

Bilateral incudomalleolar dislocations: an unusual cause of deafness

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Accepted 17 February 2017

DESCRIPTION

A 57-year-old woman was seen in an outpatient neurosurgery clinic after reporting daily headaches, a 'whooshing and squelching' sound in her head and reduced hearing in her left ear. Three months prior she required admission following serious head trauma. Imaging at that time revealed multiple skull fractures with extra-axial haemorrhages. Follow-up thin section CT of the petrous temporal bones (figure 1) demonstrated bilateral incudomalleolar dislocations. Ossicular chain disruption can

be easily overlooked and thorough assessment of the middle ear should be performed on follow-up imaging, particularly considering persistent patient symptoms.

At initial follow-up, the patient reported persistent headaches, tinnitus and bilateral decreased hearing loss, worse on the left. Formal audiological testing revealed a left-sided deficit which was corrected with a hearing aid. Further follow-up revealed no change in hearing and resolution of her headaches.

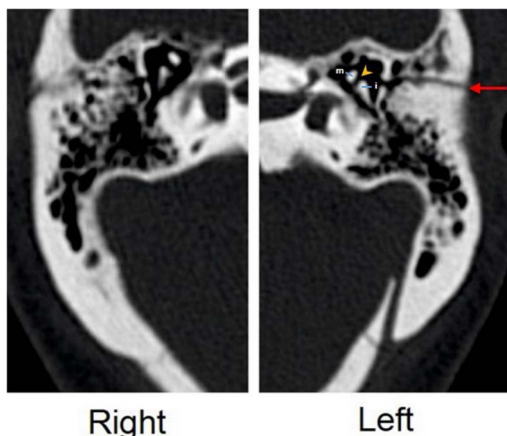


Figure 1 Cropped images of the left and right inner ear ossicles from an axial thin section CT scan through the petrous temporal bones demonstrating bilateral incudomalleolar dislocations (only left side labelled). i, incus; m, malleus; Orange arrow head, incudomalleolar dislocation; Red arrow, fracture line through left mastoid bone.

Learning points

- ▶ The normal appearance of the malleus and incus is that of a 'scoop of ice-cream' (malleus) sitting in an 'ice-cream cone' (incus).
- ▶ Incudomalleolar dislocation is diagnosed on imaging when the 'ice-cream' has fallen off the 'cone'.
- ▶ The configuration of the ossicular chain should be actively sought when reviewing and reporting imaging.

Contributors MP reformatted, labelled and prepared the images for publication; wrote the text and figure legend. TH reported the scan; extracted images; reviewed the manuscript. DB reviewed the patient in outpatient clinic; obtained informed written consent; reviewed the manuscript.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.



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To cite: Paddock M, Hodgson T, Bhattacharyya D. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2016-218733

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