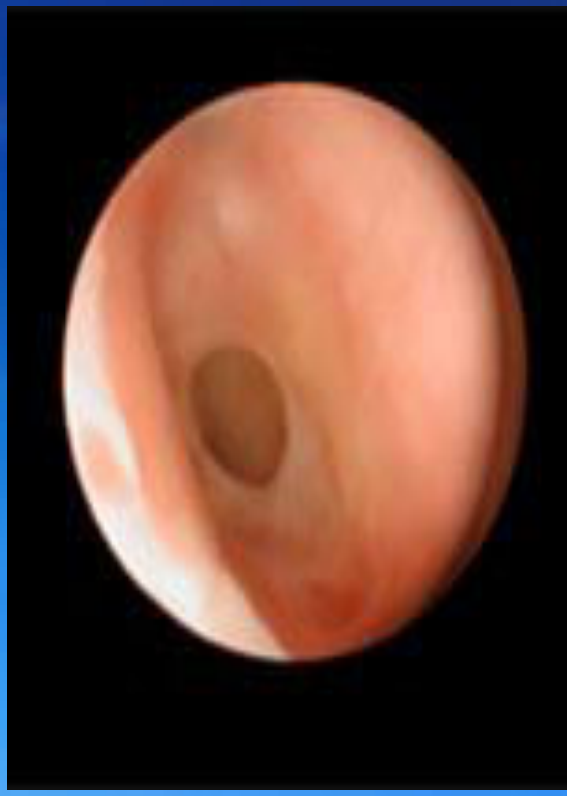
Sequelae Of ASOM

- Healing
- Open perforation
- Residual deafness
- CSOM



Today's topics-

Chronic suppurative Otitis Media (CSOM)

Presented by –
DR. G H M Shahidul Haque

Date :

Chronic Suppurative Otitis Media

Definition:

Chronic inflammation of the mucoperiosteal lining of middle ear cleft by pyogenic organism.

Aetiology:

Sequlae of ASOM due to

- Inadequate treatment of ASOM,
- Virulence of organism,
- Immunosupesed Patient,

❖ Repeated entry of infection through perforation in middle ear (dirty water)

Aetiology (Cont.)

- Repeated infection of RT reaching middle ear through Eust. tube.
- Infection from sources; sinus, nasophraynx , Adenoid,Tonsil,
- Tuberculosis.
- Persistent traumatic rupture of TM.
- Grommet insertion.

CSOM (Cont.)

Organisms:

- Pseudomonas aeroginosa.
- Proteus.
- E. coli.
- Staphylococcus.
- Streptococcus.
- Anaerobic:- Bacteroides fragalis.
  Anaerobic Streptococcus.

Epidemiology

Incidence of CSOM is higher in developing countries because of

- Poor socio economic status.
- Poor nutrition.
- Lack of health education.
- It affects both sexes and all age groups.

Pathology: (T T type)

- Perforation of pars tensa is a central perforation and its size and position varies.
- The middle ear mucosa becomes oedematous and velvety (in active stage).
- middle ear mucosa is normal when disease is quiescent or inactive.

Pathology (Cont.)

- A polyp may be seen, usually pale in colour.
- Ossicular chain is usually intact and mobile but may show some degree of necrosis.
- **Tympanosclerosis (hyalinisation and subsequent calcification of subepithelial tissue) may be seen in remnant of TM.**

Types of CSOM

1. Tubotympanic type=also called safe or bening type.

- It involves anteroinferior part of middle ear cleft (eustachian tube and mesotympanum)
- Is associated with a central perforation.
- There is no risk of serious complications/

Types of CSOM (TT type)

2. Aticoantral type also called unsafe or dangerous type.

- It involves posterosuperior part of the cleft (attic, antrum and mastoid)
- Is associated with an attic or a marginal perforation.
- The disease is often associated with cholesteatoma.
- Risk of complications is high.

Clinical features (TT Type)

1. Ear discharge=

- is mucoid or mucopurelent
- constant or intermittent.
- non offensive.
- discharge appears mostly at time of upper respt. Infection or entry of water into the ear.

