An Uncommon Presentation of a Common Condition: A Rare Case of External Auditory Canal Cholesteatoma

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INTRODUCTION

Cholesteatoma is a bone destructive cystic lesion that is lined by keratinising stratified squamous epithelium, found most commonly in the middle ear cavity and rarely in the external auditory canal.

The external auditory canal cholesteatoma (EACC) is a rare form of temporal bone cholesteatoma with an estimated incidence of 0.1% worldwide.

CASE REPORT

A 59 year old patient noticed an insect entering his ear which he removed by himself using a sharp stick following which he started to develop blood stained, foul smelling discharge from the left ear which continued for about 6 months until he visited a doctor. The discharge was associated with left ear pain as well. Patient was evaluated for the same in an outside hospital where he was advised to follow up after a course of antibiotics but he did not feel any improvement.

On examination of ear, in the left external auditory canal, floor and posterior wall was eroded, foul smelling sequestrum and crusts were noted and purulent thick discharge was present.

MANAGEMENT

- On EUM - posterior wall of EAC was eroded and sequestrum with granulation tissue and cholesteatoma flakes were noted.

MANAGEMENT

INVESTIGATIONS:

- HRCT temporal bone was performed in which the following significant findings were noted - Ill-defined soft tissue opacification with bony erosions noted predominantly involving the lateral aspect of left mastoid air cells with erosions of the lateral wall and adjacent mild soft tissue density. There was also bony erosion of both anterior & posterior wall of the left bony external auditory canal with minimal soft tissue densities along the roof & floor of the left external auditory canal.
- Biopsy was taken from the debris which was reported as 'cholesteatoma'.

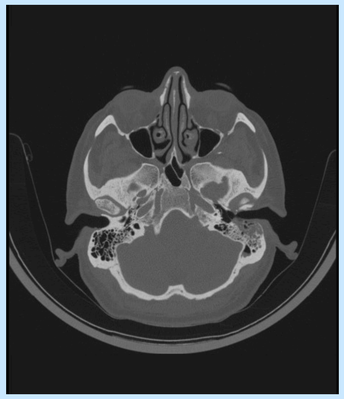

Figure 1: HRCT of temporal bone showing cholesteatoma primarily affecting Left EAC

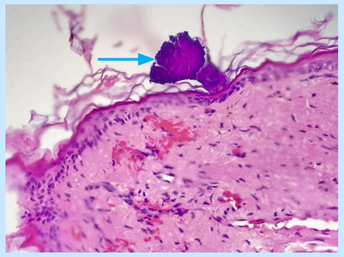

Figure 2: Section shows an inflamed tissue fragment, lined by stratified squamous epithelium with dead bone spicule (blue arrow)

SURGICAL MANAGEMENT:

Left Mastoid Exploration (canal wall down mastoidectomy + mastoid partial obliteration + conchomeatoplasty) was performed following which improvement was seen.

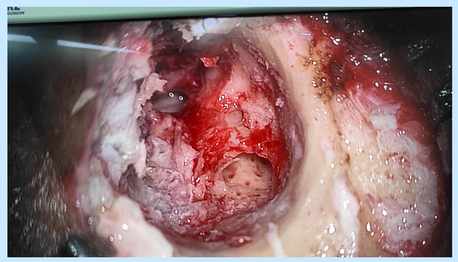

Figure 3: Intra-op image showing cholesteatoma in the EAC

DISCUSSION

The clinical findings in a case of EACC are very nonspecific and have various possible differential diagnoses including neoplasms of the EAC, keratosis obturans, post-inflammatory medial canal fibrosis, and malignant otitis externa. Therefore it is very important to be able to identify a case of EACC as it's management is notably different from the above mentioned other possible diagnoses. Imaging can be of great value in evaluation of EACC. HRCT (High Resolution Computed Tomography) is an important radiological tool for the diagnosis of EACC. On HRCT, a soft-tissue density in the EAC with erosion of adjacent bone and intramural bone fragments is seen, which is characteristic of EACC. Tissue biopsy is also another important investigation for EACC, it is especially important as it helps to distinguish EACC from external auditory canal neoplasms.

CONCLUSION

EACC is seen in only about 1 per 1000 new patients visiting ENT clinics. The rarity of this condition and its nonspecific clinical findings often lead to misdiagnosis which is why recognising it as a distinct entity is important because its management is significantly different from that of its clinical differential diagnoses.