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## OTOSCLEROSIS. / osteospongiosis

- 1<sup>o</sup> disease of the bony labyrinth in which one/<sup>more</sup> foci of irregularly laid spongy bone replace part of normally dense endochondral layers of bony otic capsule.

### Aetiology

- \* Anatomical
- \* Hereditary.
- \* Race white > black american.  
India > China & Japan..
- \* Age of onset  
Hearing loss b/w 20 & 30 yrs of age  
Rare before 10 & after 40 years.
- \* Other factors  
pregnancy, menopause, operat<sup>n</sup>.
- \* Viral Infect<sup>n</sup>

### Types.

- Stapedial
- Cochlear
- Histological.

## Symptoms.

- Hearing loss. — painless progressive insidious onset.
- Paracusis Willisii — Hearing better in noisy surroundings.
- Tinnitus —
- Vertigo.
- Speech — monotone, well modulated soft.

## Signs.

- \* T. membrane : % quite (n) + mobile  
sometimes a reddish line on promontory  
↳ Active focus with ↑ vascularity is indicated.
- \* E. tube funct<sup>n</sup> (n)
- \* Rinne → —ve  
Weber → lateralised to the ear with greater conductive loss.
- Absolute BC (n)  
↳ 2<sup>nd</sup> in cochlear otosclerosis with sensorineural loss
- Pure tone audiometry — loss of air conduct<sup>n</sup>,  
more for lower frequencies.
- Dip in BC curve. — Carhart's notch  
@ 2000 Hz -15 dB.

## Differential Diagnosis.

- serous OM, Adhesive OM, Tympanosclerosis,  
otic fixat<sup>n</sup> of head of malleus, ossicular  
discontinuity / congenital stapes fixat<sup>n</sup>

# Treatment.

\* Medical.

No cure.

\* Surgical ( $\leq 30\text{dB}$ )

stapedotomy / stapedectomy.

'stapes removed  $\rightarrow$  prosthesis inserted  
3/4 inch of oval window

Contraindication.

- \* Only hearing ear — hearing aid is better.
- \* Associated Meniere's disease.
- \* Young children
- \* Prof athletes, high construction workers, divers and freq air travellers;  
risk for post operative vertigo/dizzy.
- \* Noisy surrounding ones.
- \* O. externa, T.M. perforat<sup>n</sup> & exostosis
- \* Pregnancy.

## Complication

- Tears of tympanomeatal flap & later perforat<sup>n</sup> of T. membrane.
- Injury to chorda tympani
- Ius dislocat<sup>n</sup>
- Facial  $\odot$
- Vertigo; early in post operative period &

late due to perilymph fistula.

- Granuloma
- Conductive hearing loss