



Analysis of Foreign Body Incidence and Management in the Ear, Nose, and Throat: A Retrospective Study

Dr. Rajesh Bezawada

Assistant Professor, Department of Ear, Nose and Throat,
Sri Lakshmi Narayana Institute of Medical Sciences & Hospital,
Osudu, Puducherry - 605502

*Corresponding Author

Dr. Rajesh Bezawada,

Assistant Professor,
Department of Ear, Nose and Throat,
Sri Lakshmi Narayana Institute of Medical Sciences & Hospital,
Osudu, Agaram Village,
Koodupakkam Post, Puducherry - 605502

(Received: 07 September 2023

Revised: 12 October 2023

Accepted: 06 November 2023)

KEYWORDS

Foreign bodies, Ear,
Nose, Throat,
Retrospective study

Abstract

Foreign bodies (FBs) in the ear, nose, and throat present a common problem across all age groups, affecting both children and adults. This retrospective study aimed to analyze the types, locations, demographics, and removal methods of FBs encountered in these anatomical regions. Data were collected from hospital records over a one-year period, involving 168 patients with FBs: 188 males and 80 females. FBs were found in the ears of 140 patients, in the noses of 56 patients, and in the throats of 72 patients. Additionally, FBs were classified as animate (living) when located in the ear or nose and as inanimate (nonliving) when found in the throat. Removal of FBs was conducted under either local anesthesia (LA) or general anesthesia (GA) in 196 cases, with 72 patients requiring GA. Notably, individuals aged over ten years were most commonly affected, with children exhibiting a higher propensity for FBs in the ear and nose, while adults and elderly individuals were more prone to FBs in the throat. Most FB removal procedures were successfully performed in emergency rooms or outpatient departments, highlighting the feasibility of managing FB-related cases in these settings.

Introduction

Medical assistance should be sought as soon as possible in order to prevent the patient from being injured by a foreign body. The term foreign body refers to any object that has been placed in an area in which it was not intended to be placed [1]. Ears, noses, and throats (ENT) suffer from this condition. AFB can be classified as inanimate (nonliving) or animate (living). FBs can also be classified in terms of organic or inorganic composition and hygroscopicity (hydrophilicity) or hydrophobicity (hydrophobicity) [2]. It is common for FBs to develop in the ENT area to cause otolaryngologic emergencies. It is possible for both adults and children to introduce FBs spontaneously or accidentally. Children under the age of five are more likely to develop FBs. This may be due to several factors, including curiosity about exploring orifices, imitation, boredom, playing, mental retardation, insanity, attention deficit hyperactivity

disorder, the availability of objects, and the absence of attentive caregivers [3]. This study examines how FBs are removed as well as types, sites, ages, and genders.

Materials and Methods

The Department of ENT conducted a retrospective study. The study population includes patients with ENT FB lodgings who presented to outpatient departments (OPDs) or emergency rooms (ERs) during the study period with issues affecting their eye, nose, or throat. The data were obtained by reviewing hospital records in order to gather the necessary information [4]. It was necessary to perform an anterior rhinoscopy as well as an otoscopy examination in order to diagnose the presence of FB of the nose and ear. A rigid or flexible nasal endoscopic examination was also conducted if anterior rhinoscopy was unable to detect FB within the nasal cavity based on the anterior rhinoscopy. Under a microscope, the FB of the ear could also be diagnosed



and removed, as well as the ear was examined under a microscope for further diagnosis and removal. By using instruments such as Jobson Horne probes, FB hooks, Tilley forceps, and Crocodile forceps to remove the FB from the nose and ears, we were able to dramatically reduce the risk of infection [5]. As well as the instruments mentioned previously, syringing and suctioning are also methods that can be used to remove FB ears. When patients with a history of FB ingestion underwent a plain X-ray of their necks. In cases where the FB was not visible on the X-ray or we were not able to determine the site of impaction from the X-ray, flexible nasopharyngolaryngoscopy or flexible upper gastrointestinal endoscopy was performed to rule out the presence of an FB.

Results

A total of 268 patients were involved in the study, 188 of whom were males, 80 of whom were females, all of whom were treated in the hospital's ENT department. It was found that there were 268 patients with FB and 140 had it in the ear, 56 had it in the nose, and 72 had it in the throat. Under general or local anesthesia (LA or GA), 196 patients had their FBs removed, while 72 patients required total anaesthesia (GA).