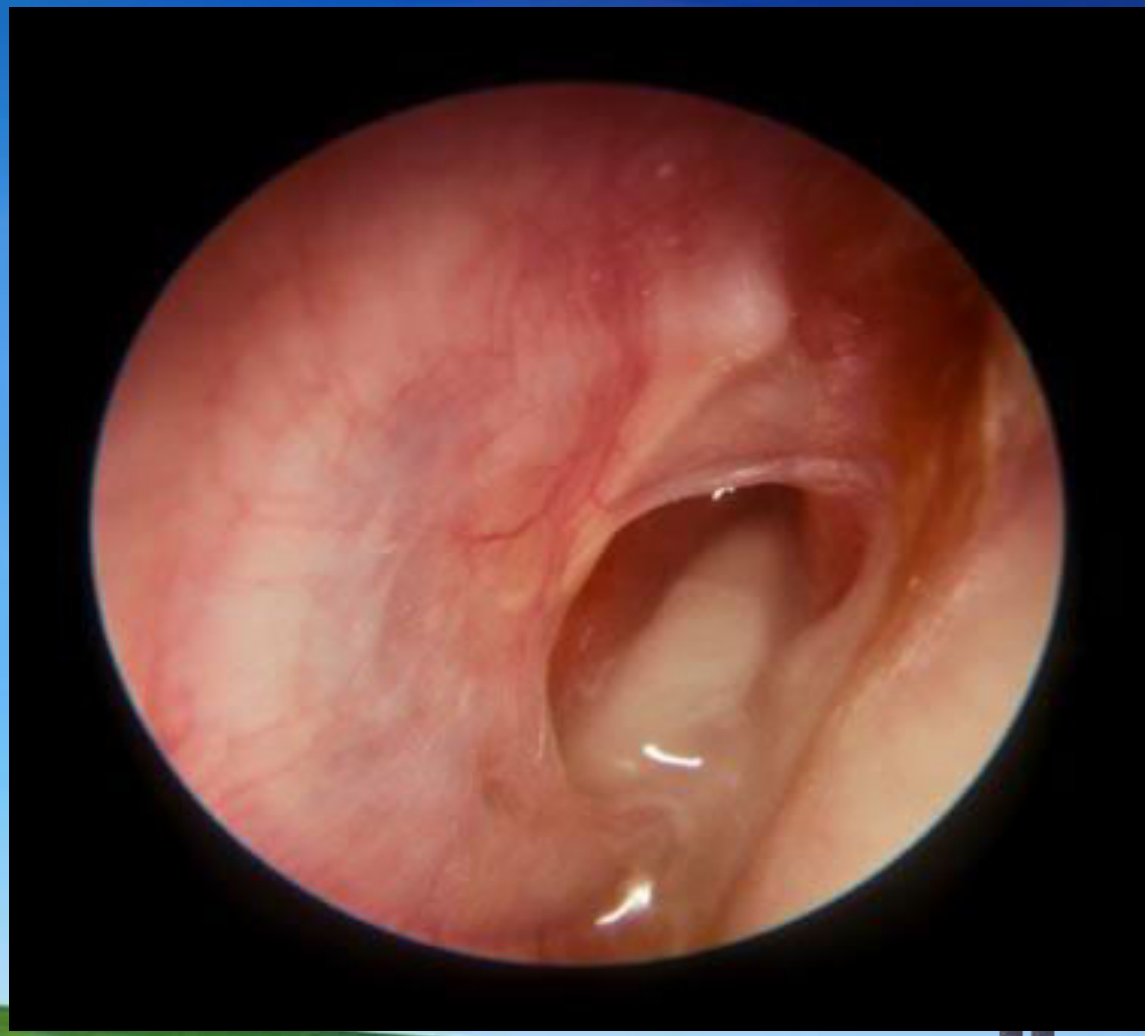
2. Hearing loss =

- Is conductive type.
- Rarely exceeds 50 dB.

Clinical features (cont.)

