

Some Interesting and Rare Presentation of Common Foreign Bodies in Otorhinolaryngology: A Case Series

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Abstract: Foreign body cases are commonly encountered in ENT emergencies. They are often associated with high morbidity or mortality when not managed timely. Accidental ingestion or aspiration of foreign bodies is commonly seen in both children and elderly. They either get lodged in cricopharynx, or get impacted in the oesophagus because it has weak peristalsis and multiple anatomical narrowings. Foreign bodies can cause mucosal damage, perforation, sepsis, or even death. We are reporting three unusual foreign body cases seen in our department which were successfully managed by us.

Keywords: aspiration, emergency, ENT, foreign body, otolaryngology

1. Introduction

Foreign bodies contribute to around 11% of the patients seen in ENT emergency [1]. They can lead to high morbidity or mortality if not managed on time. Accidental ingestion or aspiration of foreign bodies is commonly seen in both children and elderly [2]. Most commonly ingested foreign bodies are dentures, chicken or meat bone, metallic foreign bodies. They either get lodged in cricopharynx, or get impacted in the oesophagus because it has weak peristalsis and multiple anatomical narrowings [3, 4]. Foreign bodies in the paranasal sinuses can be due to iatrogenic or road traffic accidents. Foreign bodies staying in the head and neck area or oesophagus can cause mucosal damage, perforation, sepsis, or even death. We are reporting three unusual foreign bodies seen in our department during the COVID-19 pandemic which were successfully managed by us.

2. Case 1

A 2 years old male child was brought to the Emergency Department of our hospital, a Tertiary Care Centre, by his parents in an absolutely mind-boggling situation (Figure 1). One has to see to believe it, I would say. One end of a large metallic spring was impacted in his oral cavity and the baby was crying relentlessly. On taking history, it was known that the child was playing at home and he came to the area having gym equipment. Accidentally, the child was alone when he tried to play with a push up exerciser and its one end broke, exposing the metallic coil which lodged in the child's mouth and went further inside by spring action due to movement. On general examination, the airway was maintained and vitals were stable. X Ray soft tissue neck was carried out to assess the depth of spring attachment. It was shown to be deep in the hypopharynx. Attempts to dislodge the spring precipitated more crying, some bleeding and further coiling of the spring inside as the other end was connected to heavy gym equipment. So, removal of the

foreign body under vision in general anaesthesia was planned.



Figure 1: Child with metallic coiled foreign body impacted in throat. X-ray showing metal deep in hypopharynx. The removed foreign body. The separated part of coiled gym equipment and the Jumbo cutter used for cutting it

Child was shifted to Operation Theatre and intubated. It was a difficult intubation as foreign body had pushed the epiglottis and it was obscuring the view of glottis. Then first of all, the outer end of spring near the mouth was cut so as to facilitate extraction. Orthopedic Jumbo cutter was used for

this purpose. Pediatric direct laryngoscope was inserted and site of insertion visualized. It was impacted in the left vallecula. Wire was fixed at the entry site to negate further movements and then it was taken out slowly, using rotatory movements. No major bleed was encountered after removal but as a cautionary measure, the child was shifted to PICU for further observation and management. Intravenous antibiotics and parenteral nutrition were given for the next 24 hours and after stabilizing the general condition, the child was extubated and discharged on the 3rd day. Child came for follow up in ENT OPD after one week and was doing well.

3. Case 2

A 23 years old man came with the complaints of persistent pain in right cheek after a road traffic accident one month back (Figure 2). On examination, there was a discharging sinus on the right malar region with active discharge. Palpation suggested presence of some hard foreign body embedded at site with inflamed and boggy surrounding area. X-rays of the face were done which showed an osteolytic lesion in the right maxilla. Blood investigations were done and after pre anesthetic clearance, the patient was taken up for exploration under general anesthesia. An elliptical incision was given around the sinus opening and tract dissected. As we reached the anterolateral wall of maxilla, we saw a foreign body, plastic piece, impacted there along with adjacent bone dehiscence. Plastic piece was removed, wound washed with betadine and closed in layers.



Figure 2: Surgical photographs of the case 2. The extracted foreign body and patient 10 days after surgery

In the road traffic accident, the patient's head had collided with the windshield of an auto and some plastic part of the mirror casing had embedded in his face. He underwent

suturing of laceration when this plastic piece was neglected, probably because of deep impaction or non-clearance of wound prior to suturing, and now caused an enterocutaneous fistula. This underscores the importance of good surgical practice even with small cases.

Sutures were removed on the 7th day. Wound healing was achieved and the patient was symptom free at 6 months follow up.

