Original Article

Analysis of Ear Foreign Bodies in Adult Patients

Abdulhusein Mizhir Almaamuri
Department of Surgery, Almahawil Hospital, Babylon Health Directorate, Babylon Province, Iraq

Abstract

Background: Foreign bodies (FBs) in the ear are frequently encountered by an otolaryngologist. Certain types of ear FBs in our adult patients may reflect negative phenomena in our community. **Objectives:** This study was carried out to analyze the main types of adult aural FBs and to highlight the increasing frequency of already known types and more interesting newly known type of FB. **Materials and Methods:** This is a prospective descriptive study of adult patients with aural FB seen in the ENT Department in Al-Mahawil Hospital for the 2 years – 2015 and 2016. The clinical presentation, type of FB, and management outcome were analyzed. **Results:** Two hundred and thirty-two patients aged 18–82 years were evaluated. Cotton wool (of the earbuds) was the most common FB with 93 (40%) patients (male: 54, female: 39) aged 21–82 years; the insect FB with 78 (33.7%) patients (male: 32, female: 46) aged 18–58 years; and garlic with 36 (15.5%) patients (male: 15, female: 21) aged 25–74 years; the newly known interesting FB put by the students into their ears during the examination was Bluetooth device in 15 (6.5%) patients (male only) aged 18–23 years; and miscellaneous FBs such as paper, broken matchstick and clinics were found in 10 (4.3%) patients (male: 7, female: 3) aged 35–60 years. All the FBs were unilateral and removed successfully without anesthesia, except four cases removed under general anesthesia. Complications did occur such as otitis externa: 8, bleeding and laceration: 6, and abrasion: 10. The complications were mainly due to previous unsuccessful trials and delayed referral. **Conclusion:** The increased abuse of earbuds causes more incidence of FB in the ears. We have seen more garlic in the ears because of misunderstanding of some traditional thoughts. Moreover, recently, we observed new FB, Bluetooth device objects in the ears of students. Health education of the general population is necessary for prevention.

Keywords: Adult, ear, foreign body, types

Introduction

Foreign bodies (FBs) in ENT account for 11% of emergency cases in otorhinolaryngology.[1,2] An FB of external auditory canal (EAC) is more commonly seen in pediatric population, but they do occur in adults. Adults are often seen with cotton wool or broken matchsticks which have been used to clean or scratch the ear canal.[3] It may be accidental as in the case of the flying or household insects. Live insects in the ear, commonly small cockroaches, are annoying due to discomfort created by loud noise and movement.[4]

In some parts of the world, FBs such as leaves and other plant materials are inserted into the EAC deliberately as a form of native remedy.[5] Although not life-threatening, the placement or presence of FB in the ear canal and their subsequent removal can be a source of significant morbidity.[6] The spectrum of FB inserted into the EAC is wide and varies in frequency with different age groups and geographical locations. These FBs are animate as well as inanimate. The removal of these FBs from the EAC can be done by a variety of instrumental modalities, either alone or in combination, dictated by various factors such as the age of patient, state of EAC, nature of the FB, duration of the stay of the FB, and previous attempt of its removal.[7] Although FB removal is usually a simple procedure, its potential complications call for the aid of an ENT physician as repeated unsuccessful attempts will result in canal trauma, further obstruction, and uncooperative patient.[8,9]

The aim of this study was to describe the limited types of FB in EAC in adult patients and their management and to highlight the increasing frequency of already known types and more interesting newly known type of FB, in this part of the world.

Materials and Methods

This prospective descriptive study was performed in the ENT

Address for correspondence: Dr. Abdulhusein Mizhir Almaamuri, Department of Surgery, Almahawil Hospital, Babylon Health Directorate, Babylon Province, Iraq.
E-mail: drahment@yahoo.com

Access this article online

Quick Response Code:

Website: www.medjbabylon.org

DOI: 10.4103/MJBL.MJBL_53_18

How to cite this article: Almaamuri AM. Analysis of ear foreign bodies in adult patients. Med J Babylon 2018;15:197-200.