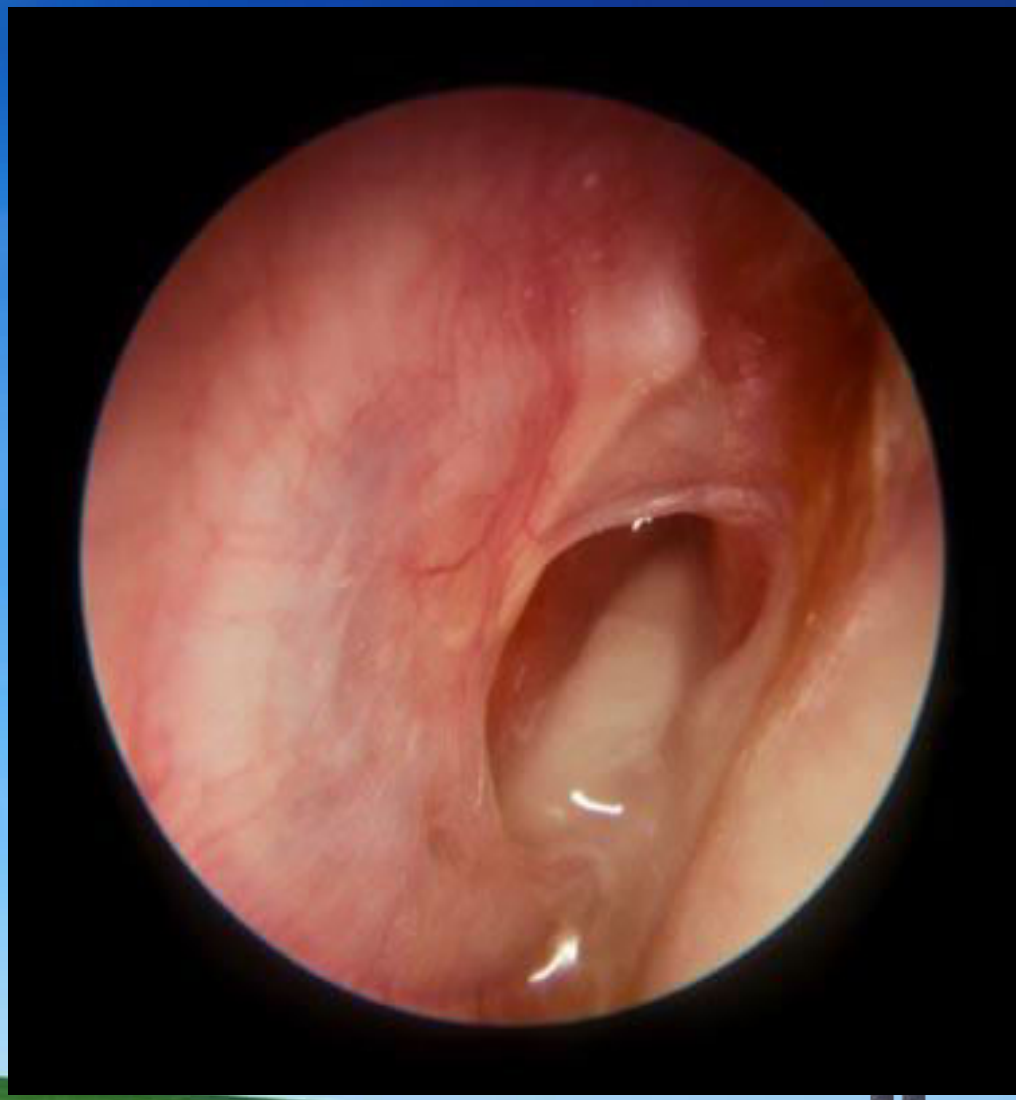
3. Perforation =

- Always central.
- May be anterior, posterior or inferior to the handle of malleus.
- May be small, medium or large.



4. Middle ear mucosa=

- Normally it is pale pink and moist.
- When inflammed it looks red, oedematous and swollen



Investigations

1. Examination under microscope=

- Is essential in every case .
- Gives useful information regarding presence of granulations, status of ossicular chain, tympanosclerosis and adhesions.
- Rarely,cholesteatoma may co exist with a central perforation and can be seen under a microscope.

Investigationgs

2. Culture and sensitivity of ear discharge=

Helps to select proper antibiotic.