Ear infections caused by foreign bodies

In total, 140 patients had FB in the ear when they presented to the hospital for treatment. 56 of these 140 patients were found to have animate (living) FBs present in their bodies. Among the 44 tick cases, there were eight cockroach cases, two ants cases, and two cases of aural myiasis cases. Additionally, there were eight cases of cockroaches and eight cases of ants. Others had inanimate (non-living) FB in their ears, while the rest had inanimate (non-living) FB. There were 84 cases of nonliving FB found, and 30 of those were hygroscopic FB found in grams, peanuts, bean seeds, and rice grains. A total of 54 cases of non-hygroscopic FB were discovered in cotton, paper, erasers, broken matchsticks and cotton buds, foam and beads, along with cotton, paper, and erasers. It was estimated that 64 children aged 10 and under out of 140 patients were included in the study. As for 140 patients with FB in their ears, 132 of them had their FB removed either through outpatient clinics or emergency rooms with or without the assistance of LA, and only four of them had to undergo a microscope examination under GA as part of the removal process; each of them was a child younger than 10 years old.

Nose filled with foreign bodies

There were 28 patients with FB lodged inside their noses. This study included 27 patients who were all children under the age of 10 who presented with medical problems during the course of the study. An outpatient department or an emergency room procedure is often used to remove FBs by using a topical nasal decongestant. It has only been possible to remove the FB in two patients under general anesthesia.

Throat infections caused by foreign bodies

It was reported that 72 patients had consumed FB. There are a large number of cases of FB caused by meat bones or boluses, which are mostly formed from chicken, mutton or buffalo meat, and the most common site of impaction is the cricopharyngeal junction. In addition to the oral cavity, the oropharynx, the hypopharynx, and the thoracic esophagus were other areas where FB impaction occurred. There were 52 organic and 20 inorganic items ingested, all of which were inanimate. The organic FBs consisted of meat boluses and bones. Many of the FBs were made up of inorganic material, such as dentures, coins, plastics, metallic objects, and even jewellery. Ten of these patients presented with an impaction of FB in their throat due to the age of 60 years or older, which was the most common group of patients presenting with FB impaction. Out of all those who ingested FBs, there were 60 patients who required GA to be removed as a result of FB ingestion.

Discussion

There is usually a history of FB lodgement in ENT with adults and older children. However, parents and relatives often bring younger children to the clinic out of anxiety. FBs are often characterized by a wide range of dimensions, sizes, and compositions, as well as a wide range of symptoms that can range from asymptomatic to acutely life-threatening. It is very common for young children to lodge objects into the natural orifices of their bodies, either accidentally or intentionally [4–8]. This may be due to the tendency of children to lodge objects into the natural orifices of their bodies. Children most commonly insert objects into their ears, as well as those of their siblings and friends, through the ear canal. A variety of ear FBs may be found including cotton wool, beans, beads, paper/plastic, erasers, insects, paddy seeds, and popcorn kernels. Aural fullness, earache, or discharge are commonly reported by patients. An otoscopic



examination may reveal the disorder incidentally when it is asymptomatic. According to our study, there is a high incidence of living FBs because people in Chitwan villages go to the jungle to gather fodder for their livestock. Taking a jungle safari in Chitwan, one of the most popular tourist destinations in our country, can result in the presence of ticks in the ear canal of many people. A medical procedure called intravenous sedation or general anesthesia is used to remove the FB under a microscope so that as little trauma as possible will be done to the external auditory canal and the tympanic membrane. When an associated otitis externa has been diagnosed, an otoscopic examination is beneficial, especially in children who are not cooperative. The removal of most nonhygroscopic FBs was successfully achieved through ear syringing. Negative pressure suctioning may be useful if in addition to the FB, there is an aural or nasal discharge. It has been shown in many other studies that children with younger noses have a higher prevalence of FBs. When a child suffers from nasal discharge that is unilateral, foul-smelling, and purulent, it is reasonable to assume that it is caused by FB, unless otherwise proved. In persons with psychiatric disorders, the introduction of FB to the nostrils is greatly reduced with growth and cognitive development. One of our patients had FB erasers in both external auditory canals, as well as FB grams in both nasal cavities. FB erasers are usually unilateral, but they may also be bilateral. Multiple FBs may also occur in the ears and nose. It is not uncommon for people to consume Facebook. The most common foreign body swallowed by children is a coin or metallic object (part of a playing object), whereas adults and the elderly are most likely to swallow meat bones. There was a strong correlation between the presence of meat bones and the presence of boluses inside the throat of our study, and both sites of lodgment were primarily in the cricopharyngeal region. During religious festivals such as Dashain and Tihar, clusters of such patients are prevalent. Adults may experience meat bone/bolus impaction if they consume excessive alcohol and eat meat concurrently, particularly during festivals. There is also a possibility that this condition is caused by poor chewing. The presence of an impaired peristalsis in elderly people who have edentulous mouths can lead to meat bones and boluses becoming entrapped in their esophagus as a result of age-related neuromuscular incoordination and poor mastication habits. Due to other underlying medical conditions, elderly

