

PHOTO QUIZ

What is your diagnosis?

A young boy presented with difficulty in speech discrimination and tinnitus in the left ear. Audiometry showed high frequency hearing loss in the left ear.

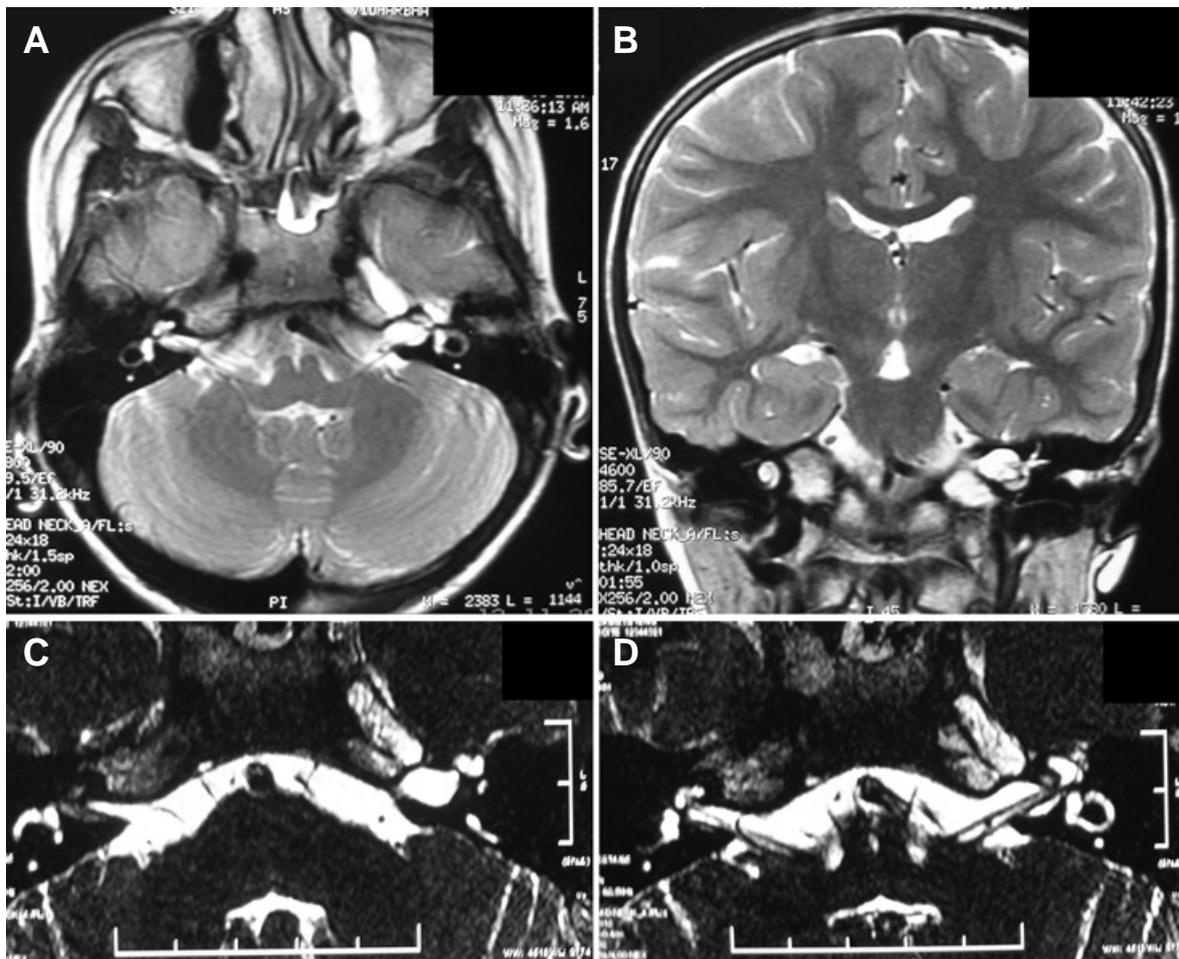


Fig. 1. A 14-year-old boy presented with difficulty in speech discrimination and tinnitus.
A&B. T2W MR images showing an intracanalicular hyperintense lesion involving the left internal acoustic meatus.
C&D. CISS 3D MR images showing an intracanalicular hyperintense lesion involving the left internal acoustic meatus.

What is your diagnosis?

Diagnosis: Intracanalicular Arachnoid Cyst

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Arachnoid cysts limited to the internal auditory canal are rare. They are found in about 0.5% of operations for suspected neoplasm of the internal auditory canal.¹⁻³ A 14-year-old boy presented with difficulty in speech discrimination and tinnitus in the left ear. There were no other complaints. His general and systemic examinations were normal. Higher mental functions were normal. All cranial nerves were normal except for the sensorineural hearing loss in the left ear. Motor and sensory examinations were normal. There were no cerebellar signs or nystagmus. Blood investigations were normal. Audiometry showed high frequency hearing loss in the left ear (between 30-40 db). The brain MRI showed a small lesion that was hypointense on T1, and hyperintense on T2 and CISS 3D sequences (Fig. 1). A diagnosis of arachnoid cyst was considered. The lesion was excised by the translabyrinthine approach. Differential diagnoses of intracanalicular lesions include vestibular schwannoma (commonest), meningioma, facial neuroma, cavernous haemangioma, lipoma and arachnoid cyst.^{1,4} Lesions confined to the internal auditory canal usually present with cochleovestibular symptoms; sensorineural hearing loss, tinnitus and balance disturbances.⁴ Involvement of the facial nerve is more common with meningioma than any other lesion.⁴ However, even a long-standing arachnoid cyst

of the internal auditory canal can cause compression atrophy of the nerve trunks with associated neurological deficits.³ Previously, there was no absolute method for differentiating an intracanalicular neoplasm from an arachnoid cyst.³ However, with the advent of high-resolution air CT cisternography and MRI techniques, a preoperative diagnosis can be suspected in many cases.^{2,4,5} Small intracanalicular arachnoid cysts can have a similar radiographic appearance to acoustic neuroma and need to be differentiated radiologically.² A CISS sequence allows further appreciation of the cystic nature and extension of the arachnoid cysts with their relations to nerves and vessels.⁵

References

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