3. Audiogram =

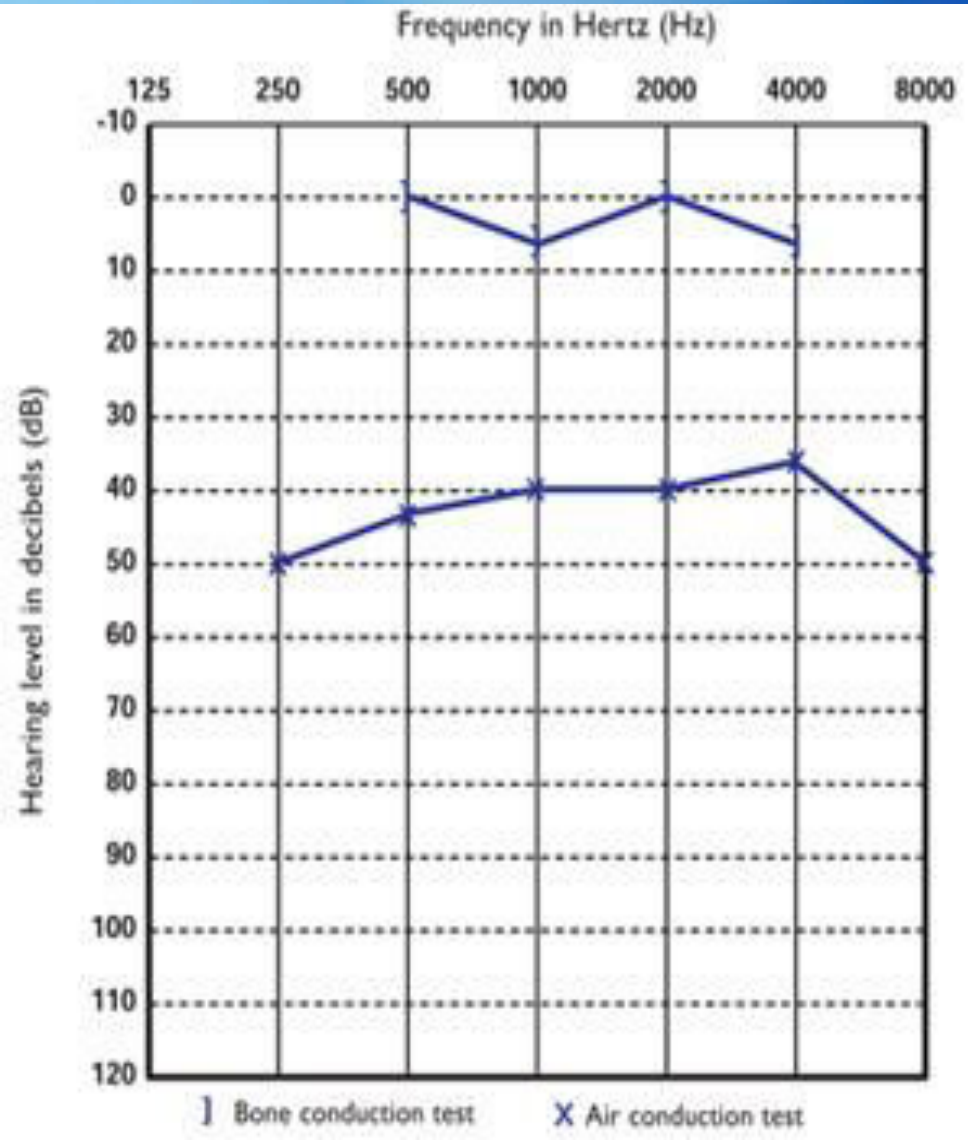
Gives an assesment of degree of hearing loss and its type.

