

Sigmoid colonic perforation by foreign body rectum: A case report

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ABSTRACT

Rectal foreign bodies are infrequently encountered in surgical practice and present perplexing management situations. They can be dealt with in varied manners depending on their size, location, presentation, and expertise available. Surgery with a laparotomy is usually reserved for patients with perforation or ischemic bowel or cases of failed transanal attempts. Patients with perforation who present early, having minimal or no peritoneal contamination can be managed with primary repair and peritoneal lavage. We report a case of rectosigmoid foreign body presenting as an acute abdomen in elderly patient necessitating emergency laparotomy.

Key words: Extramucosal interrupted suture, Primary repair, Sigmoid perforation, Transanal extraction

Rectal foreign bodies are infrequently encountered in surgical practice and present perplexing management situations [1]. They mostly appear to involve 30–40-year-old patients, with two-thirds being males [2,3]. Although sexual intent is the most common cause, non-sexual reasons predominate in extremes of age [4]. They can be dealt in varied manners depending on their size, location, presentation, and expertise available. Surgery with a laparotomy is usually reserved for patients with perforation or ischemic bowel or cases of failed transanal attempts [5]. Patients with perforation who present early, having minimal or no peritoneal contamination can be managed with primary repair and washout. We report a case of rectosigmoid foreign body presenting as an acute abdomen in elderly patient necessitating emergency laparotomy with uneventful post-operative recovery.

CASE REPORT

A 74-year-old male presented with complaints of acute pain abdomen associated with obstipation for 1 day. The pain was present all over the abdomen, severe in nature, continuous, increased on movement, and not associated with vomiting, distension, fever, or bleeding per rectum. He had passed small quantity stool a day and a half prior. He was clinically stable and well preserved. On examination of the abdomen, he had guarding/rigidity and rebound tenderness. Bowel sounds were sluggish.

On investigations, except for raised total leukocyte count (17,500 cu.mm) with neutrophilia, hemogram and other laboratory

investigations were normal. A chest X-ray posteroanterior view revealed pneumoperitoneum (Fig. 1). Initially, a working diagnosis of hollow viscus perforation with suspected duodenal perforation was thought of as a possible cause. However, the scenario changed drastically once a digital rectal examination was performed, a stout stick/rod-like object was felt impacted inside the rectum whose upper end could not be reached. The anal sphincter tone was normal. On proctoscopy, a wooden stick could be seen lying in mid-rectum extending into the upper rectum with the upper end not visible and was found impacted, but no blood could be seen. On pointed questioning, the patient revealed that while squatting in haste to pass stool in open field 15 days back, a wooden stick on the ground accidentally entered the anal opening. The wooden stick was radiolucent on the X-ray abdomen.

He was immediately resuscitated with two liters saline, started on broad-spectrum antibiotics, and taken up for the emergency laparotomy. Peroperative, the upper end of the stick was visualized perforating sigmoid colon causing a 1.8 cm rent – Grade II AAST Rectal organ Injury scale (Fig. 2). Surprisingly, there was no significant contamination of the peritoneal cavity. Further on, the upper end of the stick was seen eroding into transverse colon, but only serosa and subserosal muscular layers were breached. The stick was carefully delivered in toto through the anal opening by careful digital maneuvering. The stick measured 23 (Fig. 3) cm in length and 1 cm in diameter. The peritoneal cavity was thoroughly irrigated, margins of perforation were debrided. Sigmoid perforation was closed primarily in one layer using extramucosal interrupted sutures of 2/0 silk. Transverse colon tear was also tackled similarly. Postoperatively, the patient recovered uneventfully.

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Figure 1: The presence of gas under the diaphragm due to sigmoid perforation

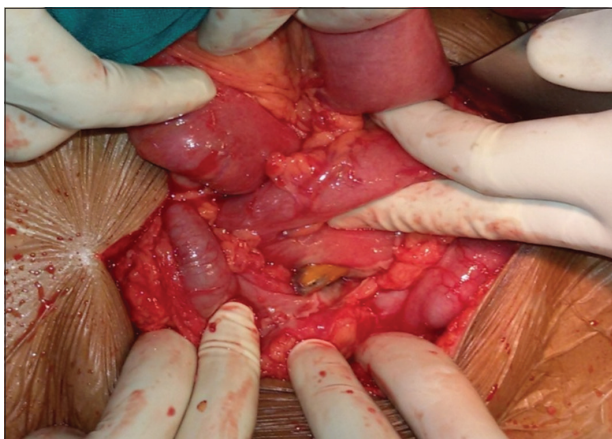


Figure 2: Sigmoid colon perforation due to a stick in the rectum



Figure 3: Rectosigmoid wooden stick (23 cm)

DISCUSSION

Rectal foreign bodies are uncommon in general surgical practice [1,6] but when encountered, are potentially hazardous [4,5] and need to be treated without any loss of time. Simple and straightforward answers do not exist due to a variety of objects that are found in the rectum, their delayed presentation, varying degrees of trauma, and less than reliable history by the patient, as many patients are embarrassed and reluctant to seek medical care. Most of these patients present to the emergency room after efforts to remove the object at home have failed. A stepwise approach that entices diagnosis, removal, and post-extraction monitoring is essential.

Retained rectal foreign bodies have been reported in patients of all ages but more than two-thirds are men in their third and fourth decades [5]. The clinical presentation can be varied depending on the complications associated [2] which may include

infection, bleeding per rectum, perforation, or frank sepsis due to fecal peritonitis.

The diagnosis is confirmed with radiological tests (plain film abdominal radiography is the recommended first-line approach) and with a rectal examination [7]. Careful attention should also be paid to the status of the sphincter as an injured sphincter may indicate an involuntary insertion method. Laboratory tests are not very helpful in the diagnosis.

The first step in the evaluation and management of a patient with a rectal foreign body is to rule out the perforation. Hypotension, tachycardia, severe abdominopelvic pain, fever, and pneumoperitoneum are indicative of a perforation. In such instances, immediate resuscitation with intravenous fluids and broad-spectrum antibiotics should be instituted. If the patient appears stable, a computed tomography scan may help to diagnose a rectal perforation. Unstable patients, those with multiple comorbidities, significant tissue damage, fecal contamination, and delayed presentation, more often require a colostomy and fecal diversion. On the other hand, the patients who present early, those with minimal trauma, and those with little or no peritoneal contamination can be managed with primary repair and washout. However, the best surgical technique may be chosen based on the surgeon's experience, judgment, and comfort level.

Small extraperitoneal injuries can also be managed non-operatively [2,3]. In a few cases, rectal enema or laxatives may also result in spontaneous passage of the object [1]. In clinically stable patients without perforation or peritonitis, most objects in the low or mid rectum can be extracted through the transanal route in most instances either on the bedside or emergency room using adequate anal or caudal block [2,3]. Rectosigmoidoscopic assistance can prove handy in transanal extraction [8] and if migrated higher may require a trans-abdominal approach [9,10].

CONCLUSION

Treatment of rectal foreign bodies is challenging and may need the surgeon's ingenuity, an index of suspicion of foul play, and an unusual amount of patience. It leads to a wide spectrum of injury patterns that range from minimal extraperitoneal mucosal injury to free intraperitoneal perforation. In the non-perforated stable patient, the object should be removed through the transanal approach. Surgery with a laparotomy should be reserved for patients with perforation or ischemic bowel or cases of failed transanal attempts. On the other hand, the patients who present early, those with minimal trauma, and those with little or no peritoneal contamination can be managed with primary repair and washout. This was highlighted in our case and needs further study and confirmation.

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