Department of Al-Mahawil Hospital for the whole years of 2015 and 2016.

In this study, we included 232 adult patients aged 18–82 years with normal mentality of both genders with clinical diagnosis of FB in EAC. A brief history focusing on the age, sex, presenting complaints, and approximate duration was documented. Afterward, otoscopic examination of both ears was carried out. Patients found to have FB in their EAC, whether they were aware or unaware, were included in this study, while patients with negative FB but having other pathologies such as wax in the ear, otitis externa, acute otitis media, otitis media with effusion, or active chronic suppurative otitis media were excluded. The FB were retrieved in the outpatient ENT clinic which was equipped with the required instruments to remove the FBs such as aural syringe, sucker, Jobson Horne probe, and crocodile forceps [Figure 1]. However, the patients who needed general anesthesia were dealt with in the operation theater. Living insects should first be killed by instilling oil into the meatus to drown them before removal. Irregular and soft graspable nonliving objects (cotton wool, dead insects, and paper) may be removed by a pair of crocodile forceps. After removal of FB, careful examination of the ear was done to deal with possible complications.

Figure 1: The main instruments used for removal of foreign bodies

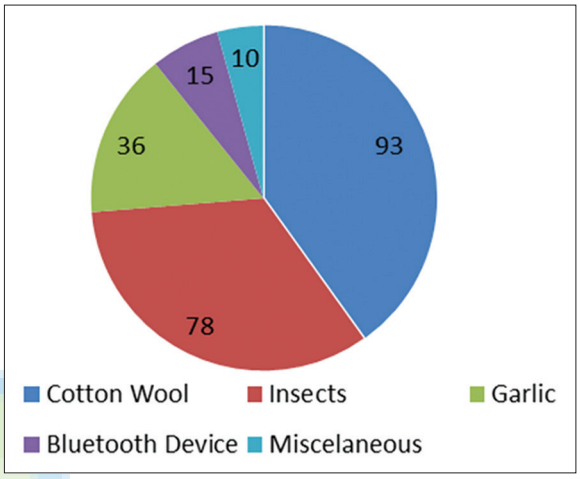

Figure 2: Types and numbers of foreign bodies in the ears

Results

Two hundred and thirty-two patients aged 18–82 years were included and evaluated. There were 123 (53%) males and 109 (47%) females. We have found limited types of FB, and all were unilateral, and each type had its own characteristics, so we grouped the patients based on the type of FB in the following order [Figure 2].

Cotton wool (of the earbuds) was the most common FB found in 93 (40%) patients (male: 54, female: 39) aged 21–82 years, with a history of self-insertion and associated with otalgia, itching, and decreased hearing. It was incidental finding in 26 (28%) patients, who were unaware of the FB and came rather with wax, otomycosis, otitis externa, or suppurative otitis media. All cases dealt with successfully in the outpatient room.

The insect FB was found in 78 (33.7%) patients (male: 32, female: 46) aged 18–58 years. Live insects such as ants and small cockroaches were annoying due to discomfort created by loud noise and movements. Ten patients (12.8%) were unaware of dead insects in their EAC. We needed general anesthesia for two female patients who were delayed and complicated with severe otitis externa due to previous failed removal attempts.

Garlic clove was found in [Figure 3] 36 (15.5%) patients (male: 15, female: 21) aged 25–74 years, with a history of self-insertion and associated with otalgia and decreased hearing. It was incidental finding in one patient who came with ear occlusion. All cases were dealt with successfully in the outpatient room.