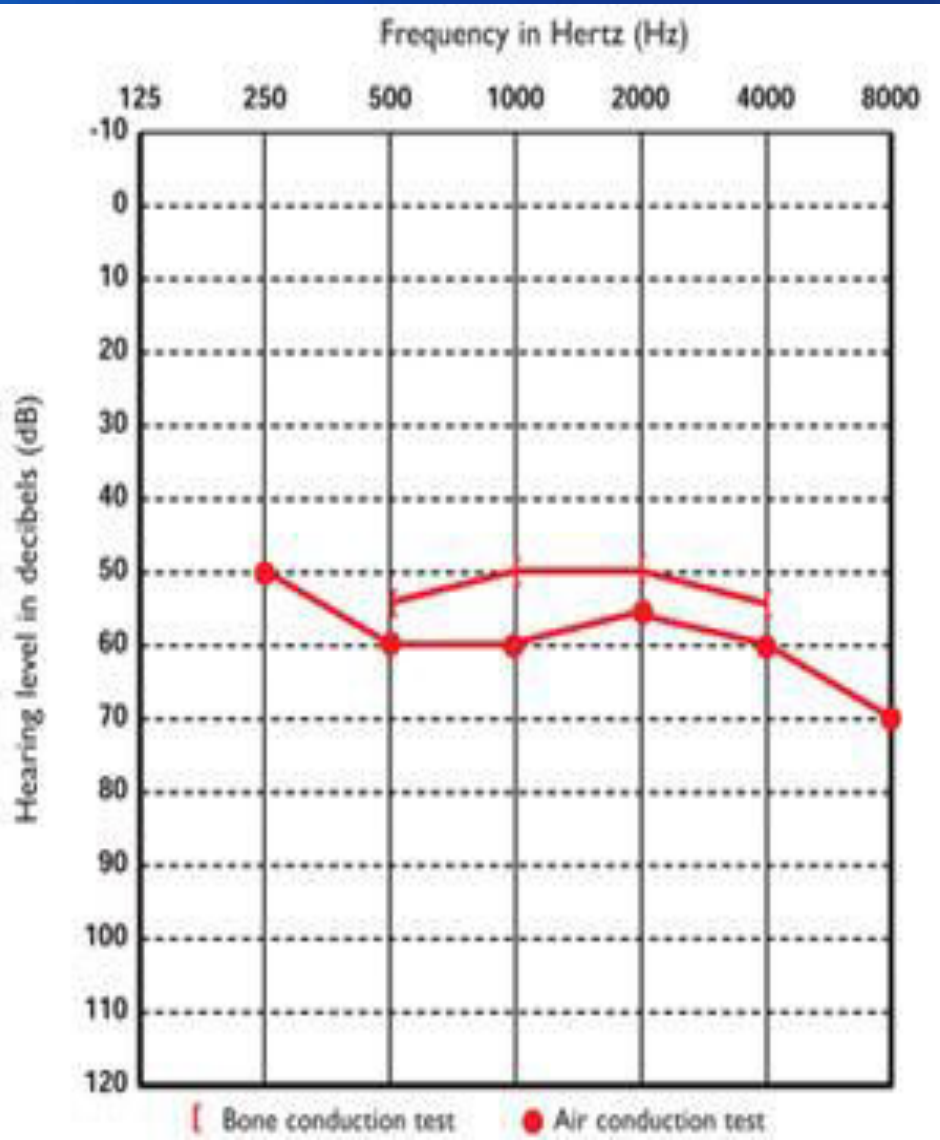
Usually conductive loss but SNHL may be present.

