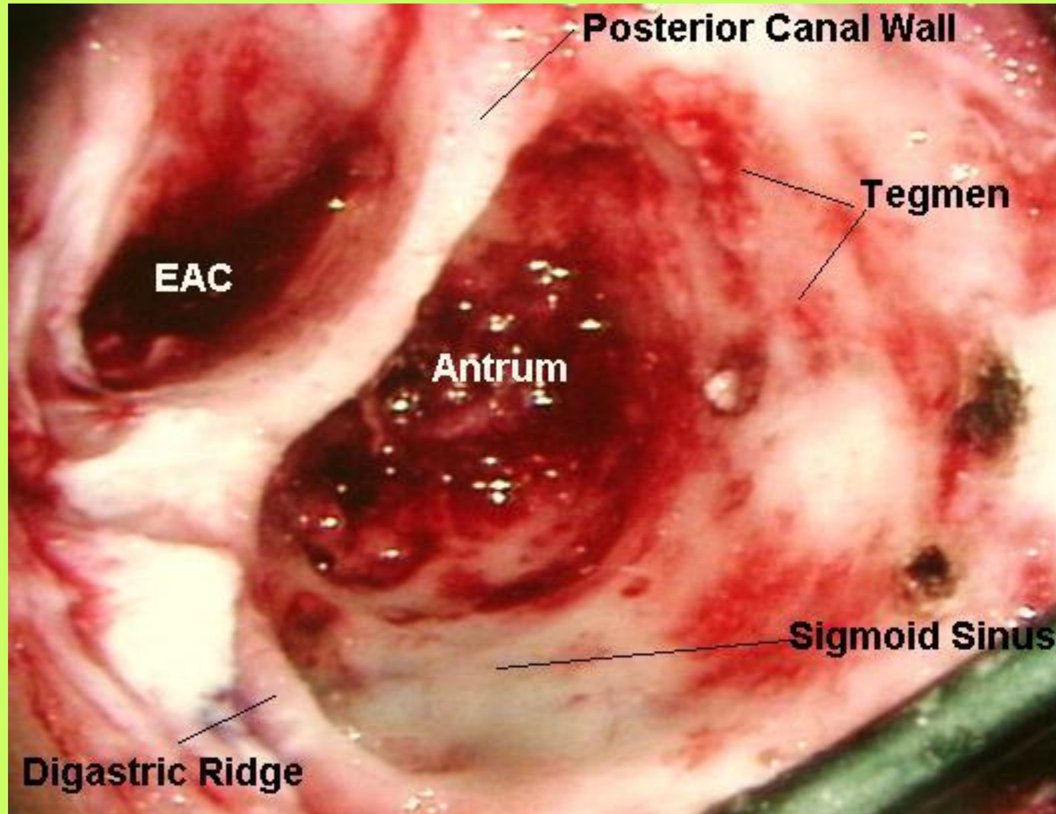
Conservative / medical / surgical

Conservative - microsuction, review

Medical – antibiotic drops

Surgical – cortical mastoidectomy

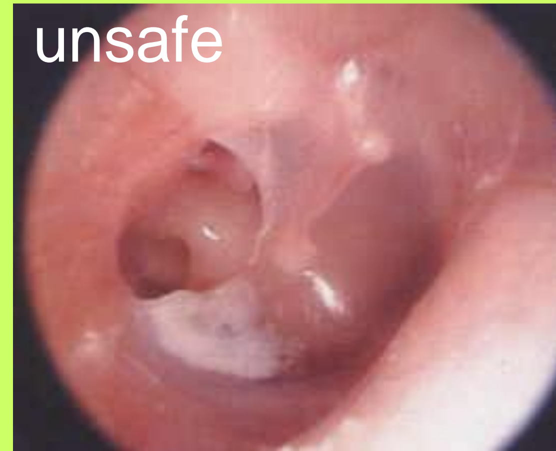
mastoidectomy

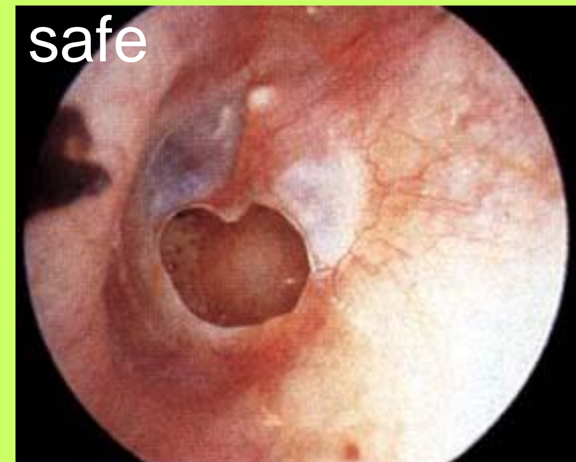


CSOM

- Perforation of TM
- Follows a slow to heal ASOM
- May be active or inactive
- Safe / Unsafe perforation
- Mucosal or cholesteatoma

