



CASE STUDY

FOREIGN BODY INGESTION: A COMMON PEDIATRIC RISK!

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ABSTRACT

Foreign body ingestion is very common among pediatric age groups and most of the times they pass through the gastrointestinal tract without any complications. Very few patients require any intervention. Most common foreign bodies ingested are coins, but marbles, button, batteries, safety pins, glass and bottle tops are also found. Radiological localization is mandatory for decision making regarding the removal. (Wyllie, 2006) Smooth foreign bodies do not pose much threat but Sharp foreign bodies, if not retrieved at the earliest may cause complications.

Key words:

Glass piece, Ileocecal junction,
No perforation.

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INTRODUCTION

Foreign body ingestion is one of the most common problems in the pediatric age group. Usually 80-90% foreign bodies pass without any difficulty and only 10% of the patient require some surgery or intervention. (Webb, 1995) Out of 100,000 cases of foreign body ingestion reported each year in the United States of America, a majority of 80 percent occur in children. Most common foreign bodies in children are coins, but marbles, button, batteries, safety pins, glass and bottle tops are also reported. Radiological localization is mandatory for decision making regarding the removal. (Wyllie, 2006) Smooth foreign bodies do not pose much threat but Sharp foreign bodies, if not retrieved at the earliest may cause complications.

Case report

A 14 year old boy presented in the department of surgery with complains of accidentally ingesting few pieces of glass while drinking water. They requested for a CT scan of abdomen to identify the location of glass pieces as well to look for any complications if present. A plain CT abdomen of the patients was done and it revealed multiple hyperdense foci of foreign body with streak artifact in ascending colon, ilio-cecal junction, ileal loops, sigmoid colon and rectum. The largest foreign body

was measuring 2.4x0.7cm with a density of 1342 HU. There was no evidence of perforation of the bowel loops or any sign of acites or pneumoperitoneum. The glass pieces were freely passing off in his stool. No surgical or any sort of intervention was done for this patient.

DISCUSSION

Foreign body ingestion are very common and most of the times they pass through the gastrointestinal tract without any complications. But they are important, interesting and at times provide a great deal of amusement. Although ingestion of foreign body can be observed at any age, it occurs more frequently in children aged between six months and five years who tend to recognize objects found around them by delivering them to their mouths. (Dereci *et al.*, 2015) They may be overlooked and can cause harm to the patient. Identifying a foreign body on radiograph or CT scan is very important to rule out any complications related to it. This is where imaging plays a very crucial role in these cases. CT is considered to be a sensitive tool for foreign body detection. However, inconsistencies in detecting radiolucent foreign bodies have been reported. The use of IV contrast agent in the detection of foreign bodies is not clearly defined in the literature. (Mark Guelfguat *et al.*, 2014) Elongated sharp foreign bodies like glass, needle, razor are more likely to lodge at the areas of narrowing. (McPherson *et al.*, 1957) Most foreign bodies (80%) pass through the gastrointestinal tract easily however only about 20% get lodged in the transition regions of the tract.

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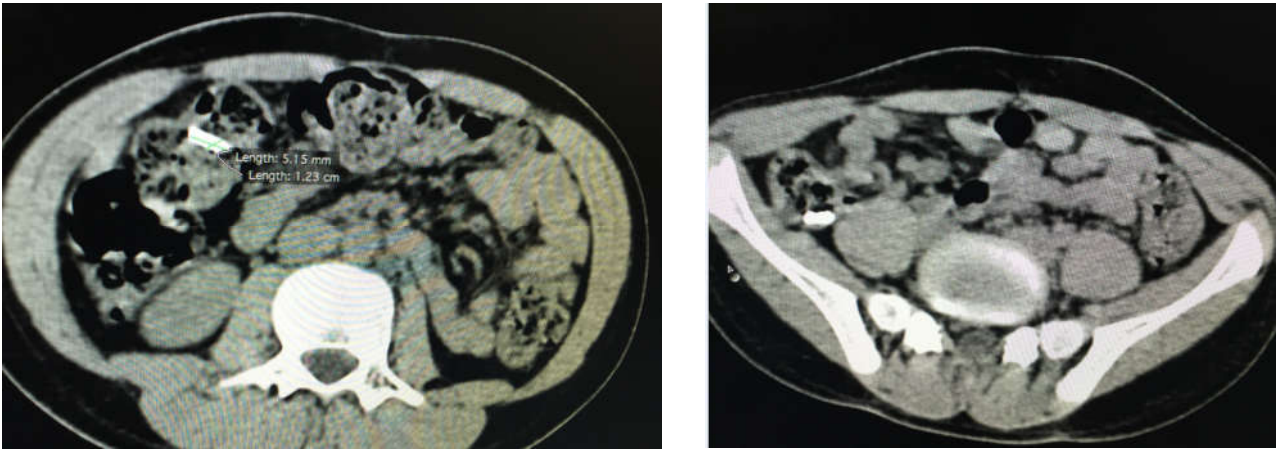


