



ORIGINAL RESEARCH PAPER

PAEDIATRIC SURGERY

ACCIDENTAL INGESTION OF UNUSUAL FOREIGN BODIES IN INFANTS

KEYWORDS: foreign bodies, accidental ingestion, infants

P.MOHANAVEL	ASST PROF, DEPT OF PAEDIATRIC SURGERY, ICH&HC, CHENNAI.
M.ANANDHAN	ASST PROF, DEPT OF PAEDIATRIC SURGERY, ICH &HC, CHENNAI.
PRAVEEN PANDIAN	RESIDENT, DEPT OF PAEDIATRIC SURGERY, ICH& HC, CHENNAI.
NIRANKUMAR SAMUEL	RESIDENT, DEPT OF PAEDIATRIC SURGERY, ICH& HC, CHENNAI.

ABSTRACT The accidental ingestion of food, toys, and small household objects is a common pediatric complaint, resulting in many clinic and emergency department visits as well as hospitalizations (1). Infants and toddlers explore their world by putting objects in their mouths, placing themselves at risk for having foreign bodies in the gastro intestinal and respiratory tracts. We report two cases of foreign body ingestion in infants resulting in intestinal obstruction. Unusual foreign body ingestion in infants is difficult to diagnose. Good history, proper examination and relevant investigations will be useful for the early detection and early intervention in infants to prevent further complications. Community awareness is necessary to prevent accidental ingestion of foreign bodies in children.

INTRODUCTION

The clinical presentation of children presenting with ingested foreign bodies varies especially when the history is inconclusive. Majority of foreign body ingestion occurs in children from six months to three years. Many are asymptomatic or have transient symptoms. Clinical management focuses on identifying and treating cases at risk for complications, which depend on location and type of foreign body. Mostly children swallow radio opaque foreign bodies which are easily picked up by X-rays. Unusual foreign bodies present as a surprise during surgery. We present two cases of unusual foreign body ingestion in infants leading to intestinal obstruction

CASE REPORT

Case 1

A 8 months old girl child presented to us with history of passing loose stools for 3 days and vomiting which was initially non bilious and later turned to be bilious for 2 days with no history of fever and abdominal distention. Examination of abdomen revealed no abnormality.

X-ray and ultrasound of abdomen revealed acute intestinal obstruction. The child was resuscitated and underwent laparotomy. Small bowel loops were dilated till proximal jejunum whereas the distal jejunum and ileum were collapsed. There was a sudden luminal narrowing noted in the proximal jejunum where a soft intra luminal foreign body was palpable which could be moved to and fro. Jejunotomy revealed a swollen jelly ball which was removed and the jejunotomy was closed. The child has an uneventful post-operative recovery.



FIGURE 1: XRAY SHOWING FEATURES OF INTESTINAL OBSTRUCTION, INTRAOPERATIVE PICTURES DEMONSTRATING OBSTRUCTION AND PRESENCE OF JELLY BALL.

Case 2

A 1 year old girl child presented with history of ingestion of foreign

body (metal hook) with recurrent vomiting. Clinical examination revealed no abnormality. X-ray abdomen revealed multiple radio opaque foreign bodies with dilated stomach. Barium meal follow through revealed dilated duodenum till the fourth part with specs of contrast in distal bowel loops. The child was resuscitated and underwent laparotomy. Duodenum was dilated till its fourth part. Distal small bowel loops were collapsed. Duodenotomy at fourth part revealed multiple foreign bodies eroding the gut wall causing partial stenosis of duodenum. The foreign bodies were removed and duodenoplasty was done. The child has an uneventful post-operative recovery.



FIGURE 2: XRAY SHOWING DILATED DUODENUM AND FOREIGN BODIES IN THE DUODENUM, INTRAOPERATIVE PICTURE DEMONSTRATING PARTIAL DUODENAL STENOSIS.

DISCUSSION

As infants start crawling and move around, they inevitably put foreign bodies into their mouths and swallow some of them. Most swallowed foreign bodies pass harmlessly through the bowel (2). Foreign bodies that damage the GI tract, become lodged, or have associated toxicity must be identified and removed. Children with preexisting GI abnormalities (eg, tracheoesophageal fistula, stenosing lesions, previous GI surgery) are at an increased risk for complications.

Gastro intestinal foreign bodies rarely cause intestinal perforation. The mechanism of intestinal perforations is direct penetration by sharps, pressure necrosis, chemical necrosis, and due to the volvulus produced by the retained foreign bodies (3).

Jelly balls are made up of super absorbent polymer (SAP) which absorbs water and swell in size. Their size ranged between 1 and 4 mm. They absorb water and can swell up to 30-60 times of their original volume (4). The complications following ingestion can range from partial or complete intestinal obstruction to more severe form i.e. perforation (5).

Metal foreign bodies and button battery can produce pressure necrosis leading to partial stenosis of intestine resulting in intestinal obstruction. A retained foreign body should always evoke the suspicion of an anatomical abnormality in bowel (6,7). We had discussed two cases where in the first case, the intra luminal foreign body resulted in intestinal obstruction and in the second case the foreign body caused luminal narrowing due to erosion of the intestinal wall.

CONCLUSION

Unusual foreign body ingestion in infants is difficult to diagnose. Good history, proper examination and relevant investigations will be useful for the early detection and early intervention in infants to prevent further complications. Community awareness is necessary to prevent accidental ingestion of foreign bodies in children.

REFERENCE

1. ... Mahale AR, Shetty R, Venugopal A, Kumar A. Radiological detection of unsuspected foreign bodies. *Indian J Radiol Imaging*. 2002;12:133-5.
2. ... Selivanov V, Sheldon GF, Cello JP, Crass RA. Management of foreign body ingestion. *Ann Surg*. 1984;199:187-91.
3. ... Oktar SO, Erbas G, Yucel C, Aslan E, Ozdemir H. Closed perforation of small bowel secondary to a phytobezoars: Imaging findings. *Diagn Interv Radiol*. 2007;13:19-22.
4. ... Super absorbent polymer. 2011 Nov 24. Available from: http://www.en.wikipedia.org/wiki/Superabsorbent_polymer.
5. ... Mirza B, Ijaz L, Sheikh A. Decorative crystal balls causing intestinal perforation. *J Indian Assoc Pediatr Surg*. 2011; 16: 106- 7.
6. ... Pandya VK, Malik R, Lakhole M. Rigid 12 inches long impacted foreign body in upper gastro-intestinal-tract. *Indian J Radiol Imaging*. 2006;16:495-7.
7. ... Mirza B, Saleem M, Sheikh A. Broken piece of silicone suction catheter in upper alimentary tract of a neonate. *APSP J Case Rep*. 2010;1:8.