CASE REPORT

An uncommon oesophageal foreign body in a neonate

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SUMMARY

We report a case of a 2-month-old male child who presented with sudden onset of vomiting and refusal to breast feed. Chest and abdomen examination were normal. A foreign body (zipper) was visualised in the cervical oesophagus on X-ray of the neck. The retrieval of the zipper by oesophagoscopy relieved the symptoms of the patient.

BACKGROUND

A foreign body in the oesophagus is not uncommon. However, in this case, the unusual age, atypical foreign body and late presentation after the ingestion of the foreign body prompted us to report this case.

CASE PRESENTATION

A 2-month-old male child presented with a history of refusal to breast feed, multiple episodes of non-bilious vomiting for approximately 10 days and cough for the past 15 days. There were no loose stools, fever or respiratory symptoms. Also, the parents denied knowledge of any foreign body ingestion by the child. The child was a full term normal delivery and weighed 5.5 kg on presentation. His milestones and overall general examination were normal.

INVESTIGATIONS

X-ray of the chest and soft tissue of the neck (anteroposterior and lateral view) after removing all the clothes of the patient were carried out to ascertain the cause of the symptoms. A long radio opaque foreign body was visualised in the cervical oesophagus at vertebral level of C7–T2 (figures 1 and 2). Routine blood investigations were normal, and bilateral air entry in the chest was equal.

TREATMENT

The patient was kept nil per orally, started on intravenous fluids and antibiotics, and was worked up for oesophagoscopy after admission. He was taken up for rigid oesophagoscopy under general anaesthesia. The oesophagoscopy showed an impacted metallic foreign body (zipper) covered in milk debris directly below the cricopharynx. This was dislodged gently and removed in one piece using grasping forceps. The foreign body, a regular zipper, measured 3×0.8 cm (figure 3). Oesophageal mucosa showed no bleeding, but there was mild oedema at the site of impaction. The child was kept nil per oral, continued on intravenous fluids and antibiotics, and was monitored

Figure 1 Chest X-ray (anteroposterior view) showing foreign body in oesophagus.

for fever, tachycardia and subcutaneous emphysema over the neck in the postoperative period. Having shown no signs of oesophageal perforation for the first 24 h, the child was allowed to breast feed, which he tolerated well.

OUTCOME AND FOLLOW-UP

The child was brought for weekly follow-ups for two consecutive weeks, during which he remained asymptomatic.

DISCUSSION

Foreign body ingestion is common in children between the age group of 6 months to 6 years; if present in adults, the cause is usually accidental but occasionally can be homicidal or suicidal.¹ The most common foreign bodies in children are coins; however, buttons, disk batteries, marbles, safety pins, needles, bottles and pieces of glass have also been reported.^{2–6} The presentation and management of a foreign body in the paediatric population depends on where it gets impacted; some commonly affected areas are at the physiological narrowing in the oesophagus, and include the cricopharynx, the aortic arch, the left main bronchus and the lower oesophageal sphincter.⁷

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Figure 2 Chest X-ray (lateral view) showing foreign body in oesophagus.

Foreign body ingestion usually requires endoscopic removal but often the foreign body passes through the whole gut without any complications. However, any foreign body that is large or sharp may get impacted in the oesophageal mucosa,

Figure 3 Retrieved foreign body (zipper).

producing troublesome symptoms.⁸ Foreign body obstruction should always be suspected in neonates with symptoms such as refusal to feed, excessive drooling, respiratory symptoms and unexplained gagging, especially if sudden in onset.⁵ Diagnosis is a lot easier when parents can give the history of foreign body ingestion. In the absence of a definitive history, it becomes difficult as even the mere choice of radiological investigation to be performed in infants becomes a hard task in view of poor localisation of symptoms and signs. However, radiological investigations such as chest X-ray and X-ray of the neck with anteroposterior and lateral view are commonly carried out, as they adequately confirm the location, size, shape and number of ingested foreign bodies, and also help to distinguish between tracheal and oesophageal foreign bodies, as their symptoms can overlap. If the incident is not witnessed or the ingested object is of radiolucent matter such as fish bones, wood, plastic, glass, etc, investigations such as barium swallow, plain or three-dimensional reconstructed CT scans of the neck, ultrasonography and MRI may be required for diagnosis.⁹ For radiolucent foreign bodies of which radiographs are usually negative, performing endoscopy is preferred over barium swallow, because contrast examination can lead to a risk of aspiration, and also coating of the foreign body and oesophageal mucosa with contrast can compromise subsequent endoscopic foreign body removal.^{10–12}

The need for and the timing of an intervention for foreign body ingestion depends on various factors such as the patient's age, clinical condition, the size, shape, anatomic location, the ingested foreign body itself and the time since its ingestion. Patients unable to manage their secretions, and those who have ingested disk batteries, or sharp or long objects, should undergo emergent endoscopic intervention to avoid aspiration or risk of perforation, respectively.^{13–15}

In children, the duration of the foreign body in the oesophagus may be unknown, hence an urgent removal is suggested because complications such as mucosal erosion and fistula formation can occur. Once the foreign body has entered the stomach, there is a good chance it will pass through the system in 4–6 days.^{5 16–18} The most common foreign bodies in children are blunt and usually free of complications, but sharp foreign bodies are frequently associated with serious complications such as retropharyngeal abscess, so these must be removed at the earliest.¹⁹ Most ingested foreign bodies are best treated with flexible endoscopes. However, rigid oesophagoscopy may be helpful for proximal foreign bodies impacted at the level of the upper oesophageal sphincter or hypopharyngeal region.²⁰ A wide variety of instruments are available for use with the rigid oesophagoscope for various methods of foreign body extraction.

Learning points

- ▶ A high index of suspicion for foreign body ingestion should be maintained:
 - In every child, irrespective of age, with unexplained sudden onset of vomiting or respiratory symptoms.
 - Irrespective of parents/relatives not being aware of any foreign body ingestion or inhalation by the child.
- ▶ Prompt intervention is advised as soon as the patient presents because, in children, the duration between the actual ingestion of the foreign body and onset of symptoms may be unknown.

Common foreign bodies such as coins can be removed using rigid cupped forceps, or rat-tooth and alligator forceps; uncommon atypical smooth surfaced round foreign bodies are best removed using a rigid suction catheter, dormia basket and fogarty balloon catheter; metallic foreign bodies can be removed using magnetic probes and sharp foreign bodies using retrieval forceps, retrieval nets and polypectomy snares.²¹

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