Bluetooth device was found in [Figure 3] 15 (6.5%) patients (male only) aged 18–23 years; all of them were students with

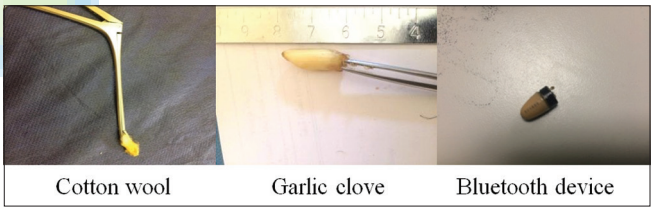

Figure 3: Samples of foreign bodies

a history of self-insertion during high-school examination, presented with otalgia and ear obstruction. All cases were dealt with successfully in the outpatient room, except two of them needed general anesthesia because of severe pain due to deep impaction and previous failed attempts.

Miscellaneous FBs such as paper, broken matchstick, and clinic were found in 10 (4.3%) patients (male: 7, female: 3) aged 35–60 years presented with ear obstruction and otalgia. All cases were dealt with successfully in the outpatient room.

Discussion

FBs in EAC are most commonly seen in children who have inserted them into their own ears.[3] They do occur in adults, but probably all the literature dealt with this problem in pediatric age group alone or included patients of all ages in the same study. Some claimed that the self-insertion of FB has been

acknowledged to be a common presentation in children and psychologically disturbed patients.[10]

In our practice, we have noticed that the FB in EAC in adult is not uncommon and the problem is different as the patients are mature, more cooperative, and mostly aware of what is inserted into their ears, and the types of FB are limited and all are unilateral. The self-insertion of FB in such patients in our territory may reflect a wrong habit, a wrong traditional thought, or recently a wrong practice. Hence, we decided to restrict this study to adult patients.

If they are not handled rightly, FB of EAC may lead to a series of complications as meatus abrasion, bleeding and laceration, otitis externa, tympanic membrane perforation, residual FB, hearing loss, membranous labyrinth affection, and edema of ear canal, making a further specialized approach difficult.[11-13]

The armamentarium for the removal of FBs in our setup comprised of Jobson Horne probe, aural syringe, aural crocodile forceps, and electric suction. As the patients are adults with normal mentality, they cooperate well during the procedure of removal. From a total of 232 patients, 228 patients (98.3%) dealt with successfully in outpatient room; only four patients (1.7%) needed general anesthesia because of previous failed attempts and delayed referral.

We grouped the patients on the basis of the type of the FB. The first was the cotton wall group, the largest, with 93 (40%) patients (male: 54, female: 39) aged 21–82 years; they presented with a history of self-insertion and may be associated with otalgia, itching, and decreased hearing. It was an incidental finding in 26 (28%) patients, who were unaware of the FB and came rather with wax, otomycosis, otitis externa, or suppurative otitis media. Most patients of this group were with normal ears, but they used to clean or scratch their ears with the cotton-tip applicator or earbuds and may be grouped as earbud abusers. The role of health education is important in preventing this wrong habit as the EAC does not require any additional cleaning, because a natural cleaning mechanism already in place which involves epithelial migration aided by jaw movement is quite sufficient.

The second was the group of the insect FB with 78 (33.7%) patients (male: 32, female: 46) aged18–58 years. It is incidental; insects may find their way into the ear canals. These are usually flying insects, but crawling insects may also enter the canal, especially when people are asleep. Such insects include ants, flies, and small cockroaches. Patients become acutely aware of their presence because of the insect's noise and induced pain.[14] Living insects should first be killed by instilling oil into the meatus to drown them before removal. We retrieved dead insects from EAC of 10 patients (12.8%) who came for another reason. We needed general anesthesia for two female patients who were delayed and complicated with severe otitis externa due to previous failed removal attempts.

The third is the group of garlic clove with 36 (15.5%) patients (male: 15, female: 21) aged 25–74 years. In our territory, there is strong belief that putting garlic clove into the EAC is effective in relieving ear pain and this maneuver may lead to impaction of the garlic clove in the EAC. The patient came with history of self-insertion associated with otalgia and decreased hearing. It was incidental finding in one patient who came with ear occlusion. All cases were dealt with successfully in the outpatient room.

