

Pattern of ENT foreign bodies at Lumbini Zonal Hospital, a regional level ENT referral centre in Western Nepal

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ABSTRACT

Aim: Foreign bodies in ENT account for a significant number of visits to an ENT clinic. Our study was aimed to determine the load of foreign bodies in an ENT referral centre in western Nepal.

Methods: It is a retrospective analysis of all the patients who presented with foreign bodies in the ENT department of the Lumbini Zonal Hospital over a period of 9 months from April-December 2009. Charts and outpatient register of the ENT department were retrospectively analyzed using SPSS 14.0.

Results: Foreign bodies were predominant in the paediatric age group. Aural foreign bodies were the most common followed by nasal foreign bodies. Nonliving foreign bodies were more common than living foreign bodies.

Conclusion: ENT foreign bodies can be removed safely in the outpatient clinic without much complication except for the foreign bodies in the oesophagus which require removal under general anaesthesia.

Keyword: foreign Bodies, ,lumbini Zonal Hospital, safe removal

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Introduction

Foreign bodies still form a majority of the ENT emergency visits¹ and a significant number of ENT outpatient visits. They also form a significant percentage of emergency ENT admissions in most centres. Studies carried out in some of the specialized ENT centers have shown foreign body as one of the leading causes for ENT emergency admission and intervention.² Children are the most vulnerable;³ mentally ill adults are also at increased risk.⁴ This is because of the fact that both of these groups lack awareness about the consequences of the objects that they are playing with. It is not that uncommon in adult and geriatric population.^{3,4}

Foreign body anywhere in the ear, nose and throat can lead to pain and an uneasy sensation. Foreign body in the ear can present with pain, sense of ear fullness, hearing loss or symptoms of otitis media. Similarly, foreign body in nose can present with pain, unilateral foul smelling nasal discharge; whereas foreign body in throat present with a history of choking, dysphagia, odynophagia, or dysphonia, often with respiratory distress if the foreign body is lodged in the respiratory passage.⁵

Most of the foreign bodies in the ear, nose and oropharynx can be easily removed by a general practitioner,^{1,6-8} where as foreign bodies especially in pharynx and oesophagus are to be attended by an ENT specialist.⁷ Foreign bodies in the throat are ENT emergencies. However, most of these can be deferred for the next day. Emergency intervention is only required when these patients present with complete airway obstruction.⁹

Lumbini Zonal Hospital is one of the 4 referral centres in western, mid western and far western Nepal, and one of the 2 government hospitals to provide ENT services in this region. ENT department is run by one consultant surgeon and occasionally assisted by a medical officer. It covers almost 35 districts of the region and about 40% of the total population of the country. In developing countries like Nepal, which lack specialized centers at the grass root level, primary care physicians, undergraduate doctors and General Practitioners are more likely to face foreign bodies in their clinical practice.

We aimed to study about the distribution of the foreign bodies, their nature and the method of retrieval of ENT foreign bodies. We also look for any complications that occurred due to foreign bodies and its attempt at removal. We also looked whether removal of the foreign

body was within the scope of a medical officer working in ENT department. The third aim was to identify whether foreign body removal was possible in an outpatient setting.

Method

This is a retrospective study done at Lumbini Zonal Hospital, Butwal. Study period was 9 months starting from the month of April 2009 to December 2009. All the patients attending the outpatient clinic or emergency department of the hospital with foreign bodies were included in the study. Data was retrieved from the OPD and inpatient record book of the department. Data entry was done in Microsoft Excel and analysis was done using SPSS 14.0.

Foreign bodies in EAM, nose and oropharynx were done in the outpatients where as foreign bodies in the oesophagus and other complicated foreign bodies were removed in the operation theatre under general anaesthesia. Foreign body removal was done by the consultant surgeon or a medical officer under his supervision. Medical Officer initially observed foreign body removal by the ENT surgeon who later on supervised the MO for removal of the foreign body.

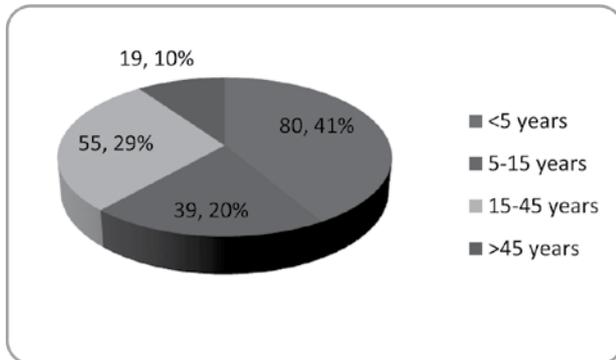
Data was primarily analyzed for the age, sex distribution of the patient, site of the foreign body, nature of the foreign body, and the urgency for emergency intervention.

Result

During the study period of 9 months, 193 patients presented to the ENT department with foreign bodies. Foreign bodies accounted for 2% of the 9700 total ENT outpatient visits and 2% of the total hospital admissions in the department over the same duration. Almost all of the patients, 94% (182) presented to the outpatient department while the remaining 6% presented in the emergency department of the hospital.

