

An unusual foreign body impaction in the pharynx of a child – A case report and literature review

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Summary

Aims and objectives: Foreign body impaction in the upper aero-digestive tract is relatively common in Otorhinolaryngological practice. The aim is to present a case of an unusual impacted foreign body (ear ring), in the pharynx of a child, that was confirmed by plain radiographs.

Case report: An 8-month old male baby presented in emergency paediatric unit (EPU) of our hospital with a history of ingestion of an empty paracetamol sachet. Plain X-ray soft tissue of the neck however revealed a big metallic ear ring that impacted in the upper aerodigestive tract. It was removed successfully under general anaesthesia. The possible delay in diagnosis and various complications of pharyngeal foreign bodies were highlighted /reviewed.

Conclusion: In conclusion foreign body impaction is common in the paediatric age group. Effort should be made by the attending physician to inquire into details of event relating to ingestion of foreign body in order to arrive at early and timely diagnosis and treatment so as to prevent complications.

Key words: foreign body, impaction, ear ring, child

Introduction.

Foreign body impaction in the upper aerodigestive tract is relatively common in Otorhinolaryngological practice. It is commonly seen in children. A wide variety of objects are often implicated, such as toy parts, coins, needles, bones, pins, plugs or dental appliances^{1,2}. These children by their nature, curiosity, and inquisitive; explore the various orifices in the body^{3,4}. Other factors that may encourage ingestion of foreign body in children are the availability of these objects and absence or presence of watchful caretakers/ caregivers⁴. We report a case of an unusual foreign body, big ear ring impacted in the pharynx of an – 8 – month – old baby that was confirmed by plain radiographs. This report also stresses the need for physician to take proper and adequate history when there is possibility of foreign body ingestion. Complications associated with pharyngeal foreign bodies were reviewed.

Case Report

An 8 - month old male baby OM presented in emergency paediatric unit (EPU) in our hospital on account of accidental ingestion of empty paracetamol sachet 3 hours prior to presentation. On direct questioning the mother claimed that an attempt at removing the foreign body from the child's mouth with her finger pushed it further and got impacted in the throat. The child had been taken to a nearby General Hospital from where he was immediately referred to our centre. There was no associated difficulty with breathing and no vomiting. However there was minimal drooling of saliva, difficulty with sucking and swallowing. Other history was essentially not contributory. Immunisations were up to date.

General examination revealed a rather ill looking child, stertor, in mild respiratory distress, afebrile (temp 36.4 °C), not pale, acyanosed, not dehydrated, RR= 42 cycles

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per minute, PR=124 beat/ minute. Ear, Nose & Throat examinations showed pooling of saliva in the oro pharynx with foreign body barely visible in the throat. He has good air entry bilaterally with transmitted sounds; no crepitations. An urgent plain X-ray soft tissue of the neck antero-posterior (AP) and lateral views was ordered. Only the AP view of the plain radiographs was available for review. This showed a metallic ear ring in the upper aerodigestive tract. **Fig.1.** The child was subsequently prepared for removal of the foreign body under general anaesthesia. In the theater, examination under general anaesthesia with oro tracheal intubation revealed a big golden yellow ear ring in the oro pharynx with part of it lodged in the naso pharynx (behind the uvula and soft palate). The foreign body was removed successfully with Magill forceps though with minimal difficulty due to the location, size and shape of the ear ring. **Fig. 2.** The patient did well post operatively. He had intravenous infusion, antibiotics and analgesics while on admission. He was discharged home on the third day of admission. No complication was recorded.

