
A retrospective investigation of clinical profile and management of foreign bodies in ear**Deepti Pandey***Consultant, otolaryngology, SRLNMH Charitable Trust Hospital, Varanasi, UP, India*

ABSTRACT

A retrospective investigation of medical records, of 41 cases of foreign body in ear, is presented from a metropolitan secondary care hospital. Most vulnerable age group is preschool children and there is male gender predominance. Vegetable grains are most frequent ear foreign bodies. Majority cases, are self insertion of foreign body, report as emergency and fairly easily managed, unless complicated due to, attempts at removal, prior to hospital visit. Some cases of accidental insertion of foreign body may involve tympanic perforation, need definitive management. Foreign body may be removed with good specific equipments, with adequately sedated child and local antibiotic care post removal, may suffice the needs. Otolaryngological care is most distinctly advantageous in regard to uneventful removal of ear foreign bodies and prevention of complications.

Key words: ear emergency, ear foreign body, external ear

Introduction

Ear foreign bodies are things, other than cerumen and wax, in ear and can be a variety of animate and inanimate entities [1, 2]. These constitute, over a tenth of cases seen by otolaryngologists [3]. These need prompt recognition, appraisal and management, as serious complications can occur in one-fifth of these cases [4]. Quite often, out of anxiety, parents and other untrained persons may attempt removal and very often create complications. Successful removal of foreign body depends on its location, composition, doctor's skill, equipments available and patient co-operation [5, 6]. Obvious commonest domain for foreign body is external auditory canal, followed by the middle or internal ear [7]. Impacted middle ear foreign bodies may lead to otitis media, engulfing the middle ear cleft. Involvement of inner ear causes symptoms, as vertigo, nausea and vomiting, even, cerebrospinal fluid leak, besides, deafness. Foreign body removal is often done in operation theatre under sedation or general

anaesthesia [4]. Present report is a retrospective study, based on medical records of 41 cases diagnosed with ear foreign body and managed at the secondary care level Shishumangal (VIMS) hospital, Kolkata.

Patients and method

It was a cross sectional retrospective study. Medical records of cases with final diagnosis of foreign body ear were scrutinized to collect information. Details of age, sex, type of foreign body, time since lodged, i.e. from first symptom to hospital visit and ENT specialist encounter, clinical features, complementary investigations, if any, complications, as otitis media and chosen approach to treatment, including use of antibiotics, foreign body removal and referral elsewhere, were noted.

Observation and result

A total of 41 cases, comprising of 25 males and 16 females (M/F ratio 5:3) were found with good information record. Ages of patients ranged from 2 to 38 years (mean age 6 years). Eighteen (44%) patients were under 5 year age, 8 (19.5%) cases between 5 and 8 years, 4 (10%) cases between 11 and 15 years, a further 4 cases in 15 to 25 year age range, 6 cases in 25 to 35 year age range and 2 were between 35 and 38 years of

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age. In 29 (71%) cases, the foreign body resulted from deliberate self insertion by the victim and accidental in remaining 12. Food grain, dead insect, stone, plastic

bead, match stick, cotton bud were very common, making half the cases.

Table 1: Types of foreign body lodged in ear

Type	No. of cases	%age
Seed grain	8	19.5
Wooden twigs	6	14.6
Cotton bud	5	12
Insect	3	7.3
Stone	3	7.3
Bead	2	5
others	14	34

Twenty nine (71%) patients presented within 24 hours of foreign body insertion, after being noticed by adult guardian; seven cases came between 24 hours to 1 week; and 5 cases after lapse of 1 week of foreign body insertion. Upon presentation, foreign body was removed within 24 hours in 36 (88%) patients and between 24 hours and 72 hours in remaining 5.

Table 2: Profile of presenting symptoms

S no.	Symptom/sign	Cases (n)	%age
1.	Foreign body sensation	24	58.5
2.	Earache	12	29.3
3.	Hearing loss	3	7.3
4.	Ear bleeding	2	4.9
5.	Ear discharge	1	2.4

Most foreign bodies were easily removed, using aural crocodile forceps, ear hook, Jobson Home probe and ear syringe (except in case of food grains). Children under 10 years of age were given ketamine sedation to facilitate safe removal. External auditory canal was subjected to topical antibiotic-steroid preparation. Amongst the 41 patients, 4 had tympanic membrane perforation, 2 had traumatized external auditory canal and 1 had suppurative otitis media. Imaging was sought in 4 patients.

Discussion

Clear preponderance of children and male gender is apparent among the victims. Ear foreign bodies constitute practical emergency in school going age [1, 8]. In present study, 12 (29%) of the cases were above 15 years of age. Children play and put objects in ear out of curiosity. Over 70% of instances of foreign bodies were result of self insertion. Persistence of the foreign body beyond 72 hours and unscrupulous attempts at removal increase the risk of complications [9]. Direct visualization was possible in patients of this study with need for X-ray in 4 cases only. Over 70%

patients presented within 24 hours of foreign body insertion and the foreign body removed within next 24 hours. Food grains are the commonest of the foreign bodies which swell on attempted syringing and become difficult to remove. Although, general anaesthesia is reportedly needed in a third of the cases [10], in present series children under 10 years of age were ketamine sedated for foreign body removal. Three of the patients with tympanic perforation continued to have deafness despite, foreign body removal and were subjected to definitive therapy. This constituted 7% complication rate, much lower than reported [11]. This may be because all cases in the study were managed by ENT specialists in hospital setting. Removal of foreign bodies from ear requires sophisticated equipments as, microscope, endoscope and a range of special forceps that are available at ENT facility. Trained doctor is important factor [12]. Ear foreign bodies vary in type and clinical presentation and their complications too, vary. Routine approaches to removal of foreign body include: (1) ear syringing for non vegetable entities; (2) use of crocodile forceps, ear hooks or adhesive materials; and (3) surgical intervention under anaesthesia for deep impacted foreign body, in middle

or inner ear. Method of removal depends on type of foreign body. Live insects need to be drowned in oil to kill before attempt to removal [13]. Hasty attempts at home for removal of foreign body, risk complicating the removal and damage the ear.

Conclusion

Ear foreign bodies are major part of otolaryngologist job, largely affecting young children. Keys to successful outcome are, prompt help by well trained doctor and otolaryngological equipment set up.

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