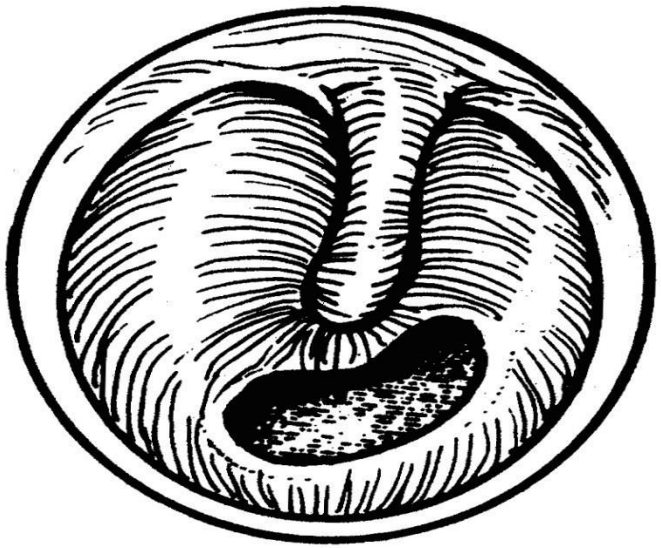
4. X ray mastoid / CT scan=

No evidence of bone destruction

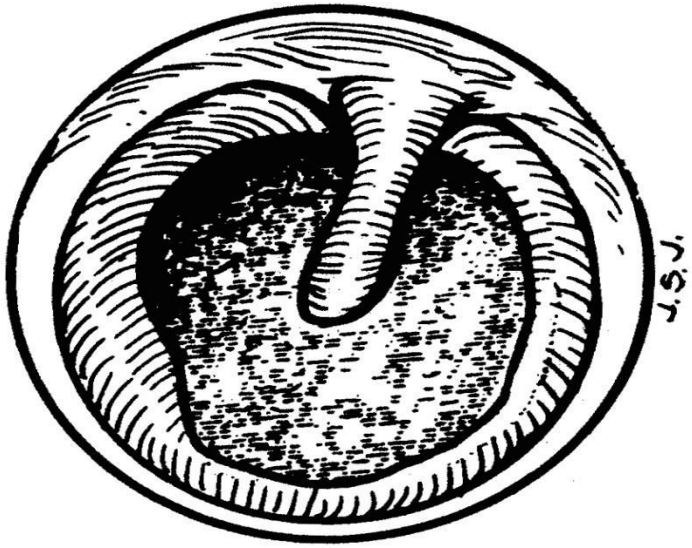
Audiogram


Frequency in Hertz (Hz)
125
250
500
1000
2000
4000
8000
-10
0
10
20
30
40
50
60
70
80
90
100
110
120
Hearing level in decibels (dB)
] Bone conduction test
X Air conduction test

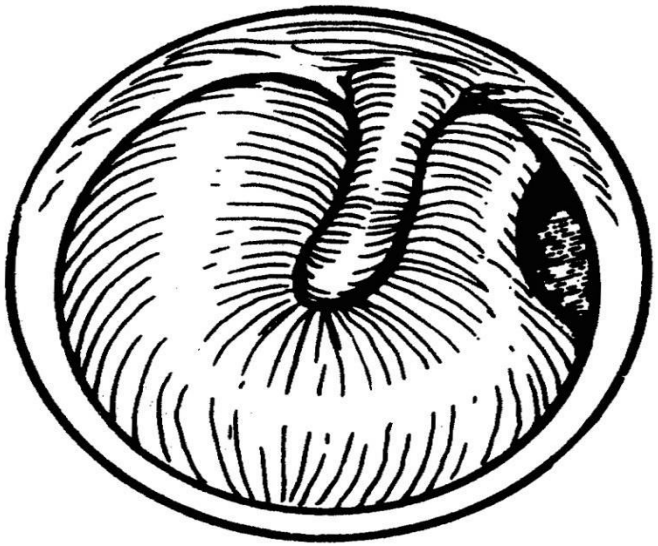

Frequency in Hertz (Hz)
125
250
500
1000
2000
4000
8000
-10
0
10
20
30
40
50
60
70
80
90
100
110
120
Hearing level in decibels (dB)
[Bone conduction test
Air conduction test



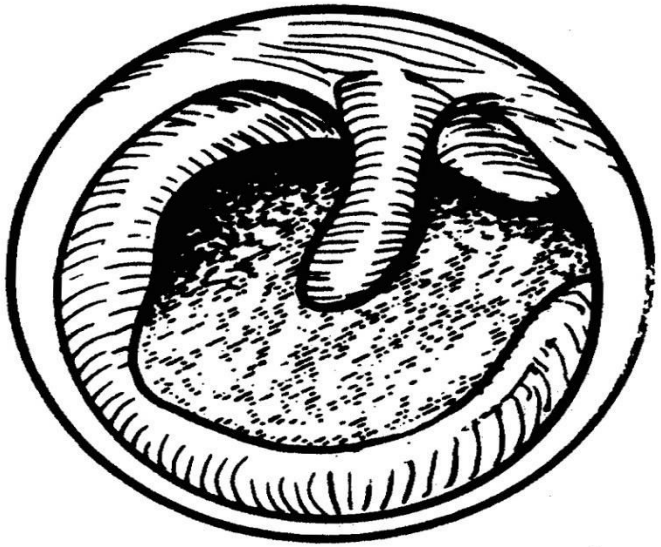
20% CENTRAL



90% CENTRAL



10% MARGINAL



90% MARGINAL

CSOM (Cont.)

Aims of treatment:

- To control infection.
- To eliminate ear discharge.
- To correct the hearing loss by surgical means.

Treatment

1. Aural toileting= if discharge present.
   - ✓ By suction clearance
   - ✓ By dry mopping with sterile cotton buds
   - ✓ By wet mopping
   - ✓ By syringing.
2. Ear drops= antibiotic ear drops combined with steroids are used.

3. Systemic antibiotics=in acute exacerbation of chronic infection. Amoxacillin / aziyhromycin / cefixime/ cephorexime etc.

4. Nasal decongestent= xylometazolin/ oxyma

5. Treatment of contributory factors= chronic tonsillitis/ adenotonsillitis/ sinusitis/ DNS / nasal allergy should be treated.

Treatment (cont.)

7. Surgical treatment= aural polyp or granulations, if present should be removed.
8. Reconstructive surgery= once ear is dry, myringoplasty with or without ossicular reconstruction can be done to restor hearing.