Similar principles to cholesteatoma



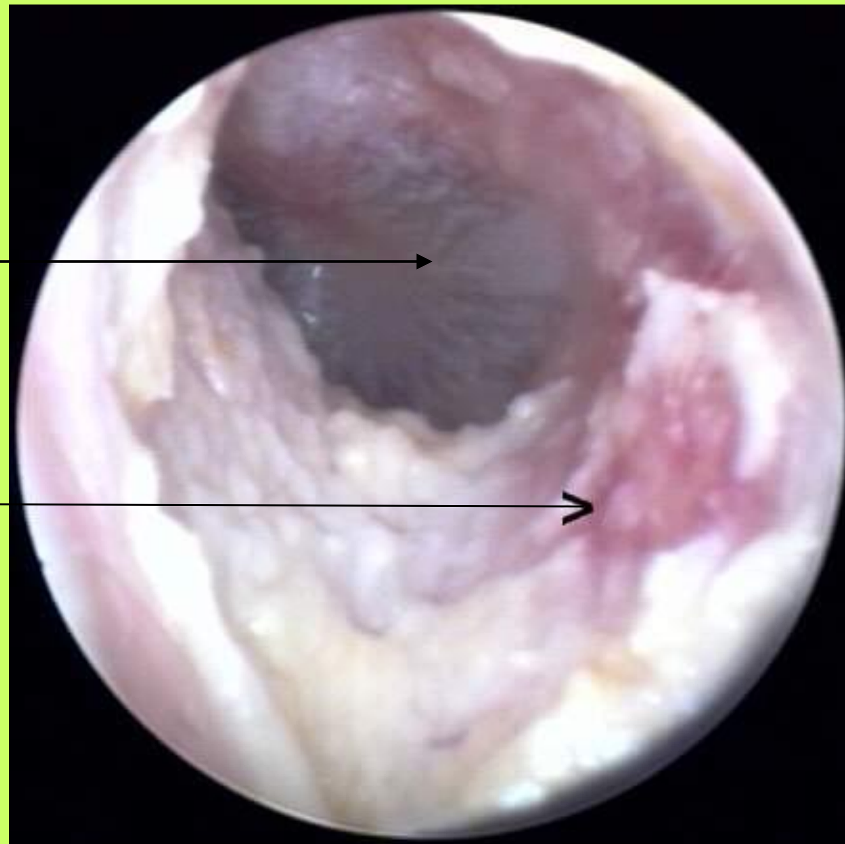


Otitis Externa

- Inflammation of EAM +/- infection

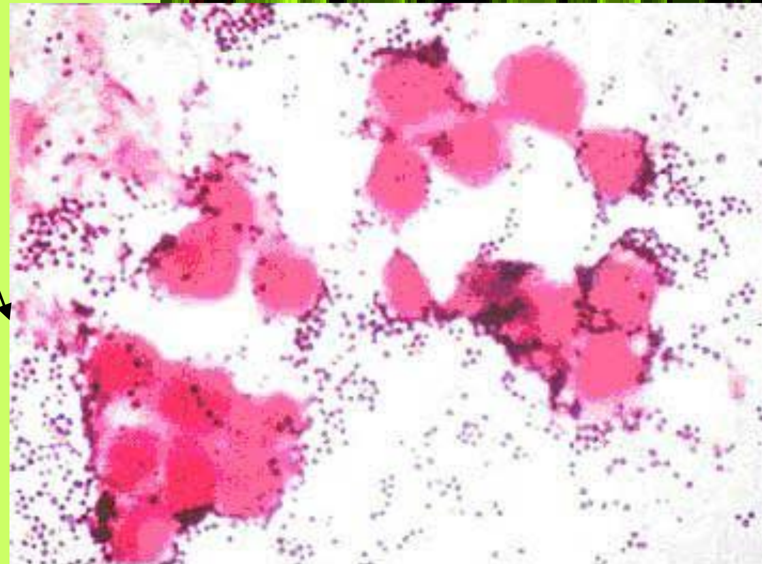
TM

debris



Pathogens

- Pseudomonas
- Staph Aureus
- Mixed growth



Causes

- Trauma
- Cotton buds
- Fingers
- H20 in ear
- Eczema
- Narrow canals

Rx

- Microsuction / aural toilet
- Microsuction / aural toilet
- Topical Topical antibiotic drops
- Water precautions

Leave oral / IV until specialist review

Malignant OE

Often in immunocompromised
+ Diabetics

Not mitotic!

Aggressive OE – cranial nerve palsies
Base of skull disease
Emergency referral for surgery and Abx