RESEARCH ARTICLE

Study on Prevalence 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 locations for the 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 outpatient 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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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
eergency 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 harbour ed 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   | 62    |
| Female | 38    |

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

| Location | Number |
|----------|--------|
| Ear      | 36     |
| Nose     | 47     |
| Throat   | 17     |

**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          |

**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                                       |
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.

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 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.

REFERENCES

[1] Patigaroo S A, Ahmad R, Khan M A, Afzal A, Khan M A. ENT Emergencies- An Experience. Ind. J. Sci. Res. and Tech. 2013;1(03):62-65

[2] Mukherjee A, Haldar D, Dutta S, Dutta M, Saha J, Sinha R. Ear, nose and throat foreign bodies in children: A search for socio-demographic correlates. International Journal of Pediatric Otorhinolaryngology.Elsevier;2011 Apr;75(4):510–2. DOI: 10.1016/j.ijporl.2011.01.006

[3] Barretto R L, Holinger L D. Foreign bodies of the airway and esophagus Elsevier Mosby; 2005;4343–8.

[4] Naragund AI, Mudhol RS, Harugop AS, Patil PH, Hajare PS, Metgudmath VV. Tracheo-Bronchial Foreign Body Aspiration in Children: A One Year
Descriptive Study. Indian Journal of Otolaryngology and Head & Neck Surgery. Springer; 2011 Dec 7;66(S1):180–5. DOI: 10.1007/s12070-011-0416-2

[5] Sarkar S, Roychoudhury A, Roychaudhuri BK. Foreign bodies in ENT in a teaching hospital in Eastern India. Indian Journal of Otolaryngology and Head & Neck Surgery. Springer; 2010 Jun;62(2):118–20. DOI: 10.1007/s12070-010-0040-6

[6] Ray R, Dutta M, Mukherjee M, Gayen GC. Foreign Body in Ear, Nose and Throat: Experience in a Tertiary Hospital. Indian Journal of Otolaryngology and Head & Neck Surgery. Springer; 2012 Mar 4;66(1):13–6. DOI: 10.1007/s12070-012-0529-2

[7] Figueiredo RR, de Azevedo AA, de Ávila Kós AO, Tomita S. Complications of ENT Foreign Bodies: A Retrospective Study. Brazilian Journal of Otorhinolaryngology. Elsevier; 2008 Jan;74(1):7–15. DOI: 10.1016/s1808-8694(15)30744-8

[8] Silva B SR, Souza L O, Camera M G, Tamiso A GB, Castanheira L VR. Foreign bodies in otorhinolaryngology: a study of 128 cases. Int Arch Otorhinolaryngol. 2009;13(04):394–399.

[9] Bressler K, Shelton C. Ear foreign-body removal: A review of 98 consecutive cases. The Laryngoscope. Wiley; 1993 Apr;103(4):367–70. DOI: 10.1002/lary.5541030401