The fourth group is interesting new FB that we faced it in the last few years increasingly, Bluetooth device with 15 (6.5%) patients (male only) aged 18–23 years; all of them were students with a history of self-insertion during high-school examination, presented with otalgia and ear obstruction. All cases were dealt with successfully in the outpatient room, except two of them needed general anesthesia because of severe pain due to deep impaction and previous failed attempts. The parents and the school administrations should take their role to educate the students about the risks of this behavior.

The last group is miscellaneous FB, the smallest group, such as paper, broken matchstick, and facial tissue with 10 (4.3%) patients (male: 7, female: 3) aged 35–60 years, presenting with ear obstruction and otalgia. All cases were dealt with successfully in the outpatient room.

Complications of FB in the EAC of adult patients did occur in 24 (10.3%) patients, such as otitis externa: 8, bleeding and laceration: 6, and abrasion: 10. The complications were mainly due to previous unsuccessful trials and delayed referral.

Conclusion

Types of FB of EAC in adult are limited, and each may reflect negative treatable phenomenon.

The increased abuse of earbuds causes more incidence of FB in the ears. We are seeing more garlic cloves in the ears because of misunderstanding of some traditional thoughts. Recently, we observed new FB, in the last few years which is increasing in frequency – Bluetooth device objects in the ears of students during examination of high school. Complications may occur due to delayed referral and unskilled trials for removal. Health education of general population is necessary for prevention.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Mukherjee A, Haldar D, Dutta S, Dutta M, Saha J, Sinha R, *et al.* Ear, nose and throat foreign bodies in children: A search for socio-demographic correlates. Int J Pediatr Otorhinolaryngol 2011;75:510-2.
2. Ribeiro da Silva BS, Souza LO, Camera MG, Tamiso AG, Castanheira VR. Foreign bodies in otorhinolaryngology: A study of 128 cases. Int Arch Otorhinolaryngol 2009;13:394-9.
3. Gleeson M, Browning GG, Burton MJ, Clarke R, Hibbert J, Jones NJ, *et al.* Watkinson,Scott-Brown's Otorhinolaryngology, Head and Neck Surgery. 7th ed. Vol. 3. New York, NY, USA; Hodder Arnold; 2008. p. 3370-2.
4. Kroukamp G, Londt JG. Ear-invading arthropods: A South African

survey. S Afr Med J 2006;96:290-2.
5. Bressler K, Shelton C. Ear foreign-body removal: A review of 98 consecutive cases. Laryngoscope 1993;103:367-70.
6. Ansley JF, Cunningham MJ. Treatment of aural foreign bodies in children. Pediatrics 1998;101:638-41.
7. Kumar S. Management of foreign bodies in the ear, nose and throat. Emerg Med Australas 2004;16:17-20.
8. Heim SW, Maughan KL. Foreign bodies in the ear, nose, and throat. Am Fam Physician 2007;76:1185-9.
9. Thompson SK, Wein RO, Dutcher PO. External auditory canal foreign body removal: Management practices and outcomes. Laryngoscope 2003;113:1912-5.
10. Rafique M, Shaikh AA, Siddiqui AH. Foreign bodies in ear – Its type, diagnosis and management. J Liaquat Uni Med Health Sci 2015;1486-9.
11. Balbani AP, Sanchez TG, Butugan O, Kii MA, Angélico FV Jr., Ikino CM, *et al.* Ear and nose foreign body removal in children. Int J Pediatr Otorhinolaryngol 1998;46:37-42.
12. Schulze SL, Kerschner J, Beste D. Pediatric external auditory canal foreign bodies: A review of 698 cases. Otolaryngol Head Neck Surg 2002;127:73-8.
13. Kojima H, Tanaka Y, Mori E, Uchimizu H, Moriyama H. Penetrating vestibular injury due to a twig entering via the external auditory meatus. Am J Otolaryngol. 2006;27:418-21.
14. Hirsch BE. Foreign bodies of external auditory canal. In: Eugene N. Myres MD, editor. Operative Otolaryngoglogy Head and Neck Surgery. 2nd ed. Philadelphia, PA, USA: Saunders Elsevier; 2008.