Tympanolith in the Middle Ear

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Background

Tympanolith are calcified bodies within the middle ear. Origin of nidus of calcification may be extrinsic (foreign body) or intrinsic (stagnant mucus & inspissated purulent dried discharge), requiring oto-endoscopic removal & chemical assessment.

Case Report

70 year-old Male, Diabetic (since 25 years), complaints of :

- Painless, non-foul smelling, chronically discharging Right ear since 20 years
- Reduced hearing in Right ear since 10 years.
- No prior history of foreign body insertion or hearing aid usage.

Investigations

Pure Tone Audiometry: Bilateral mixed hearing loss with profound hearing loss in the affected ear.

Right Oto-endoscopy: Gritty foreign material in the middle ear with posterior canal bulge containing purulent material.

Under Local Anesthesia tympanolith, retrieved en masse with an angled probe from middle ear occupying mesotympanum & hypo tympanum

Moderate size central perforation of the tympanic membrane with an edematous middle ear mucosa.

Discussion

Tympanolith, rare, calcified mass within tympanic cavity.

Nidus of calcification: Extrinsic or Intrinsic.

Hypothesis: Precipitation of calcium & magnesium salts in chronically inflamed middle ear cleft.

Other possibilities: foreign bodies, general & local metabolic disorders, calcified tuberculous lesion.

Small Tympanolith: Asymptomatic.
Larger Tympanolith: Ear discharge, hard of hearing.

Conclusion

Tympanolith

- Differential diagnosis in chronically discharging ears.
- Oto-endoscopic complete removal & chemical assessment.

References


Figure 1: Right ear Oto-endoscopy

Figure 2: Pure Tone Audiometry

Figure 3: en masse retrieval sequence

Figure 4: Stone Analysis

Video: en masse removal of Tympanolith

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