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Case Report

Impacted ear drop dispenser cap: A rare cause of recurrent otitis externa

Joginder Singh Gulia¹, Parmod Jangra^{1,*}, Nishant Saini¹

¹Dept. of Otorhinolaryngology, Pandit Bhagwat Dayal Sharma Post Graduate Institute of Medical Sciences or PGIMS, Rohtak, Haryana, India



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ABSTRACT

Objective: To report a case of an elderly male with aural foreign body presenting as recurrent otitis externa and to highlight the fact that aural foreign bodies may be an underlying cause in such recurrent cases.

Study design: Case report

Disease studied: Aural foreign body with recurrent otitis externa.

Setting: Tertiary care center.

Intervention: Surgical removal of foreign body.

Result: The granulations and recurrent otitis externa resolved after removal of foreign body.

Conclusion: Suspicion of an aural foreign body should be maintained in a child or even adult presenting with recurrent otitis externa.

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1. Introduction

Aural foreign bodies are typically seen as pediatric emergency. Most reports of foreign bodies in the ears of adults consist of isolated interesting cases.¹ A case of an elderly patient presenting with recurrent unilateral otitis externa found to be secondary to an impacted ear drop dispenser cap in the external auditory canal is reported.

2. Case Report

Patient a 70-year male presented with a history of right ear discharge associated with itching for about a month. He consulted a private hospital and was advised ear drops; there was some improvement however the condition recurred after some time. Past and personal history was negative for diabetes and hypertension. General physical examination was normal. Otolaryngologic examination revealed discharge from the right ear and a doubtful foreign

body buried in granulations. After the anesthetic check up the patient was taken up for foreign body removal under general anesthesia. Under the operating microscope, a plastic cone shape was visualized impacted in the granulations. A fine micro-elevator could be passed between the foreign body and the wall of the external auditory canal. The object was grasped with granulation forceps and traction was applied but the foreign body could not be retrieved. A fine skin hook was then passed in the plane between the posterior wall of the external auditory canal and the foreign body. The hook was rotated towards the lumen of the external auditory canal; the foreign body was pierced and engaged into the hook. Now giving a slow and constant traction it was removed. Excess granulations were removed. The tympanic membrane was found intact. The external auditory canal was packed with umbilical tape soaked in antibiotic solution. The removed foreign body was found to be a cap of an ear drop dispenser (Figures 1 and 2). The next day on further interrogation the patient told that he was in the habit of using ear drops and the cap of one such

* Corresponding author.

E-mail address: parmmod.jangra@gmail.com (P. Jangra).

dispenser went missing about a month back.



Fig. 1: Ear dispenser cap engaged in the fine skin hook



Fig. 2: Removed plastic cap.

The external auditory canal pack was removed after 24 hours and the patient was discharged in a stable condition on oral antibiotics and ear drops. On follow-up, at 2 weeks the granulations had resolved and the tympanic membrane was intact.

3. Discussion

Aural foreign bodies are a frequent presentation to the emergency department more so in children, however, it is most unusual in adults. It's important to consider the possibility of a foreign body, particularly in the setting of blockage, pain and otorrhea.^{1,2} The present case also presented with symptoms of otitis externa. The profile of aural foreign bodies in children has been reported by many authors and the most common foreign objects reported include beads, cotton, insects and paper. In adults, the most common foreign bodies include cotton wool tips, silicone ear plugs and insects. Cotton wool tips are frequently used for cleaning the ear.¹⁻⁴

The commonest etiological factor for foreign body insertion into the ear canal is irritation such as caused by otitis externa, chronic suppurative otitis media and wax.⁵ Chalishazar and Singh suggested that children may insert a foreign body in the ear as a result of irritation or pressure sensation secondary to otitis media with effusion or significant eustachian tube dysfunction and recommended that all children with a history of an aural foreign body should be screened by ENT specialist.⁶ In the present case, probably the patient tried to put the drops without removing the cap which forced it into the canal along with the drops inadvertently.

Ryan et al reported that retained silicone earplugs were common in teenagers and adult populations. These plugs are commonly used for preventing water from entering the canal during swimming.¹ Most cases are seen within 24 hours of insertion, however sometimes the presentation may be delayed. Unless observed at the time of insertion, it may be missed in children.⁴ Complications associated with the aural foreign bodies include otitis externa, ear canal laceration, tympanic membrane injury or perforation, general septic shock syndrome and cervical adenitis.⁷ It may become impacted and may present as a polyp.^{8,9} Complications may also result due to the nature of the foreign object. Sharp objects can cause trauma to the external auditory canal and tympanic membrane. Button batteries can result in liquefactive necrosis of the surrounding tissue by leaking an alkaline electrolyte solution and these batteries should be removed at the earliest.^{10,11}

Complications can also result during the removal of foreign bodies. Fasunla et al reported that during removal the complications appear to be related to the level of clinical skill of the individual health giver.¹² Singh et al reported a complication rate of 77% and a general anesthesia induction rate of 10% of cases treated by other health care personnel, as compared to a complication rate of 19.5% and general anesthesia induction of 3.5% of cases in patients managed by otolaryngologists.¹³

4. Conclusion

Aural foreign bodies should preferably be referred to an otolaryngologist for the first attempt at removal under the microscope. Patients who have had previous removal attempts should be seen by otolaryngologists and aural foreign bodies preferably be removed under general anesthesia. Suspicion of a foreign body should be maintained in any child or even adult presenting with recurrent otitis externa.

5. Source of Funding

None.

6. Conflict of Interest

None.

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Author biography

Joginder Singh Gulia, Professor

Parmod Jangra, Junior Resident  <https://orcid.org/0009-0000-1269-6402>

Nishant Saini, Junior Resident

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