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IMAGES IN OTORHINOLARYNGOLOGY

Intralabyrinthine haemorrhage

Hemorragia intralaberíntica

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Sudden deafness is defined as a pure sensorineural hearing loss of at least 30 dB at 3 contiguous audiometric frequencies that develops in less than 72 hours. It has an incidence of 5-20 per 100,000 inhabitants per year.

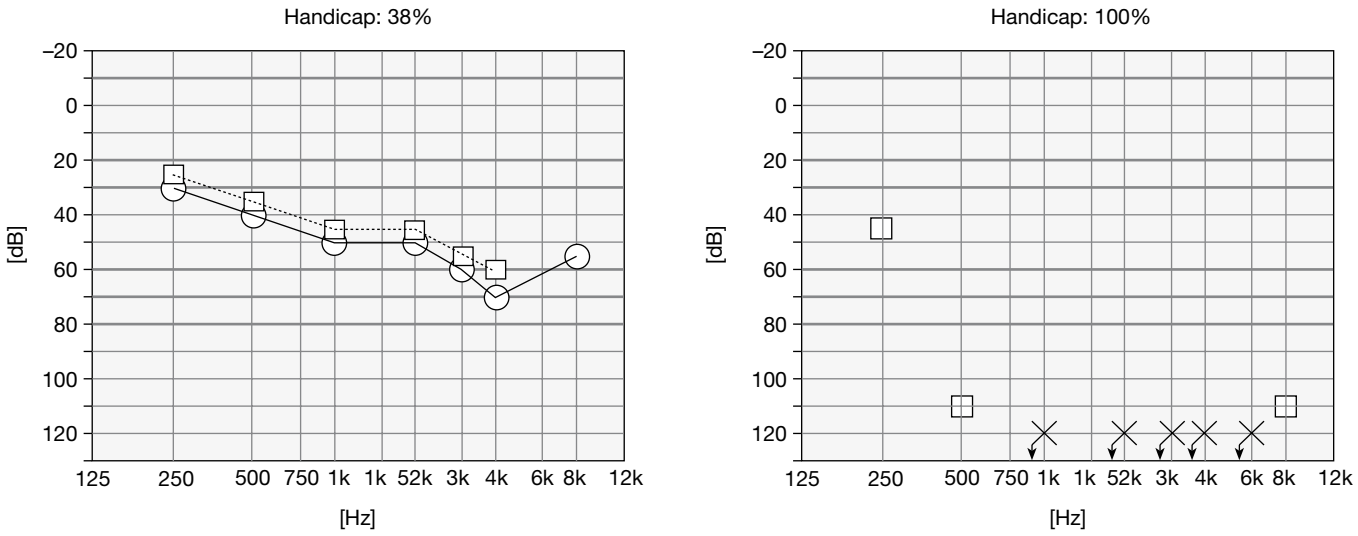

Figure 1 Tonal audiometry showing deafness in left ear (LE) and moderate sensorineural hearing loss in right ear (RE).

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Figure 2 Comparative MRI of both temporal bones. Detailed description in text.

Figure 3 Magnetic Resonance (MR) Images. Axial plane MR images were taken of the left posterior fossa with SE T1 (A, B), FSE T2 (C, D), and fat-saturated SE T1 sequences following paramagnetic contrast administration (E, F). Detailed description in text.

Various aetiological hypotheses have been considered: infectious, ruptured membranes, vascular compromise, ototoxicity, and autoimmune.

The prognosis for this condition varies depending on the time it takes to arrive at the diagnosis, how early treatment is initiated, patient's age, severity of the hearing loss, accompanying symptoms, and other factors.

Currently, the diagnosis-treatment sequence consists of audiometry and MRI, basically. The most common situation is that no cause is found, and it is classified as "idiopathic."

We are describing the case of a 69-year-old woman with an unremarkable medical history who presented with a sensation of sudden deafness confirmed by audiometry. (Figure 1). Treatment was initiated with methylprednisolone 2 mg/ kg/ day and an MRI was ordered (Figure 2, Figure 3).

The comparative MRI (Figure 2) of both temporal bones in SE T1 and 3D FIESTA (Figures 2A, 2B) showed spontaneous hyperintensity in the left labyrinth in SE T1 sequences (Figure 2A) with respect to the right labyrinth; the 3D FIESTA sequence (Figure 2B) confirmed the content of both inner ears to be liquid in nature, with no evidence of space-occupying lesions.

Figure 3 shows the axial plane MRI of the left posterior fossa with SE T1 (Figures 3A, 3B), FSE T2 (Figures 3C, 3D), and fat-saturated SE T1 sequences following paramagnetic contrast administration (Figures 3E, 3F). Spontaneous hyperintensity inside the membranous labyrinth structures of the left inner ear in T1 sequences (Figures 3A, 3B) with hyperintensity preserved in T2 sequences (Figures 3C, 3D) and no evidence of enhancement following paramagnetic contrast administration (Figures 3E, 3F). Vestibule (arrow in A, C, and E) and medial branch of the posterior semicircular canal (curved arrow in B, D, and F).

Although it has been described, sudden deafness secondary to intralabyrinthine haemorrhage is rare; when it does occur, it is usually in patients with haematological pathology, local trauma, or tumour or post-operative bleeding. Only one case of labyrinthine haemorrhage with no previous pathology has been found, and intralabyrinthine haemorrhage has rarely been visualized on MRI.

Conflict of interest

The authors declare that they have no conflict of interest.