

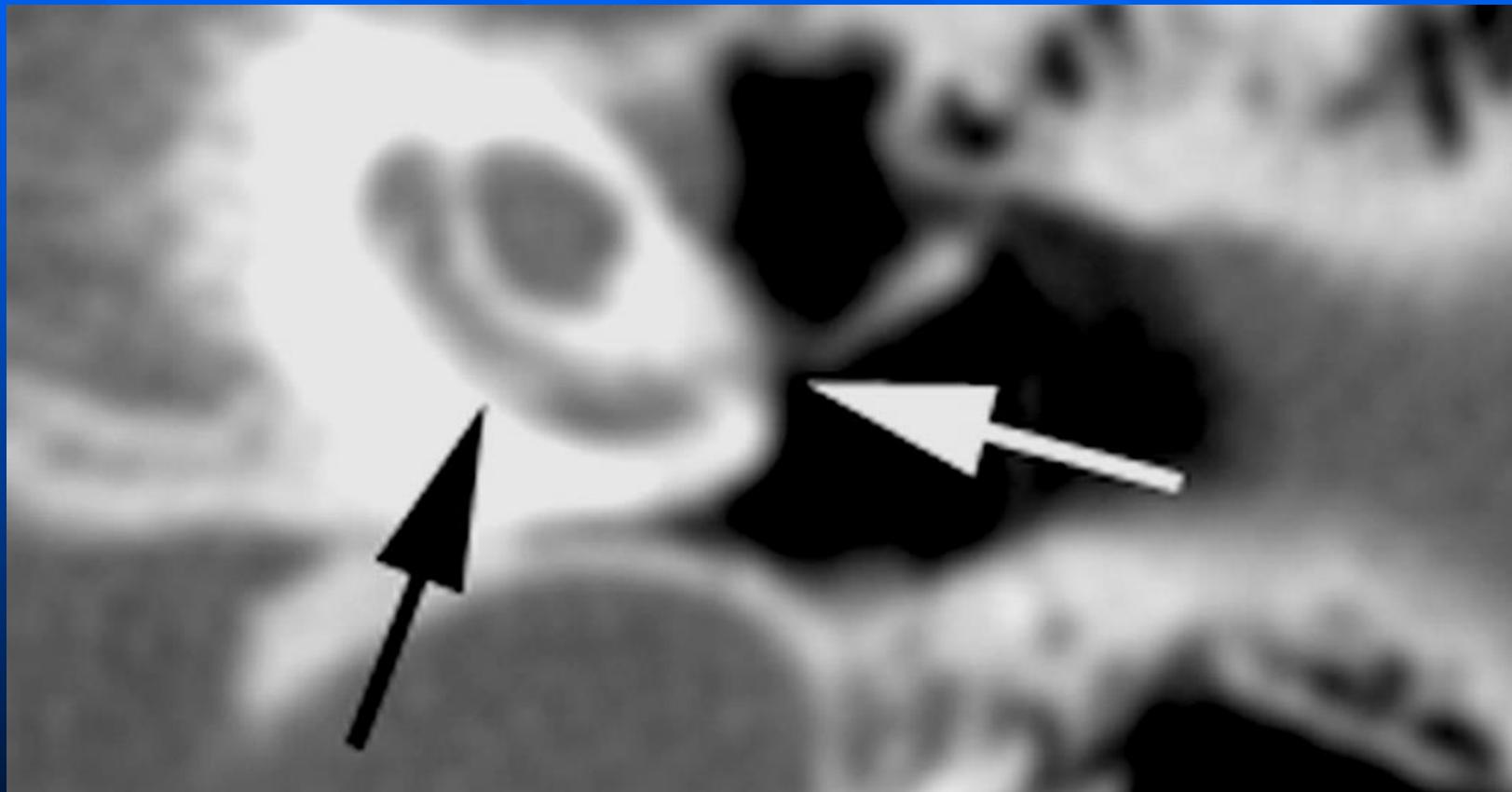
Labyrinthine Ossificans

- Healing response to inner ear infection, inflammation, trauma, or surgery.
- Synonyms
 - Labyrinthine ossification, ossifying labyrinthitis, labyrinthitis ossificans, chronic labyrinthitis.
- Imaging
 - Varies with severity
 - » Mild: "Enlarged" modiolus; subtle inner ear new bone
 - » Severe: All inner ear fluid replaced by bone
 - Temporal bone CT: **High-density** bone deposition within membranous labyrinth
 - T2 MR: **Low-intensity** foci within high-signal fluid of membranous labyrinth

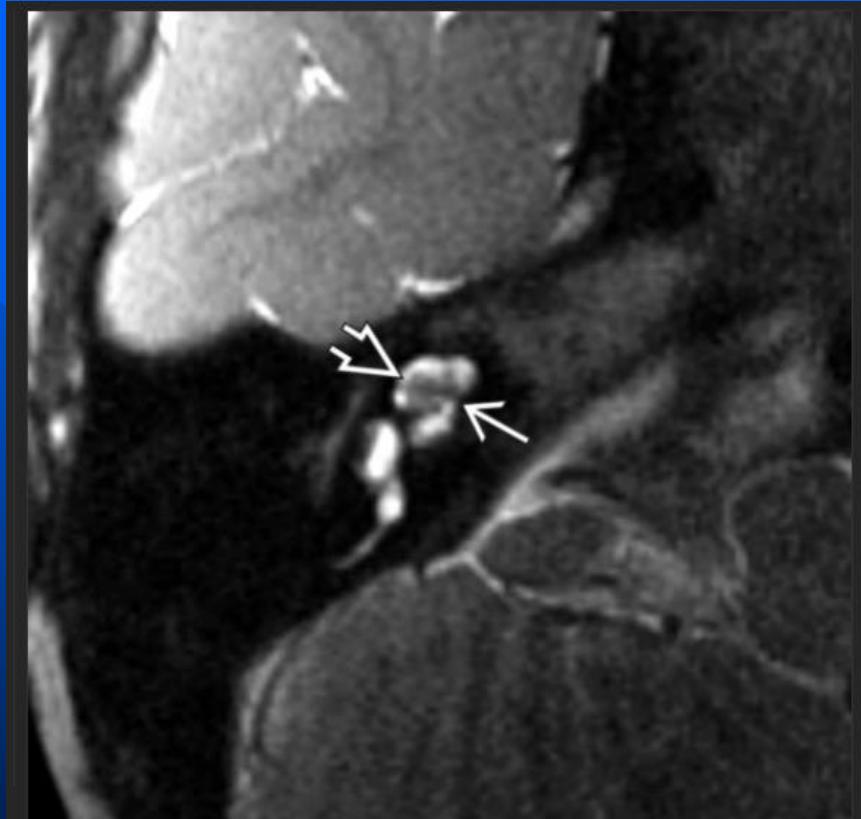
Clinical Issues

- Most common: Bilateral sensorineural hearing loss (SNHL) in child weeks to months after acute meningitis episode
- Less common: Unilateral SNHL with previous surgery, trauma, mastoid/middle ear infection
- Cochlear implantation used for SNHL correction if cochlear nerve is still present
- Bilateral cochlear labyrinthine ossificans (LO) is serious detriment to cochlear implantation

Labyrinthine Ossificans (in basal turn)



Labyrinthine ossification (Another example)



[Download to Presentation](#)

Axial T2WI MR in right inner ear with mild LO shows bony encroachment on basal turn of cochlea
→ Notice associated "large modiolus" ↗, which is fibro-osseous cochlear involvement.