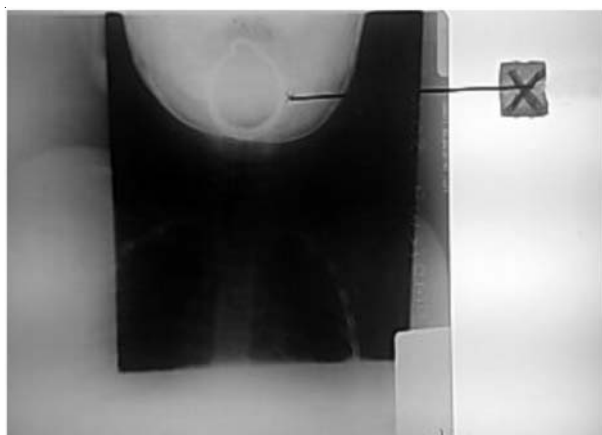


Figure 1. Plain x ray soft of the neck (AP) view showing a metallic ear ring in the upper aerodigestive tract

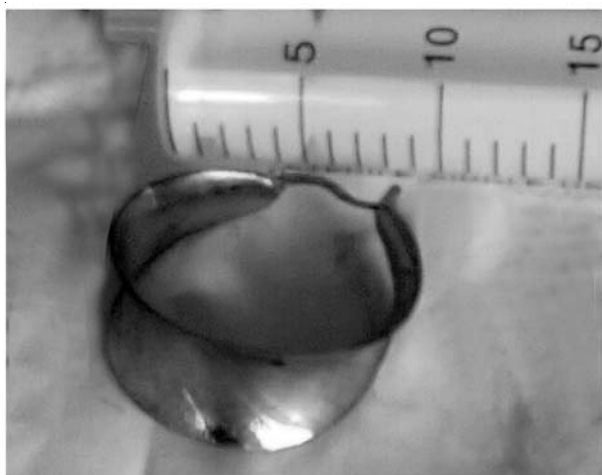


Figure 2. Showing a big metallic ear ring after removal from upper aerodigestive tract

Discussion

It is noted that insertion or ingestion of foreign body in children occurs around the age of 9 months, when they develop a pincer grip and become able to manipulate small objects⁵. Although, some might have developed such pincer grip earlier than that age as in this reported case. Although foreign body impaction in the pharynx may also be seen in adults who are mentally retarded or deranged or deliberately swallowed as in charm rituals or self harm as in suicidal attempts^{6,7,8}. Wide varieties of foreign bodies lodging in the upper aerodigestive tract and a large number of complications have been reported in literatures^{9,10}. James *et al*, reported an 18- month - old baby with tooth brush lodged in the oropharynx-peripharyngeal tissues when the baby fell with a tooth brush in his mouth while learning to brush his teeth¹¹. Onakoya *et al*¹² reported a case of 20 year old magician, who intentionally inserted two long sewing needles into the right nasal cavity during a magical act which got impacted in his nose/pharynx¹². The foreign body was retrieved from retro pharyngeal soft tissue of the nasopharynx *per ora* under general anaesthesia. A 17- year old boy (fisherman) who accidentally ingested a live fish which got stucked in the throat was reported by Dunmade *et al*¹³. The patient had extensive subcutaneous emphysema as a complication. There was also a case of a 10- year- old girl with a fish hook in the throat. This sharp - pointed object was revealed by plain radiograph¹⁴. The diagnosis of a foreign body in the pharynx may pose a problem, particularly when the history is not reliable or not forthcoming, and parents/caregivers are not even sure of what the child might have ingested. This patient was said to have ingested empty satchet of paracetamol, but anteroposterior radiography of the neck showed a metallic ear ring. The lesson to learn from this is that, it is not infrequent for parents of a toddler to minimise or hide important information and not includes it in the history, making it imperative that the physician specifically inquire as to such an event. It cannot be over emphasised that the history from the patient that he has a foreign body in his throat is the most important clinical findings and if the patient additionally has persistent symptoms, would justify endoscopic examination whatever the radiological findings. Radiological investigation should therefore be carried out in all patients with suspicion of upper aerodigestive foreign bodies ingestion, especially when it is available, affordable and patient's clinical condition permits. Apart from absence of history of foreign body ingestion, occasionally timely diagnosis may be delayed by absence of classical symptoms, predominance of respiratory symptoms and ingestion of radiolucent foreign bodies^{15,16}. In this environment, delayed presentation in the hospital, financial handicap, sparse distribution of personnel (specialist) and facilities may add to the delay in diagnosis as well as in removal of the foreign bodies¹⁷. The signs and symptoms of foreign body ingestion are quite diverse and often very non-specific. In most