Figure 1(a). Presence of hyperdense glass piece in ascending colon and [1(b)] in ileo cecal junction



Figure 2. Glass pieces in ileal loops

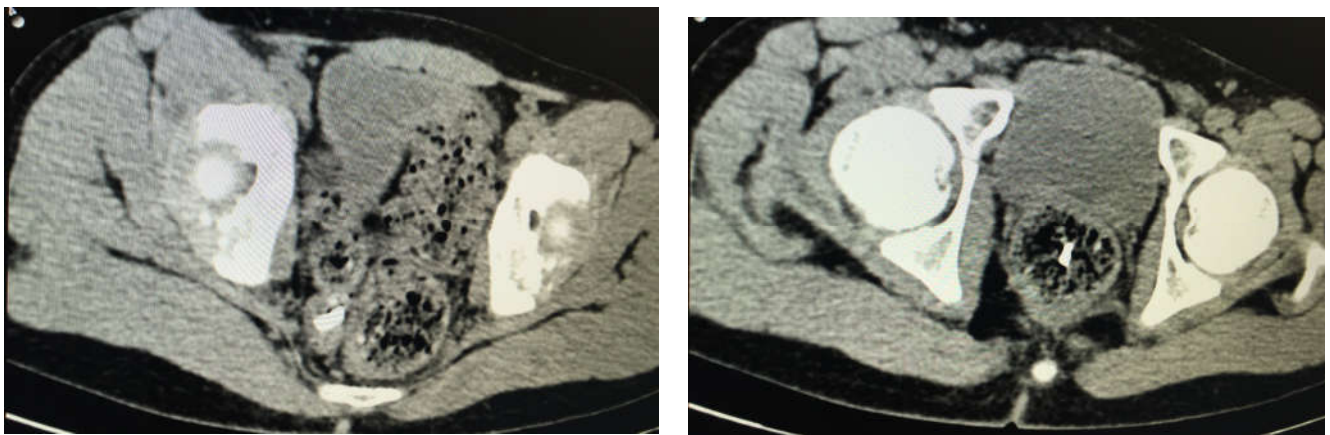


Figure 3. Glass pieces in rectum

The common regions of lodgment of foreign body include the upper, medium and lower obstructions of the esophagus, pylorus, ileocecal valve and rectosigmoid colon. (McPherson *et al.*, 1957) Such objects are the most likely to penetrate the bowel or esophageal mucosal lining and cause significant injury to the bowel wall or frank perforation. Glass is a radiopaque substance, and its radiopacity is not determined by lead or other metal content. Glass pieces, whether ingested, inserted, or deposited in the soft tissues of by an injury, is always seen on a X-ray. This depends on the size of the object. Less than 1cm of glass pieces in the soft tissue of an obese person may not be seen. However, any substantial piece of glass should generally be seen. In selected cases, contrast material studies with barium tablets, barium capsules, barium

impregnated cotton balls, or barium-coated food may be useful. CT of the abdomen or chest help in detecting any unusual opacity or lucency seen on radiographs and aids the diagnosis of a perforating foreign body. In our patient, giving oral or IV contrast could have obscured the appearance/presence of glass pieces and since it was very easily detected on a plain scan, no contrast was done.

The management of foreign body ingestion depends on many factors: the shape, size, type and location of ingested object; the patient's symptoms; elapsed time since ingestion of the foreign body; and any evidence of complications. (Palese and Al-Kawas, 2012)

Conclusion

Most patients with foreign body ingestion can be managed conservatively but a threshold for endoscopic intervention must be put down. Surgery is reserved only for complicated cases.

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