Age of the patients ranged from one year to 74 years (mean age 16.9 years). There was no significant difference in the sex of the patients although there was a slight female predominance, 50.7% versus 49.3% respectively. Nearly two thirds of the patients were children (61%); 41% of the patients being below 5 years of age. Only 29% of the foreign bodies were found among the adult population and 10% foreign bodies among the geriatric population.

Figure 1. Age distribution of the patients



Forty-seven (47%) of the foreign bodies were nonliving foreign bodies. These included peas, agricultural grains, erasers, beads, feathers, cotton and many more items. Living foreign bodies accounted for 17.2% of total foreign bodies and included ants, insects, lice, leech and wasps (where as non living foreign bodies included erasers, pencil tips, wheat and rice grains, legumes -repeated). Foreign bodies in the throat included either coins or meat boluses. (see paragraph below) The only foreign body in the trachea was a zipper. In almost 35% of the cases, there was no documentation available on the nature of the foreign body that had been removed.

Aural and nasal foreign bodies were most common accounting for almost 88% of total foreign bodies.

Table 2. Distribution of patients based on site of Foreign Body

Site	Frequency	Percentage
ear	119	61.7
nose	45	23.3
pharynx	18	9.3
oesophagus	10	5.3
trachea	1	0.5
Total	193	100

A nasal foreign body was limited exclusively to the paediatric age group. About 90% of them being among the children below 5 years of age, where as remaining 10% were present among the children of 5-15 years of age.

Table 3. Age specific distribution of foreign bodies in different sites

Age	Site				
	Ear	Nose	Oesophagus	Pharynx	Trachea
< 5 years	34	40	2	4	0
5-15 years	31	5	0	2	1
15-45 years	44	0	1	10	0
>45 years	10	0	7	2	0
Total	119	45	10	18	1

Meat boluses and coins were the foreign bodies lodged in the oesophagus. Coins were predominant among the paediatric age group where as meat bolus was commonly distributed among the elderly people. There was female predominance in this group of foreign bodies.

Table 4. Nature of Foreign Body Oesophagus

age	sex	nature
1.5	fe	coin
2	fe	coin
23	fe	meat bolus
42	m	meat bolus
46	m	coin
52	fe	meat bolus
56	fe	meat bolus
63	fe	meat bolus
72	fe	meat bolus
74	m	meat bolus

Most of the foreign bodies were removed in the outpatient clinic. Nasal foreign bodies were exclusively removed in the outpatient where as almost all of the EAM foreign bodies were also removed in the outpatients. Only 11 patients with foreign bodies were admitted to the hospital and removed under general anaesthesia. 10 of them had foreign bodies in the oesophagus and were removed by rigid oesophagoscopy under general anaesthesia. One child with a foreign body in the EAM had to undergo excision via posterior meatal approach under General Anaesthesia as the foreign body became lodged into the middle meatus while being removed in the outpatient clinic.

Foreign bodies lodged into the pharynx were also removed in the outpatient department. One foreign body lodged into the trachea had to be referred to another centre as he had respiratory distress and our ENT surgeon was not available on that day in our centre.

Discussion

Foreign bodies accounted for 2% of the OPD visits and 2% of the major ENT surgery in our department. Our data is consistent with various studies done at various institutions.^{1,2,4,6-8}

A study in a tertiary level hospital in Nigeria showed 7.3% of the OPD visits were due to foreign bodies in EAM.¹⁰ In a study in Ireland foreign bodies consisted 5% of total emergency visits.⁶ In our study, however, it accounted for only 2% of the total outpatient visits which is very low in comparison to the Nigerian Study.

Various studies have shown the predominance of the foreign bodies to be present among the children due to their curiosity towards body orifices.^{7,9} A retrospective analysis of foreign bodies at a centre in Poland showed almost 68% of the patients were children.^{7,11} In our study too, almost two thirds of the foreign bodies were found among the children.

Most of the studies showed no gender difference for the foreign bodies.⁷ However, few studies have showed female population to be more vulnerable for foreign bodies¹ which also has been found in our study.

Although various techniques have been suggested for nasal foreign body removal like direct visualization, positive pressure application, parental kiss,¹²⁻¹⁵ we removed all the nasal foreign bodies via direct visualization technique.

We could remove most of the foreign bodies safely in the outpatient department by a medical officer under guidance of an ENT surgeon. This implies that most of these foreign bodies can be safely removed by the family and primary care practitioners. In other studies too, most of the foreign bodies were safely removed by doctors or nurses with minimal training.^{1,6,7,9}

Limitation of the study

The major limitation of our study was the partial documentation of the nature of the foreign body that had been removed. Documentation was not available in

nearly in one third of the patients. This may be due to the busy OPD schedule in the centre where one ENT surgeon and one medical officer have to see nearly 100 patients every day.

Conclusion

Foreign bodies in ENT can be safely removed in the outpatient department without any complications by the general practitioners and doctors with trainings and skills on removing foreign bodies.

In the majority of patients presenting with FBs these could be removed in the outpatient department by clinicians with simple equipment and easily learned skills. Further education in these skills would reduce the work load in an ENT department.

Image 1 Living foreign body (leech) removed from nose of a patient



Image 2 Foreign body in trachea in a patient



Image 3 Foreign body in cricopharyngeal junction and another in abdomen



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