Atico antral type of CSOM

- It involves posterosuperior part of middle ear cleft.
- Is associated with cholesteatoma, which , because of its bone eroding properties , causes risk of serious complications.
- The disease is also called unsafe or dangerous type.

Aetiology

- Same as tubotympanic type.

Pathology

Atticoantral disease is associated with the following pathological processes;

1. Cholesteatoma.
2. Osteitis and granulation tissue= a fleshy red polypus ma be seen filling the meatus.

Pathology (Cont.)

3. Ossicular necrosis= is common in A A disease. Destruction may be limited to the long process of incus or may also involve stapes suprastructure, handle of malleus or entire ossicular chain. Therefore, hearing loss is always greater than in disease of TT type.
4. Cholessterol granuloma= is a mass of granulation tissue with foreign body giant cells surronding the cholesterol crystals.

Clinical features (AA type)

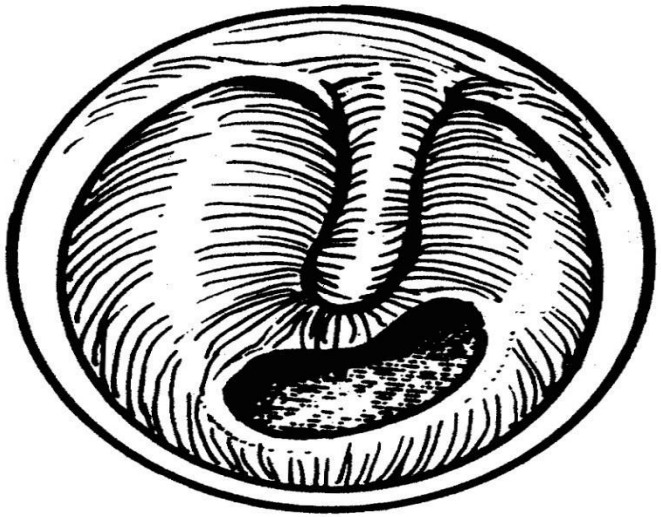
Symptoms ;

1. Ear discharge = usually scanty, but always foul smelling due to bone destruction.
2. Hearing loss= hearing loss is mostly conductive but sensoryneural element may be added.
3. Bleeding= may occur from granulations or the polyp when cleaning the ear.

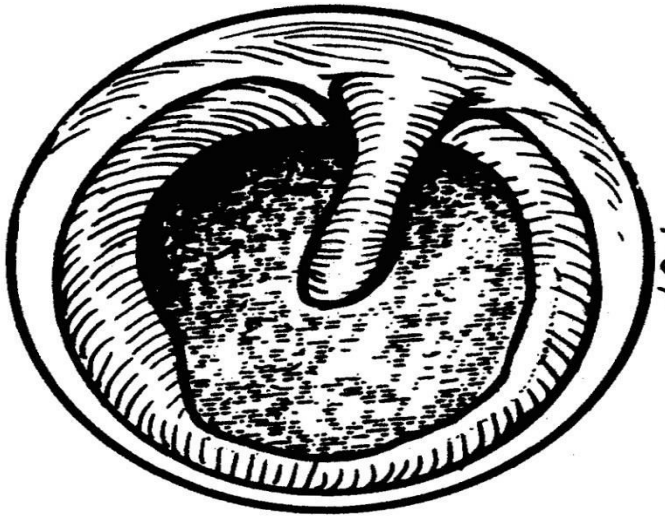
A A type

Sings;

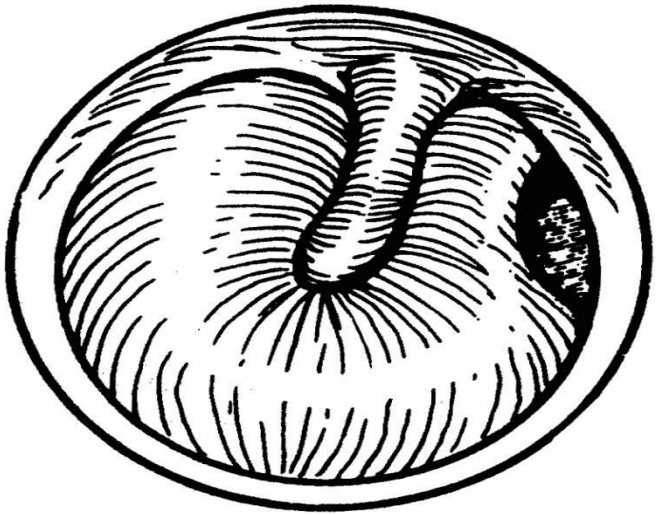
1. Perforation= either attic or posterosuperior marginal type.
2. Retracted pocket= an invagination of TM is seen in the attic or posterosuperior area of pars tensa. Degree of retraction and invagination varies.
3. Cholesteatoma= pearly white flakes of cholesteatoma is seen.