4. Case 3

An old lady presented to the ENT outpatient department of our hospital with complaints of dysphagia and some odynophagia from the past 1 month. She gave a history of accidental ingestion of the denture she was using, 1 month back, but could not seek medical attention because of financial constraints and unwillingness of family members. Now, when she could not eat any solids, she was brought to the hospital. She was not a tobacco user. She was examined thoroughly to rule out any cause in the oral cavity. Laryngeal endoscopy was performed, which was also normal. X Ray soft tissue neck was done which revealed some haziness/ opacity in the post cricoid region. Computed Tomography of the neck was sought which confirmed the presence of denture at the level of C5-C6. She was scheduled for Hypopharyngoscopy⁷ and Removal of Denture under GA. Pre operative blood investigations were done and after Anesthesia clearance, she was taken up in OT. An impacted denture was present in the post cricoid region which had caused oedema and congestion in the surrounding mucosa. Denture was freed and delivered. Hemostasis achieved. Check esophagoscopy was done which was normal. Ryle's tube no 14 was placed and confirmed.

Patient was extubated. She tolerated the procedure well. After 6 hours, a test dose was given for Ryle's tube and after it went well, Ryle's tube feeding was started[at]250 ml 2 hourly. Patient was discharged the next day with Ryle's tube and called for follow up in OPD after 5 days. On follow-up, the Ryle's tube was removed and the patient resumed swallowing without any pain. Patient came for follow-up at 1 month and she remained symptom free.

5. Discussion

Foreign body ingestion is common in both children and adults. In children it is most commonly seen in the age group of 6 months to 3 years. It is mainly because young children have a curious nature and because toddlers tend to learn by putting objects in their mouths.

In adults it is frequently seen in elderly, those with special needs, with alcoholic intoxication, mentally retarded, prisoners and those using dentures. In children, coins and button batteries are the commonly ingested foreign bodies, cases of penetrating foreign body in the pharynx due to sticks, pencils, pens, toys etc in children have been reported in literature. However, ours is first case reported in literature in which penetrating Curved metallic foreign body in pharynx of a child is first cut and then removed.

Road traffic accidents are known to result in lodgement of foreign bodies in head and neck area like air, stones, wood, metal, whole tooth, roots of teeth, dental cements. Our second case was of a neglected foreign body in the face after a road traffic accident.

In adults, dentures are the most common foreign body. This is probably because dentures cause a gradual loss of sensation in the oral cavity and laryngopharynx. Our third case is of denture in the esophagus in an elderly female which was neglected by family and so presented late after a period of one month.

Foreign bodies are generally more common in males, probable reason could be more physical activity and better presentation to hospitals. In our case series also, males sought for medical attention earlier than females. The most common presenting symptom of foreign body ingestion is dysphagia. The other presenting complaints like hypersalivation, retrosternal heaviness, and regurgitation of foods can also be present. It can also present with symptoms of complications like para or retro-oesophageal abscess, mediastinitis, empyema, or even trachea-esophageal and aorta-oesophageal fistula if it has already perforated the digestive system [5]. Bandyopadhyay et al. [6] in his study documented as reported that dysphagia and tracheal tenderness were the most common features in his study of 47 patients of denture ingestion. FB in pharynx or oesophagus can also present with symptoms of airway compression such as choking, stridor and dyspnoea.

Foreign bodies in paranasal sinuses can present with vague symptoms and therefore present a diagnostic challenge to the ENT surgeon. They may even remain asymptomatic for a long time and present at a later stage with complications such as recurrent swelling, continuous purulent discharge from wound site or a fistula.

Thorough physical examination of head and neck should be done to check for signs of perforation of foreign body like neck swelling, fever, chest pain, tachycardia and subcutaneous emphysema [7].

A soft tissue neck and chest radiograph is the first investigation usually advised to confirm the presence of foreign body and to estimate the size and assess surrounding structures. However, dentures and other radiolucent foreign bodies can sometimes be missed on plain x ray. Hence CT scan of the concerned area is usually done in these cases. CT scan can also give details about the size, exact location of foreign body and its relation to surrounding structures. An unenhanced CT scan has 100% sensitivity, 92.6% specificity, 97.9% positive predictive value, and 100% negative predictive value in the diagnosis of the esophageal foreign bodies. CT scan therefore is of paramount importance in preoperative planning. In our series CT scan was only done in 1 case as denture was not clearly visualised on X-rays.

Prompt and early intervention is the key to successful management of foreign bodies in the head and neck area. Several studies have shown that staying of foreign bodies in

ENT cavities for more than 72 hours and multiple attempts to remove the FB increase the chances of complications.

Surgical removal is the treatment of choice in most cases of foreign body in the head and neck area [8]. Only in some cases waiting for spontaneous expulsion is the treatment plan.

High success rates for rigid and flexible endoscopy have been reported in retrospective studies on esophageal FBs. Some authors have reported open thoracotomy and esophagostomy in old impacted cases of foreign body oesophagus⁵. The type of surgical procedure to be adopted and timing of medical intervention to remove a foreign body is based on the location, size and type of the FB, the duration of impaction, and patient's clinical presentation.

6. Conclusion

All our three cases highlight the need for more care and supervision especially towards the frail by the caregivers, whether family or treating physician.

Our first case of penetrating foreign body in a child emphasises extra supervision to young children at home and school. Even the elderly patient in our series was neglected by family for over a period of 1 month which highlights the neglect and insensitivity towards the elderly in society.

Same goes for the case of road traffic accident with cheek laceration. Due care must be taken before suturing and thorough examination with proper debridement to rule out embedded foreign bodies should be done.

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