

**RESEARCH ARTICLE**

# Study on Prevalance of Foreign Bodies in ENT

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## ABSTRACT

**Introduction :** Foreign body is a substance that doesn't belong to a location where it is found. Ear,nose and throat are common location for occurrence of foreign bodies. It is a common problem encountered in both adults and children.

**Objective :** 1) To analyse the different kinds of foreign bodies in ear ,nose and throat and their prevalence in different age groups. 2) To analyse the most prevalent site of foreign body among ear, nose and throat.

**Methods :** A cross-sectional study was performed in our tertiary care hospital in Navi-mumbai. The study period was from august 2017 to august 2019. The study population were the patients who came to the out patient department and emergency room of this hospital.

**Result :** A total of 100 patients as sample size with foreign bodies in ear, nose or throat were taken on first come basis. 62 were males and 38 were females. Of the 100 patients, 36 had foreign body in ear, 47 in nose and 17 in the throat. The foreign body was removed under local anaesthesia in 4% patients, with general anaesthesia in 30 % and with no anaesthesia at all in 66% patients. The most common age group affected was less than 10 years among both male and female patients.

**Conclusion :** The most frequent site of foreign body occurrence was found to be nose. The most common site requiring general anaesthesia for foreign body removal was throat. Although most of the foreign bodies could be removed without any anaesthesia in the emergency room or outpatient department.

**KEYWORDS :** Foreign Body, Ear, Nose, Throat, Anaesthesia.

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## INTRODUCTION

Any object that is present at a place where it does not belong and where it can cause harm by its mere presence if immediate medical attention is not sought is a foreign body [1] . The foreign bodies can be classified as living(animate) and non-living(inanimate). The non-living ones are further divided into organic and inorganic and hygroscopic(hydrophylic) and non-hygroscopic (hydrophobic) [2].

The presence of foreign body in ear, nose and throat is one of the most common otorhinolaryngological emergencies. Foreign bodies can be introduced in the ear, nose or throat spontaneously or accidentally in both children and adults. Foreign bodies may widely vary in shape, size, composition, colour. The symptoms can also range from being absolutely asymptomatic to acute life threatening condition.

Most ear and nose foreign bodies can be removed on outpatient basis with minimal risks. The common

methods that are used for foreign body removal are use of forcep, water irrigation and suction catheter. Airway foreign bodies are a medical emergency and require surgical consultation as they are life threatening. Flexible or rigid endoscopy usually is required to confirm the diagnosis and to remove the foreign body.

## MATERIALS AND METHODS

A cross-sectional study was performed in the department of ENT in our tertiary care hospital from August 2017- August 2019. The first 100 patients who came with complaint of foreign body lodgement in the ear, nose or throat in this period were included in the study.

A preferable method of anaesthesia, namely local or general was applied for the procedure depending on the requirement. Only patients with confirmation of presence of foreign body on clinical examination like otoscopy, anterior rhinoscopy, diagnostic nasal endoscopy or

pharyngeal/laryngeal examination were included in the study.

The type of foreign body, location of enlodgement, age of the patient and method of removal were later documented.

**RESULTS**

During the study period, out of total patients visiting the emergency or out patient department with foreign body in ear, nose or throat, the first 100 were included in the study. Out of 100, 38 are females and 62 are males. Of the 100 patients, 36 had foreign body in the ear, 47 in the nose and 17 in the throat. The foreign body was removed under local anaesthesia in 4% patients, with general anaesthesia in 30% and with no anaesthesia at all in 66% patients. The most common age group affected was less than 10 years among both male and female patients.

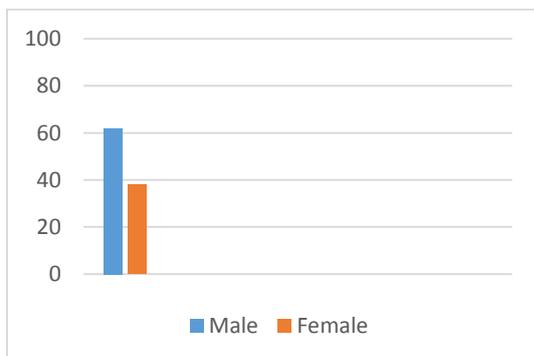
**Foreign bodies in the ear :** A total of 36 patients presented in the hospital with foreign body in the ear. Of these 36 patients, 11 harboured animate (living) foreign body(insects) and 25 inanimate (non-living) in the form of crayons, toy parts, beads, paper pieces etc. A total of 6 patients required general anaesthesia for foreign body removal from the ear.

**Foreign bodies in the nose :** A total of 47 patients presented in the hospital with foreign body in the nose. Out of these 47, 23 were hygroscopic foreign bodies in the form of seeds, grams and 24 were non-hygroscopic. Out of these 47, 9 cases required general anaesthesia for their removal and 38 required local or no anaesthesia.

**Foreign bodies in the throat :** A total of 17 patients presented with complaints of foreign body impaction in the throat. The most common type of foreign body was fish bone, 7 cases out of 17, with most common site of its enlodgement being the anterior pillar. The second most common type of foreign body was a coin, 5 cases out of 17, with most common site of its enlodgement being the cricopharynx. A total of 15 patients required general anaesthesia for the foreign body removal from the throat.