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instances, patients are able to relate a history of foreign body ingestion, but many are unable to give such information due to their young age. Symptoms and signs produced also depend upon the nature, size, location and time since lodgment of the foreign body in the aerodigestive tract. The symptoms of pharyngeal foreign bodies are usually dysphagia, pain, stertor, , excessive salivation, refusal to eat or drink^{18,19}. In the case where air passage is compromised, the symptoms are not only dramatic but may also be immediate life threatening¹⁰. Plain radiography in cases of foreign body in the upper aerodigestive passages can be misleading especially when the impacted object may be radiolucent¹⁵. Often, a radiopaque foreign body is obvious and does not pose problem in diagnosis. Contrast radiography can be helpful when the foreign body is not radio-opaque. For our patient that was presented here, the AP radiographs of the neck showed a big metallic foreign body in the upper aerodigestive tract. Although the lateral view of the plain radiograph of the neck for the patient was not available, this could have informed us the relationship of the foreign body to the cervical vertebra body. Impacted foreign bodies are seen as emergencies whose removal does not leave much time for waiting other than the time for preparing the patient for endoscopic removal¹⁰. The complications of foreign body impactions in the pharynx are as varied as the objects which are impacted coupled with various anatomical structures in these regions. Chest infection, especially pneumonitis may occur in children due to spillage into the lung of saliva. Penetration of the pharyngeal wall by foreign body producing an intra-mural abscess or, if the extrusion is complete a parapharyngeal abscess¹⁰. A large foreign body occluding the upper airway may lead to air way obstruction and even sudden death. Older patients with sharp foreign bodies are also at great risk of developing complications¹⁸. Acute retropharyngeal abscess may result from penetrating injury of foreign bodies piercing the posterior pharyngeal wall especially in older patients^{18,20}. Although airway compromise is a clear threat in penetrating oropharyngeal injuries, the severity of the injury is not always readily apparent. Violation of the retropharyngeal space can lead to subsequent hematomas, abscess formation, and mediastinitis¹¹. Perforations in the upper aerodigestive tracts could cause cervical subcutaneous emphysema¹³. Chambers *et al* reported pseudo aneurysms of the internal carotid artery after an infant allegedly fell on her face with a spoon in her mouth²¹. Adequate history, early diagnosis and treatment are imperative to prevent mortality from these complications. In general, foreign body aspiration or ingestion is common events that can be prevented in the paediatric age. Education of parents/caregivers and general public is very important in terms of preventive measures. It is also important to mention that in situation where there is positive history

from an adult witness of the event or a high level of suspicion, urgent steps should be made toward the immediate management. It is not uncommon however, for young children or elderly adults with mental status changes who are prone to such accidents to be incapable of giving a history and the initial event having gone unnoticed by family or caretakers. Older children often are reluctant to divulge the details of the accident due to embarrassment or the fear of punishment. The choice of procedure to remove foreign body in the upper aero digestive tract will depend on the exact location, its shape and size and the skill of the surgeon. Almost without exception, the treatment of choice for foreign bodies of the upper aerodigestive tract is reasonably prompt endoscopic retrieval in the operating suite under general anesthesia. Because the airway must be protected, most foreign bodies in the throat require intervention by otolaryngologist with general anaesthesia before removal. The patient had his foreign body removed in the theatre under general anaesthesia with oro tracheal intubation without complications, though with some difficulty due to the location, size and shape of the ear ring. It is occasionally possible to retrieve an oro- pharyngeal foreign body lodged at the base of the tongue in a cooperative patient with only local anaesthesia, but one should be aware of the risk of dislodging the object and becoming aspirated into the lung. The patient was placed on parenteral antibiotics, analgesic and intravenous fluid during the course of his admission.

Conclusion

In conclusion foreign body impaction is common in the paediatric age group. Effort should be made by the attending physician to inquire into details of event relating to ingestion of foreign body in order to arrive at early and timely diagnosis and treatment. Health education to parents, caregivers/takers, teachers in the schools and to general public at various levels in the society about foreign body ingestion should be given with emphasis on preventive measure

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