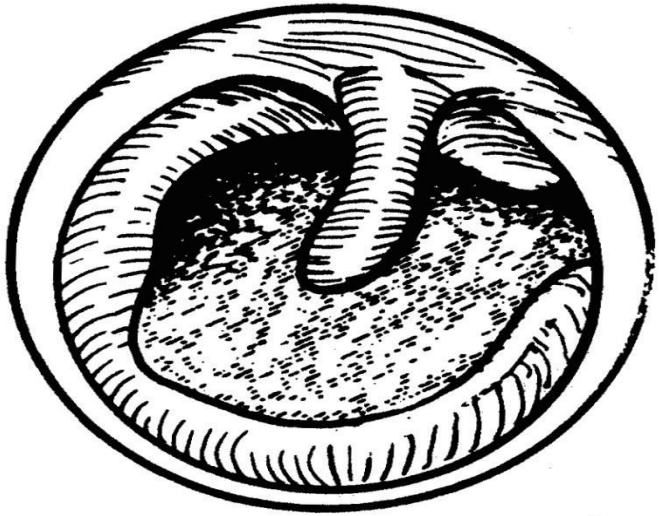
20% CENTRAL



90% CENTRAL



10% MARGINAL



90% MARGINAL

Investigations

1. Examination under microscope=
2. Tuning fork tests .
3. Audiogram
4. X ray mastoid/ CT scan of temporal bone
5. Culture and sensitivity of ear discharge.

Treatment

1. Surgical = primary aim in surgical treatment is to remove the disease and render the ear safe.second priority is to preserve or reconstruct the hearing .

- Modified radical mastoidectomy
- Radical mastoidectomy

2. Reconstructive surgery= hearing can be restored by myringoplasty or tympoplasty.

CSOM (Cont.)

Complications:

Minor

- Mucosal polyp.
- Granulation tissue formation.

Major

- Extra cranial.
- Intra cranial.

Difference between atticoantral and tubotympanic type of CSOM

1. Discharge ...

Profuse,mucoid, odourless (TT type)

Scanty , purulent, foul smelling (AA type)

2. Perforation ….

Central (TT type)

Attic or marginal (A A type)

3. Cholesteatoma …

Absent (TT type)

Present (A A type)

Diffe. Of TT type A A type of CSOM

4. Granulations …

Uncommon (TT type)

Common (A A type)

5. Polyp…

Pale colour (TT type)

Red and fleshy (A A type)

6. Complications….

Rare (TT type)

Common (A A type)

Thank you All

What is Tympanoplasty?

It is the microsurgical repair of perforation of TM.

TYMPANOPLASTY

Prerequisites of Tympanoplasty -

1. Ear should be dry at least for 6 weeks.

2. E. tube should be functioning .

3. There must be enough cochlear reserve .

4. There should be no contributory factors..

Advantages of Tympanoplasty

- To make the ear dry by preventing further infection in the ear.
- To improve hearing & to prevent further deteriorating of hearing.
- To prevent complication.
- For using hearing aid.
- To enable recruitment in certain profession.

CSOM- Chronic Suppurative Otitis Media(cont.)

- ✓IS TYMPANOPLASTY DONE IN BANGLADESH?
- ✓CAN IT BE DONE BY LOCAL ANESTHASIA?
- ➢WHAT IS USED AS GRAFT AS MATERIAL?
- ➢IS IT A COSTLY OPERATION?
- ➢IS IT A RISKY OPERATION?
- ➢DOES IT REQUIRE LONG HOSPITAL STAY?
- ➢DOES THIS OPERATION HAVE MANY COMPLICATIONS?
- ❖WHAT TYPE OF SURGERY IS IT?
- ❖WHAT IS THE SUCCESS RATE OF THIS SURGERY?

Thank you All