**Table 1-** Gender distribution of patients visiting the hospital with foreign body in ENT

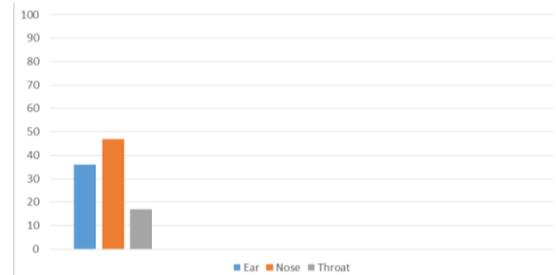
Gender		Total
Male	Female	100
62	38	



**Fig 1-** Gender distribution of patients visiting the hospital with foreign body in ENT

**Table 2 -** Distribution of foreign bodies among ear, nose and throat

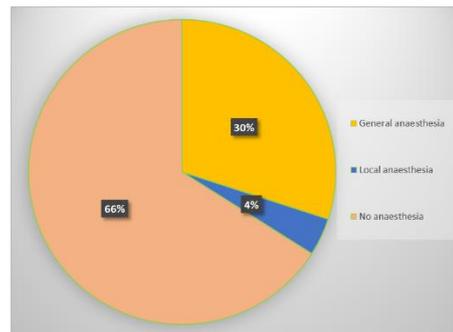
Location	Number
Ear	36
Nose	47
Throat	17



**Fig 2 -** Distribution of foreign bodies among ear, nose and throat

**Table 3 –** Types of anaesthesia required in the different types of foreign body

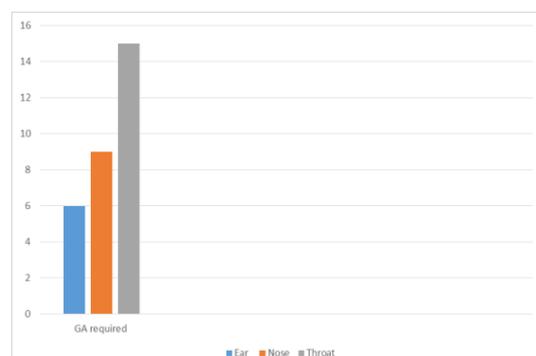
Types of anaesthesia	No of cases
Local	04
General	30
No anaesthesia	66
	100



**Fig 3 –** Types of anaesthesia required in the different types of foreign body

**Table 4 –** Distribution of cases in which general anaesthesia was required for foreign body removal in Ear, nose and throat

Area of lodgement	No of cases requiring general anaesthesia
Ear	06
Nose	09
Throat	15



**Fig 4-** General anaesthesia requirement in cases of ear, nose or throat foreign body

## DISCUSSION

The present study considered first 100 patients examined for ENT foreign bodies in out patient department and in emergency department in a tertiary multispeciality hospital for 2 consecutive years from august 2017 to august 2019.

In the present study, foreign bodies were more prevalent in children. Among them 63% of females and 68% of males were aged between 1-10 years of age. Male patients were found to be in majority. These findings coincide with the literature and with reports of other studies. [1,2]

There are many factors that are responsible for the age distribution of the foreign bodies. The mouthing activity by the children is one of them. It confirms that children tend to mimic the habit of ear and nose picking done by adults. [2]

Among adults also a higher rate of aural foreign bodies is seen especially cotton buds in an attempt to self clean the ear. Patients with psychological illnesses are also prone to ear, nose or throat foreign bodies.

Foreign bodies in ear, nose and throat are one of the most common encountered clinical entities in clinical practice. Foreign bodies account for an estimated of 11% of emergencies in an otorhinolaryngology practice. [3-5]

In the present study, nasal foreign bodies are most common accounting to 47% followed by aural foreign body (36%), and ingested/inhaled foreign body (17%).

The key to quick and safe removal is immobilisation. The success of a therapeutic method for foreign body removal depends on various factors but there is no evidence to prove that a specific method is superior to others.

Studies are conducted in the past that show that among aerodigestive tract foreign bodies, fish bone was the most common (70.5%) followed by coin in the oesophagus (6.63%) and meat bone impaction in the oesophagus (1.49%). [6] This is in agreement with our study having fish bone (46%) as most common followed by coin (33%), safety pin (13%) and chicken bone (8%).

Most cases of foreign body throat in our study were managed using rigid bronchoscopy and

oesophagoscopy. It was performed under general anaesthesia and spontaneous ventilation. There are studies which reported that the most common complication of foreign body aspiration encountered pre-operatively was persistent pneumonia, intraoperative bleeding from the site of foreign body and post operative bronchospasm. [7]

In our study most aural foreign bodies were removed in the emergency room as office procedure. The live insects were first killed by drowning them in oil before doing ear syringing. Only 30 % cases out of all cases of foreign body ear, nose or throat required general anaesthesia for their removal. The factors leading to this were patient's age, compliance and degree of impaction.

The most common nasal foreign body encountered in our study was gram (34%), followed by bead (26%), pomegranate seeds (15%), paper bits (9%), crayon (6%) and polythene particles (6%). These were mostly removed by direct visualisation with or without local anaesthesia using forceps, curved hooks or suction catheters. Only 19% out of total nasal foreign bodies required general anaesthesia for their removal using nasal endoscope due to factors like uncooperative child and bleeding complications.

The nasal foreign bodies included in our study was mostly seen in children below 10 years of age. This is on agreement with the other studies. [8,9]

## CONCLUSION

Foreign bodies in ear, nose and throat are a very common occurrence in otorhinolaryngology emergencies. Foreign body in nose is the most commonly encountered case in our study. It may range from being uneventful to causing profound complications that might compromise with the quality of life of the individual. Foreign body in general can also be life threatening such as in cases of throat. A quick and vigilant approach should be made for its removal taking into consideration age, general condition of the patient and also nature of the foreign body to avoid complications.

participated in the redaction, the revision of the manuscript and provided approval for this final revised version.

## COMPETING INTERESTS

The authors declare no competing interests.

## AUTHORS' CONTRIBUTIONS

The participation of each author corresponds to the criteria of authorship and contributorship emphasized in the [Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly work in Medical Journals](#) of the [International Committee of Medical Journal Editors](#). Indeed, all the authors have actively

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