Clinical Image

Bifid facial nerve with absent stapes: a rare anomaly

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An 18-year-old male was referred to our outpatient service with the complaint of right-sided hearing loss. An audiological investigation was performed to evaluate hearing loss. The nature of hearing loss was determined to be conductive. Then, the patient was planned for right side exploratory tympanotomy. During exploratory tympanotomy, the patient was found not to have stapes. Chorda tympani was noted and the cord-like structures were found to be encasing the oval window. The nerve monitoring confirmed that the cord-like structures were branches of the facial nerve. Tympanomeatal flap was repositioned without attempting any further procedure.

In Figure 1, we can see the facial nerve is branching and encasing the oval window. Stapes is not at all visualized. The chorda tympani is visualized crossing the middle ear, lateral to the oval window area. The round window is seen below the second branch of the facial nerve. Congenital duplication of a mastoid segment of the facial nerve is a rare anomaly and may be associated with middle ear anomalies like stapes fixation, absent stapes or dysplastic middle ear ossicles [1–3]. It has also been reported with normal stapes [4]. However, these kinds of anomalies can be noted in high resolution computed tomography (HRCT) of the temporal bone. HRCT of the temporal bone is generally beneficial for patients with conductive deafness planned for exploratory tympanotomy. In developing countries, the imaging of temporal bone is not routinely done prior to exploratory tympanotomy. Cost-effectiveness of imaging prior to exploratory tympanotomy is yet to be analyzed. In case of unilateral conductive deafness, a screening computed tomography (CT) can be done to rule out middle ear anomalies prior to exploratory tympanotomy.

Figure 1. Bifid facial nerve, chorda tympani and round window.

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