Fungal Granuloma in External Auditory Canal

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Abstract Aural masses are most commonly inflammatory in nature, but may also manifest as more severe disease making them an important differential diagnoses. We present the case of a 20-year-old female who presented with a 3-month history of unilateral, foul smelling, occasionally blood stained ear discharge and earache. She was conservatively treated for these 3 months and was subsequently referred to our institute where she was diagnosed with a mass left ear. After thorough evaluation an excision biopsy with histopathological examination was done which proved the mass to be a fungal granuloma. The importance of this case report lies in the statement that in a case presenting with chronic foul smelling ear discharge fungal granuloma should be kept in the differential diagnoses.

Keywords Ear · External auditory canal · Foul smelling discharge · Fungal granuloma · Blood stained discharge

Introduction

Aural masses (majority of them being polyps) typically present in external auditory canal but may arise in middle ear. These masses are usually associated with discharge and present as chronic suppurative otitis media with or without cholesteatoma. Conservative treatment with topical antibiotic and steroid drops plus oral antibiotics is recommended before surgical intervention. However, prolonged

topical therapy for persistent aural mass may delay the diagnosis of more serious disease. This case report emphasizes the importance of thorough patient evaluation in cases with non-responsive aural mass and discusses the differential diagnoses.

Case Report

A 24-year-old female patient presented with 3-month history of discharge from left ear and pain left ear. The discharge was greenish black/dark green, mucoid, foul smelling with occasional bloodstaining. It was intermittent with no diurnal variation and did not change with change in posture. No aggravating or relieving factors could be elicited. Amount of discharge was moderate which had not increased or decreased with time. There was history of intermittent throbbing pain in the left ear that was moderate in intensity, non-radiating, which was relieved with analgesics (diclofenac sodium). There was history of diminished hearing from left ear that was progressive in nature.

There was no past history of otitis externa, otitis media, trauma or any ear surgery. There was no history of headache, vertigo, vomiting and fever. There was no history of any complaint from the right ear, nose or throat. She was repeatedly treated with topical antibiotics and steroid drops (polymyxin + dexamethasone drops) with no relief of symptoms.

On examination of the left ear—the pinna, postauricular region and the mastoid area were normal and non-tender. On examining the external auditory canal a red polypoidal mass was seen filling the bony part of the external auditory canal obscuring all of the tympanic membrane. There was dark green, mucoid discharge present in the floor of the external auditory canal that was foul smelling.

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On probing the mass, the probe could be passed all around except for the posterosuperior part from where it seemed to be arising. It was tender on probing and also bled but was not associated with any vertigo, giddiness or facial twitching.

The tympanic membrane could not be appreciated due to mass completely obscuring the tympanic membrane.

Right ear, nose and throat were normal.

On tuning fork tests, Rinne test was negative in left ear and positive in right ear. Weber was lateralized to left ear thus indicating conductive hearing loss in left ear. Pure tone audiometry showed pure, moderate conductive hearing loss (36 dB HL) in left ear with normal hearing in right ear.

X-ray both mastoids (lateral oblique view) showed normally pneumatized mastoid air cells bilaterally.

Patient was taken up for biopsy and histopathological examination. Under general anaesthesia (Pentothal + Halothane) whole of the mass was excised and sent for histopathological examination. Underlying tympanic membrane was intact and normal.

External auditory canal after removal of mass was packed with a small pack soaked in antibiotic–steroid ointment that was removed after 48 h. There was no postoperative complaint and external auditory canal and tympanic membrane looked normal after removal of the pack.

Final histopathological report proved the mass to be a fungal granuloma (Figs. 1, 2). Grossly the specimen contained multiple grey white, tiny soft tissue bits measuring 0.4 cm. Microscopically it showed filamentous pattern with branching. Patient was put on oral fluconazole 150 mg once weekly for 8 weeks plus topical 2% ketoconazole ointment.

Fig. 1 H & E staining of excised mass showing fungal colonies (10×)

Fig. 2 H & E staining of excised mass showing clear branching pattern of fungal hyphae (20×)

After 1 year of follow up patient is all right with no complaint. Repeat audiogram showed mild conductive hearing loss in left ear (16 dB HL).

Discussion

Patients presenting to an ENT OPD with an aural mass are not uncommon. Majority of them are aural polyps, which are often associated with CSOM. On occasions there may be conditions where the patient has aural mass with intact tympanic membrane.

In addition to inflammatory aural polyps many conditions can present as mass ear with discharge. These include squamous cell papilloma [1], eccrine acrospiroma [2], multiple myeloma [3], leiomyoma [4], lymphoma [5], schwannoma [6] etc. In addition to the tumours a case of foreign body granuloma [7] has also been reported.

Fungal infections are usually restricted to diffuse involvement of external auditory canal. In cases of immunocompromised status of the patient invasive fungal infection can be seen. No case of fungal granuloma in external auditory canal with intact tympanic membrane has been reported till date in author's knowledge.

Summary

Patients presenting with aural mass and discharge from the ear are usually suffering from chronic suppurative otitis media. Differential diagnoses usually include tumours, foreign body, metastases. The presence of fungal granuloma in the ear canal with foul smell and ear discharge has not been reported yet and that is why we want our fellow

practitioners to be aware of this possibility while dealing with patients of aural mass through this case report.

References

1. Rogers KA Jr, Snow JB Jr (1968) Squamous cell papilloma of the external auditory canal and middle ear treated with radiation therapy. *Laryngoscope* 78(12):2183–2188
2. Rupp SJ, Wagner RF, Porter NC (1992) Eccrine acrospiroma of the EAC. *Cutis* 49:49–50
3. Quinodoz D, Dulguerov P, Kurta M et al (1998) Multiple myeloma presenting with external ear mass. *J Laryngol Otol* 112(5):469–471
4. Yeh SY, Chao TK (2005) Leiomyoma of the external auditory canal—a case report and brief review of the literature. *Eur Arch Otorhinolaryngol* 262(5):397–399
5. Shuto J, Ueyama T, Suzuki M et al (2002) Primary lymphoma of bilateral external auditory canals. *Am J Otolaryngol* 23(1):49–52
6. Gross M, Maly A, Elishar R et al (2005) Schwannoma of the external auditory canal. *Auris Nasus Larynx* 32(1):77–79
7. Harris Kevin C, Conley Stephen F, Kerschner Joseph E (2004) Foreign body granuloma of the external auditory canal. *Pediatrics* 113(4):e371–e373