

CASE REPORT

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An unusual presentation of the external auditory canal mass

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Abstract

Background: External auditory canal (EAC) masses can arise secondary to a multitude of ear pathologies like congenital, inflammatory, infective, or malignancy. The most common causes of external auditory canal masses are due to otitis media—squamous and mucosal types, tubercular otitis media, malignant otitis externa, and benign tumors like osteomas, exostosis, pleomorphic adenoma, tumors from the ceruminous and sebaceous glands; and malignant tumors like squamous cell carcinoma and rhabdomyosarcoma. The management of an external auditory canal mass will vary in each case, depending upon the underlying pathology and the extent of the involvement of the surrounding structures.

Case presentation: In our case report, we report a neglected foreign body in the external auditory canal that presented as an EAC mass and its management.

Conclusion: Hence, we suggest that we need to consider an underlying neglected foreign body as a cause, whenever masses of EAC do not respond to appropriate medical treatment with antibiotics.

Keywords: Foreign body, Aural mass, External auditory canal

Background

Neglected foreign bodies of the external auditory canal (EAC) can present as an aural mass which can also present with otalgia, otorrhea, aural fullness, hearing loss, granulation tissue, and aural polyp. These neglected foreign bodies in EAC that present as an aural mass usually do not respond to treatment with antibiotics until they are discovered using appropriate investigations and removed surgically. Imaging studies and FNAC (fine needle aspiration cytology) may lead to diagnosing the underlying pathology and help us to narrow down the spectrum of various other causes of an aural mass [1, 2]. We report a case of an aural mass that was secondary to a neglected foreign body and was discovered during surgical excision of the

same. There are similar case reports available in the literature, but in our case report, despite adequate history, examination, and appropriate investigations, we discovered the neglected foreign body per operatively only. Hence, we emphasize the importance of history taking and consider a neglected foreign body as one of the differential diagnoses for an aural mass and plan for a surgical excision when they do not respond to antibiotics.

Case presentation

A 49-year-old female, a farmer by occupation, presented to our ENT outpatient department with complaints of persistent, progressive, purulent foul-smelling left ear discharge and hearing loss for 1 year. She also noticed a growth in the external ear for a 1-year duration that slowly increased in size to attain the present size. Her complaints started after she had

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Fig. 1 Skin-covered, globular mass occupying the cartilaginous part of EAC

encountered trauma to her left ear, while she was chopping firewood at work.

On inspection, there was a 2-cm, skin-covered, sessile, globular mass attached to the posterosuperior part of the cartilaginous EAC covered with purulent discharge (Fig. 1). On probing, the mass was soft, insensitive, did not bleed, and obscured the tympanic membrane and the tuning fork test showed conductive hearing loss on the left side. The lesion did not respond to appropriate oral antibiotics for 2 weeks, so a high-resolution computed tomography (HRCT) temporal bone was done which showed a soft tissue mass occupying the lateral third of the left EAC, with the normal middle and inner ear (Fig. 2). Fine needle aspiration cytology of the lesion was reported as an inflammatory aural polyp; hence, the patient was taken up for aural polypectomy.

Peroperatively, this 2 x 1 cm skin-covered lesion occupied the entire cartilaginous part of EAC obscuring the tympanic membrane. After incising the polyp along its base, we found a wooden stick of 2 cm in size that was encapsulated within granulation tissue (Fig. 3) and the lesion was removed in toto (Fig. 4). The tympanic membrane and bony part of the external auditory canal were intact.

Histopathological examination showed inflammatory epithelial polyp with occasional foreign body giant cells. On follow-up after 1 month, the excised skin in the external auditory canal healed well and she had normal hearing sensitivity.

Discussion

Aural masses/polyps of the EAC/middle ear can be due to various causes such as congenital, traumatic, inflammatory, benign, or malignant causes such as otitis media, pyogenic granuloma, and tumors from the eccrine glands of the EAC, relapsing polychondritis, langerhans cell histiocytosis, and neoplastic conditions like osteoma, rhabdomyosarcoma, and progressive necrotizing otitis externa [3]. These aural masses can present as, granulation tissue, aural polyps or growths with persistent ear discharge, ear fullness, ear pain, and hearing impairment [4]. Neglected foreign bodies presenting as a skin-covered mass in the EAC are very few in the literature to date.

Harris et al. in 2004 reported an external auditory canal polyp and retrieved a plastic electrical cap on surgical exploration in a 9-year-old boy [5]. Ahmed et al. removed a spherical bead in a 5-year-old child, and Abdel Tawab et al. removed neglected cotton pieces in a 19-year-old deaf-mute patient, the above described cases presented as external auditory canal mass which failed to respond to adequate medical management [3, 6] and the patients were subjected to appropriate imaging and still failed to reveal the foreign body.

