



Internal Auditory Canal Diverticulum associated with Sensory Neural Hearing Loss

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Clinical Image

Internal Auditory Canal (IAC) diverticula are focal CSF-attenuation out-pouchings invariably located at the anterior IAC near the medial margin of the dense otic capsule. The aetiology of the diverticula is not fully understood but they have previously been described as cavitory otosclerosis [1]. They vary in size from a small notch to larger outpouchings and are bilateral in 60% of cases. Pippin et al suggest a prevalence of 5% in patient's referred for differing patterns of hearing loss, more common than had previously been thought. 91% of patients with an isolated diverticulum and no evidence of otosclerosis demonstrated hearing loss, pure Sensory Neural Hearing Loss (SNHL) in 63%. 8% of patients demonstrated both otosclerosis and an IAC diverticulum, 29% of whom demonstrated pure SNHL [2]. This suggests that isolated diverticula are related to SNHL. They are encountered commonly on CT temporal bones and their presence should prompt further audiometric evaluation.

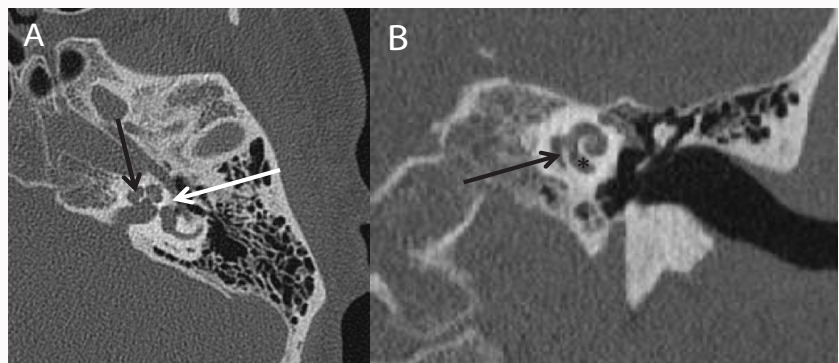


Figure: Axial (Image A) and Coronal (Image B) high resolution computerised tomography images of the left sided temporal bones identifying an IAC diverticulum (black arrow). There is also bony lucency at the fissula ante fenestram (white arrow) in keeping with otosclerosis. There is a focal connection between the diverticulum and the adjacent basal turn of the cochlea (marked by *).

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