individuals commonly have narrowed digestive tracts. In our study, coins were the most frequently found FB in children's throats, which is similar to other studies. There is a high likelihood that children may swallow coins by accident due to their tendency to speak and take things into their mouth, their poor deglutition control, and their tendency to shout or scream when they are playing or eating due to their tendency to speak and take things into their mouths.

X-rays of soft tissue in the neck can be used to evaluate FB in the throat using a cost-effective radiologic examination method. When a patient has a history of ingesting FB, we recommend X-rays. Direct laryngoscopy has occasionally been used to evaluate and remove FB in oropharynx and hypopharynx, as well as with laryngoscopy in the pharynx [9]. It is usually necessary to perform rigid esophagoscopy in order to remove FBs from the digestive tract. The most practical method of performing an upper gastrointestinal endoscopy when the patient consumes radiolucent foods is to perform a flexible upper gastrointestinal endoscopy. Further, in patients who suffer from cervical spondylosis, who are not able to extend their neck, this procedure can be useful in determining the location of impaction and for removing or forcing the foreign body into the stomach if it cannot be removed or pushed.

Conclusion

Children were more likely to have FBs in their ears and noses and adults and elderly people more likely to have FBs in their throats. An ER or OPD visit is usually sufficient for the removal of the majority of nasal and aural foreign bodies. Children should not be allowed to play with coins or other small objects while they are young, so that the likelihood of foreign materials being ingested or inserted into their bodies becomes less likely. To ensure the safety of children, it is strongly recommended that parents/caretakers keep them from playing with coins or other small objects while they are young.

References

1. Sarkar S, Roychoudhury A, Roychaudhuri BK. Foreign bodies in ENT in a teaching hospital in Eastern India. *Indian J Otolaryngol Head Neck Surg* 2010;62(2):118–120
2. Carney AS, Patel N, Clarke R. Foreign bodies in the ear and the aerodigestive tract in children. In: *Scott-Brown's Otorhinolaryngology, Head and*



- Neck Surgery, 7th ed. London, UK: Edward Arnold; 2008:1184–1193
3. Shrestha I, Shrestha BL, Amatya RCM. Analysis of ear, nose and throat foreign bodies in Dhulikhel hospital. Kathmandu Univ Med J (KUMJ) 2012;10(38):4–8
 4. Banerjee S. Concept of foreign body—its past and present. Indian J Otolaryngol Head Neck Surg 1999;51(1, Suppl 1):23–30
 5. Das SK. Aetiological evaluation of foreign bodies in the ear and nose. J Laryngol Otol 1984;98(10):989–991
 6. Higo R, Matsumoto Y, Ichimura K, Kaga K. Foreign bodies in the aerodigestive tract in pediatric patients. Auris Nasus Larynx 2003; 30(4):397–401
 7. Ray R, Dutta M, Mukherjee M, Gayen GC. Foreign body in ear, nose and throat: experience in a tertiary hospital. Indian J Otolaryngol Head Neck Surg 2014;66(1):13–16
 8. Adhikari P, Shrestha BL, Baskota DK, Sinha BK. Accidental foreign body ingestion: analysis of 163 cases. Int Arch Otorhinolaryngol 2007;11(3):267–270
 9. Pokharel R, Adhikari P, Bhusal CL, Guragain RP. Oesophageal foreign bodies in children. JNMA J Nepal Med Assoc 2008; 47(172):186–188