

ORIGINAL ARTICLE

AURAL FOREIGN BODIES: A RETROSPECTIVE STUDY OF 162 PATIENTS.

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ABSTRACT

Background: Foreign bodies in the ear are relatively common in the practice of otology. Children below 10 years of age are usually more involved than adults. The physical characteristics of these foreign bodies will determine the mode and the instrument required for their removal.

Objectives: To determine the types of foreign bodies, age commonly involve, method of removal of aural foreign bodies (with or without anesthesia) and complications associated.

Methodology: This is a 5-year retrospective study conducted at the Otolaryngology Unit of the Department of Surgery Federal Medical Centre Lokoja. After obtaining a written permission from the Hospital Medical Records Department, patient's data such as age, sex, presentation and duration of symptoms, treatment modality and outcome were extracted, studied and analyzed.

Results: : Eventually 162 patients with the age range from 1 to 60 years, a mean age of 8.14 years, and a modal age of 1-10 years underwent analysis. Of all patients, Seeds/grains 41 (25.3%) were the commonest foreign bodies found in this study, followed by beads 36 (22.2%). Furthermore, it was found that 95.1% of foreign bodies were removed in clinic without anesthesia and six patients (3.7%) had complications such as tympanic membrane perforation 2 (1.3%), external auditory canal bruises 2 (1.3%), hearing loss 1 (0.6%) and acute mastoiditis 1 (0.6%).

Conclusion: In conclusion, we found that grains, seeds and beads form the bulk of aural foreign bodies encountered mostly in children while cotton, matchsticks and insects are common in the adults. With the right kind of instrument, an ENT Specialist can successfully remove 95% of these foreign bodies without anesthesia and less complications.

KEYWORDS: Aural, foreign bodies, removal, anesthesia.

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INTRODUCTION

A foreign body in ear is most commonly encountered in children than in the adults¹. They are usually inserted into one or both ears and could constitute greater danger if in the middle ear than if in the external auditory canal². Foreign bodies involving the aero-digestive tract are usually more danger-

ous, complication wise, than those affecting the ear^{3,4}. The peak age for children is said to range from 1 to 4 years with the commonest site being the external auditory canal⁵. In children, foreign bodies such as beads, wristwatch and calculators' batteries, bean seeds, eraser, pencil tip, papers, stones and crayon has been reported in literature⁶. In adult foreign bodies such as cotton wool, broken matchsticks and small insects such as cockroaches have

also been reported⁷.

Physical characteristics of foreign bodies are important in their classifications and management. They may be animate or inanimate, organic or inorganic, biological or non-biological, metallic or non-metallic, hygroscopic or non-hygroscopic, regular or irregular etc⁸. The method of removal depends on these aforementioned physical characteristics, the position of the foreign body in the ear (external or middle ear) and the cooperation of the patient⁹.

Presentation is usually asymptomatic and with most patients presenting to the General Practitioner or Family Physician who then refer them to the E.N.T Surgeon for attention. It has been found out that complications are higher in non-specialist care than those of specialist care¹⁰. However, some patients may present at the Accident and Emergency Department of the hospital at night after the working hours with a history of severe ear pain, fever, conductive hearing loss and ear discharge.

METHODS

This is a 5-year retrospective hospital base study conducted at the ENT Unit of the Department of Surgery Federal Medical Centre Lokoja, North Central Nigeria. From the hospital Medical records, files of 162 patients who were treated for foreign bodies in the ear were retrieved, studied and analyzed.

RESULT

A total of 162 patients had foreign bodies in their ears. They were 78 males (48.1%) and 84 females (51.9%) with a male to female ratio of 1:1.1. The age range was from 1 to 60 years, a mean age of 8.14 years, and a modal age of 1-10 years in both sexes (Figure1).

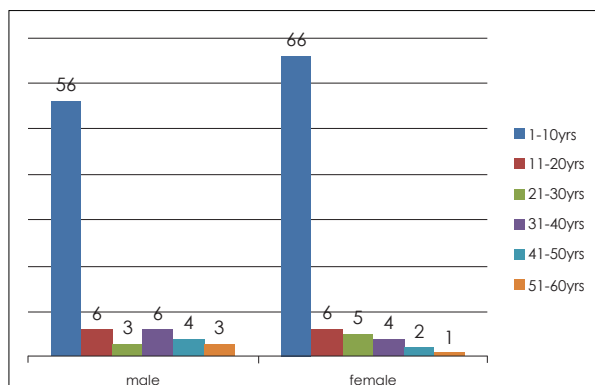


Figure1: Age and Gender Distribution of Aural Foreign Bodies

Seeds/Grains 25.3% were the most common foreign bodies found, followed by beads 22.2%, stone 14.2%, cotton 11.7%, button 8.1% and insect 7.4% as shown in figure 2.

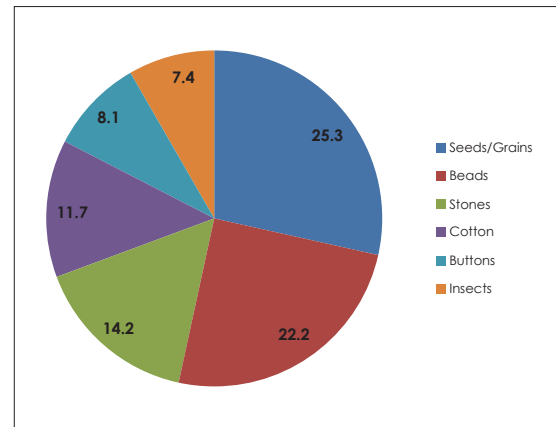


Figure 2: Showing the types of aural foreign bodies

Ninety six patients (59.2%) presented to the General Outpatient Department (G.O.P.D), followed by E.N.T outpatient clinic 34(21.0%), Accident and Emergency Unit 22(13.6%) and Paediatric Emergency unit 10(6.2%).

