

A Rare Cause of Intestinal Obstruction Induced by Retained Foreign Body

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ABSTRACT

Swallowed round or oval foreign bodies entering the stomach are usually passed through the entire gastrointestinal tract uneventfully without requiring intervention. Patients with previous gastrointestinal surgery, congenital abnormalities of the gastrointestinal tract, peptic stricture and cancer are at a higher risk for foreign body impaction and perforation. We report a case of a male patient with a marble foreign body impacted in the ileorectal stricture from complication of Duhamel surgery. The marble was successfully removed by colonoscopy.

Key words : foreign body, Duhamel surgery, stricture, colonoscopy

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INTRODUCTION

A gastrointestinal foreign body (FB) is a common occurrence in both children and adults. Foreign body in the colon and the rectum proximal to a stricture may be difficult to remove endoscopically and may require a surgical intervention⁽¹⁾. We report a patient with a marble foreign body impacted in the ileorectal stricture from complication of Duhamel surgery. The marble was successfully managed by colonoscopy.

Case report

A 14-year-old male patient who was referred from the surgical unit with history of abdominal distension for one year and constipation for three years. His symptoms had been partially relieved with rectal enemas

and oral laxatives. Previously he was totally asymptomatic. The patient underwent a Duhamel procedure for Hirschsprung's disease at the age of 6 months. On examination, there was no significant pallor. Well healed postoperative scars in the anterior abdominal wall and moderate abdominal distension were noted. An abdomen X-ray showed a radiopaque round shadow in the pelvis (Figure 1), which was also seen in multiple X-rays at various ages. Laboratory investigations were within normal limits. An MRI enteroclysis revealed dense adhesions at the upper end of the rectum, with small bowel loops and a stricture at this level. Significant narrowing was visualized at the level of ileorectal anastomosis. Colonoscopy was thus performed under conscious sedation following bowel

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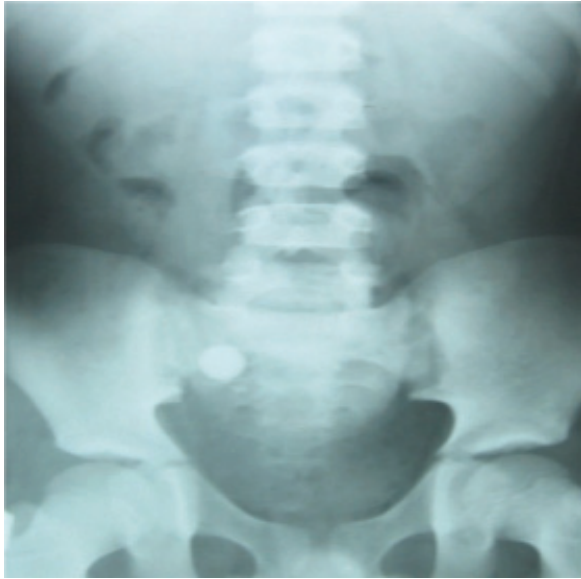


Figure 1. Abdominal X-ray showing the presence of radiopaque round shadow in the pelvis.

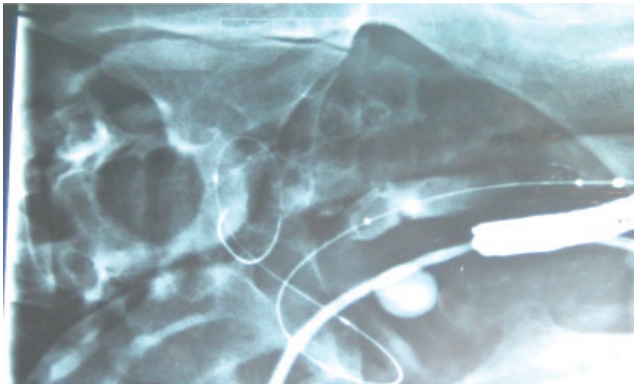


Figure 2. Cholangiogram showing a stricture at the ileorectal site and presence of a radiopaque round shadow.

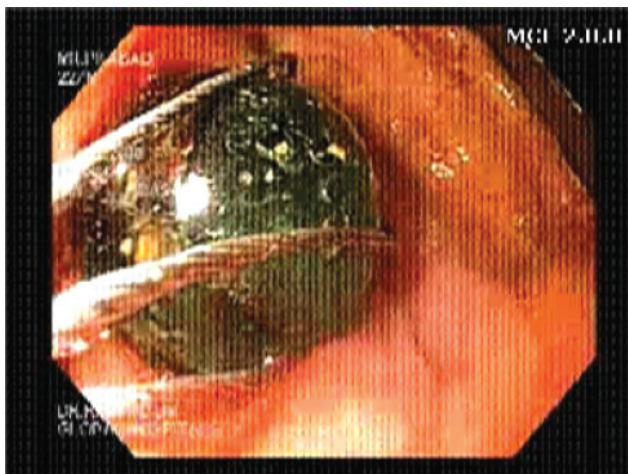


Figure 3. Endoscopic image of retrieved marble with dormia basket.

preparation with an enema. Ileorectal anastomosis was seen at 10 cm from the anal verge, and an anastomotic stricture was observed. The endoscope could not be passed beyond the stricture. A 1.5-cm through-the-scope balloon dilator was used to dilate the stricture (Figure 2). After the dilatation, it was possible to over-pass the structure and a 2 cm × 2 cm marble object was seen in the ileum (Figure 3). The marble was grasped with a dormia basket and removed per anus. The patient remained asymptomatic one year after the endoscopic retrieval.

DISCUSSION

A missed FB is not uncommon, and the patient may remain asymptomatic for a long period, or may develop a wide range of complications⁽²⁾. Between 80-90% of ingested foreign bodies entering the stomach and the small intestine will pass spontaneously. Stasis of small, round, oval, or cuboidal foreign objects in the stomach or the duodenum is extremely uncommon. Retention of such bodies in the duodenum may cause serious complications, such as impaction, obstruction, or perforation. FB impaction occurs at areas of physiological or anatomical angulations of bowel loops⁽³⁾. Patients with congenital abnormalities, previous surgeries of the gastrointestinal tract, peptic strictures or cancers are at a higher risk for FB arrest and perforation. The latter complication is estimated to occur in less than 1% of cases⁽⁴⁾. The incidence of stricture formation following Duhamel operation varies from 3% to 35%⁽⁵⁾. In our reported case, the cause of obstruction was previously thought to be due to post-Duhamel surgery stricture. Only after dilation of the ileorectal anastomosis area, the cause of obstruction was the FB. Foreign bodies greater than 2 cm in diameters will usually not pass through the pylorus or the ileocecal valve. However, in our case the FB had been present for several years, impacted at the strictured ileorectal anastomotic site, and leading to intermittent episodes of subacute intestinal obstruction incorrectly considered a complication of Duhamel surgery. Symptoms following FB ingestion are often nonspecific, and the differential diagnosis encompasses a wide variety of conditions.

In conclusion, colonoscopic removal of foreign bodies is effective and safe. Our case illustrates the need to look for unusual causes of intestinal obstruction in addition to the commonness. Post-surgical stric-

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ture at the ileorectal anastomosis caused by a retained FB with recurrent obstructive manifestations and with a much delayed diagnosis has not been described before, hence this case report.

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