Arachnoid Cyst: Middle Ear Mass Diagnosis to Consider

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ABSTRACT

Objective
Arachnoid cysts are CSF filled spaces involving, as the name suggests, the arachnoid membrane. They can occur anywhere in the intracranial compartment, but are significantly more common in the posterior fossa, the suprasellar cistern, collicular region, cerebellopontine angle, and the middle ear space. The decision was made to perform a facial nerve decompression as the primary treatment option for the patient due to the risk of progressive hearing loss and vertigo.

Methods
A 57-year-old woman presenting with a unilateral conductive hearing loss was noted to have a middle ear mass causing a conductive hearing loss. On examination, her middle ear area was normal. The patient underwent a CT scan of the temporal bone which revealed a well-defined mass in the middle ear space. The mass was noted to be hyperintense on T1-weighted images and hypointense on T2-weighted images. A temporal bone biopsy confirmed the diagnosis of an arachnoid cyst.

Conclusion
Arachnoid cysts are a rare finding in the middle ear. They can present with conductive hearing loss and vertigo. Treatment options include observation, surgery, or resection. This case illustrates the importance of considering arachnoid cysts in the differential diagnosis of middle ear masses.

REFERENCES

INTRODUCTION

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