One hundred and thirty two patients 132 (81.5%) presented asymptotically and 30 patients presented with symptoms of otalgia 23 (14.2), otorrhea 4(2.5%), bleeding from External Auditory Canal 2(1.2%) and fever 1(0.6%). Eighteen patients (11.1%) presented within the first 24 hours, 53 patients (32.7%) presented within 7 days, 48 patients (29.1%) within 8-14 days, 33 (20.4%) within 15-30 days and 10(6.2%) patients presented after 30 days duration, as shown in table 1.

Table1: Manner of presentation of patients with aural foreign bodies

1) Hospital Unit Patient first presented	Frequency (%)
General Outpatient Department	96(59.2)
E.N.T. Clinic	34(21.0)
Accident and Emergency Department	22(13.6)
Paediatric Emergency Department	10(6.2)
Total	162(100.0)
2) Signs/Symptoms at presentation	Frequency (%)
Asymptomatic	132(81.5)
Otalgia	23(14.2)
Otorrhea	4(2.5)
Bleeding from External Auditory Canal	2(1.2)
Fever	1(0.6)
Total	162(100.0)
3) Duration before presentation in Days	Frequency (%)
<1day	18(11.1)
1-7days	53(32.7)
8-14days	48(29.6)
15-30days	33(20.4)
>30 days	10(6.2)
Total	162(100.0)

One hundred and fifty four patients 154 (95.1%) had their foreign bodies removed in the clinic without anesthesia while 8(4.9%) had theirs removed in the theatre under general anesthesia, as shown in table2.

Table 2: Treatment Modality of patients with aural foreign bodies

1) Removal in clinic without anesthesia	Frequency (%)
With Jobson Horne's Probe	68(41.9)
Ear Syringing	54(33.3)
With Forceps	32(19.9)
Total Removed	154(95.1)
Not removed	8(4.9)
Total	162(100.0)
2) Removal in Theatre under anesthesia	Frequency (%)
With Jobson Horne's probe	5(3.1)
With forceps	2(1.2)
Via Post Auricular Incision	1(0.6)
Total	8(4.9)

Six patients (3.7%) had complications such as tympanic membrane perforation 2(1.2%), external auditory canal bruises 2(1.2%), unilateral conductive hearing loss 1(0.6%), and acute mastoiditis 1(0.6%).

DISCUSSION

In this study 75% of aural foreign bodies were found in the first decade of life and this is consistent with previous studies¹¹. The right ear was slightly more involve when compared to the left ear. This was not surprising as most aural foreign bodies in children were self inserted by these children only, who are mostly right handed.

Household seeds and grains constituted a quarter (25.3%) of the total aural foreign bodies found in this study. Since, they form a part and parcel of the common food items in various Nigerian homes and so are within the reach of these children if not properly monitored by their parents. This is similar to a study by Chai et al (2012) who found seeds/nuts to be the commonest aural foreign bodies followed by toys and beads¹². However, this is different from that of a study by Ryan et al (2006) who found beads and cotton wool to be the commonest aural foreign bodies¹³. Next to grains/seeds were beads and stones in decreasing order of frequency. Beads could be from women decorating body accessories or praying rosaries which also abound in various Nigerian homes and are readily available for the child to use.

More than half (59%) of the patients first present to the General Outpatient Department (G.O.P.D) where they were first seen by the Family Physician who then referred them to the E.N.T as they are the specialist for attention according to the hospital's management protocols. Although aural foreign

bodies may appear simple, it is the E.N.T Surgeon that should make the diagnosis and managed accordingly. Some of these children's parents or some elderly patients often mistake impacted ear wax for aural foreign bodies and we know that the management of these two diseases are quite different¹⁴. Most of these patients (81.5%) presented asymptotically and a few of them had otalgia as their commonest complaint followed by ear discharge. Otagia may have resulted from previous trauma due intervention or inflammation from infection or chemical reaction from the foreign body if biological or alkaline in nature¹⁵.

Fifty three patients (32.7%) present within one week duration while the rest presented thereafter, this further confirm that late presentation is still common in this environment when compared to what obtained in the developed world¹⁶.

Most aural foreign bodies 154(95.1%) were successfully removed in the outpatient clinic without anesthesia using the headlight and Jobson Horne's probe or forceps or by syringing with warm saline. Eight patients (4.9%) had theirs removed in the theatre under general anaesthesia with simple instrument out of which one had post auricular approach¹⁷.

Of the six patients (3.7%) that had complications, also had a history of failed intervention prior to presentation. It has been observed that complications are less in patients managed by the E.N.T. Specialists against non-specialists¹⁸.

CONCLUSION

Grains, seeds and beads form the bulk of aural foreign bodies encountered mostly in children while cotton, matchsticks and insects are common in the adults. With the right kind of instrument, an ENT Specialist can successfully remove 95% of these foreign bodies without anesthesia and less complications.

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