Clinical diagnosis and treatment of the EAC mass are based largely on history, examination, and appropriate investigations. HRCT of the temporal bone helps in diagnosis and specifically determines the extent of the lesion involving the EAC, middle ear, and inner ear. It also provides a tool for better evaluation of the surrounding structures, and it is considered the best method to visualize the middle ear when there is complete occlusion of the external auditory canal [1]. In our case, the HRCT temporal bone did not reveal the presence of a foreign body; hence, we proceeded to FNAC.

FNAC is also another tool that gave us an idea of underlying pathology by identifying the tissue of origin and its nature; as in our case, it was revealed to be an inflammatory aural polyp [2].

In our case, our patient was unsure of the mode of onset of trauma to her left ear at work despite adequate history taking, so we proceeded with appropriate investigations to find out the cause, and to rule out the presence of a retained foreign body, an HRCT temporal bone was done.

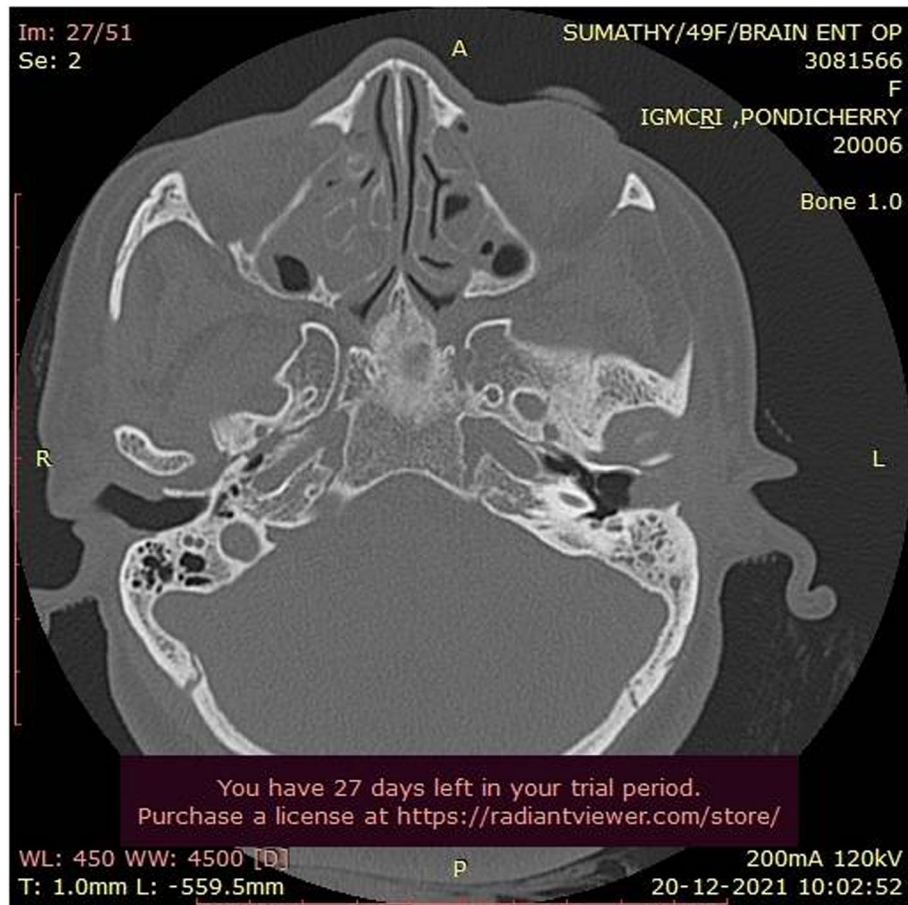


Fig. 2 Soft tissue mass occupying the lateral third of the left EAC, with normal middle and inner ear



Fig. 3 Wooden stick encapsulated within the granulation tissue



Fig. 4 Wooden stick of 2 cm removed in toto

Conclusion

Hence, we suggest that we need to consider an underlying neglected foreign body as a cause, whenever aural polyps of EAC do not respond to appropriate medical management with antibiotics and to subject them to surgical excision. We also emphasize a thorough history taking, examination, investigation, and exploration under the microscope and histopathological examination of excised polyp for appropriate treatment of EAC masses.

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Authors' contributions

PK: concepts, design, definitions, literature search, manuscript preparation, editing, review, and guarantor. SA: concepts, design, definitions, manuscript preparation, editing, and review. AR: concepts, design, definitions, literature search, and manuscript preparation. KR: concepts, design, definitions, manuscript preparation, editing, and review. The authors read and approved the final manuscript.

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Declarations

Ethics approval and consent to participate

Not applicable.

Consent for publication

Informed written consent for publication was obtained from the patient.

Competing interests

The authors declare that they have no competing interests.

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