

## Rectal Foreign Body Causing Perforation: A Case Report

Nischal Shrestha,<sup>1</sup> Narayan Psd Belbase,<sup>1</sup> Sushim Bhujel,<sup>1</sup> Nishnata Koirala,<sup>1</sup> Binaya Timilsina,<sup>1</sup> Sagar Khatiwada<sup>1</sup>

<sup>1</sup>Department of Surgery, College of Medical Sciences and Teaching Hospital, Bharatpur, Chitwan, Nepal.

### ABSTRACT

The rectal foreign body is a rare presentation with rising incidence. We present a case of a 26-year-old heterosexual male with an alleged history of sexual assault with insertion of a large foreign body through the anus two days prior with peritonitis. After investigations, the patient underwent an exploratory laparotomy, foreign body removal, primary repair of perforation with a diverting colostomy. Diversion must be considered in cases where the extent of anal sphincter mechanism injury is in question. The patient had a good outcome. Assessment of the shape, size, nature, and location of the object through appropriate imaging is necessary. Exploratory laparotomy is inevitable in cases of perforation.

**Keywords:** *case report; foreign bodies; laparotomy; rectum; perforation*

### INTRODUCTION

Rectal foreign body is a rare presentation and often presents a difficult diagnostic and management dilemma. Most cases are underreported; therefore the accurate epidemiological data is not available.<sup>1</sup> Most common etiology of rectal foreign body is following sexual stimulation, followed by assault, accidental or iatrogenic events, ingestion of animal bones and foreign bodies, psychiatric diseases, drug trafficking, and self-treatment of fecal impaction in elderly people or prostate massage.<sup>2-4</sup> We present a case of rectal foreign body following assault which caused perforation.

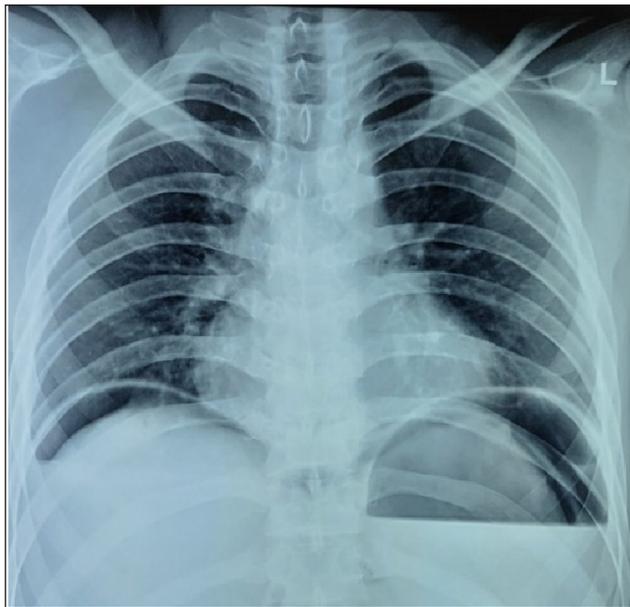
### CASE REPORT

A 26-year-old married male (heterosexual) presented to the emergency department with an alleged history of sexual assault with glass bottle which was inserted through the anus two days

prior. He was intoxicated with some unknown drug in his drink by his assailant following which the bottle was inserted. He complained of generalized abdominal pain with abdominal distension and had not passed stool or flatus for two days. There were no medical comorbidities and past psychiatric illnesses. On physical examination, patient was anxious. He was tachycardic with blood pressure within normal limits. Abdominal exam had signs of generalized peritonitis with a palpable lump at right upper quadrant. Abdominal X-ray was suggestive of a foreign body resembling a bottle and erect chest X-ray was suggestive of pneumoperitoneum. On digital rectal examination, there were no external signs of anal injury or bleeding with lax anal tone, the foreign body could not be palpated. Therefore, exploratory laparotomy was performed under general anesthesia. A midline incision was given and a vodka

**Correspondence:** Dr Nischal Shrestha, College of Medical Sciences, Bharatpur, Chitwan, Nepal. Email: nischal.shrestha333@yahoo.com. Phone: +977-9849804909.

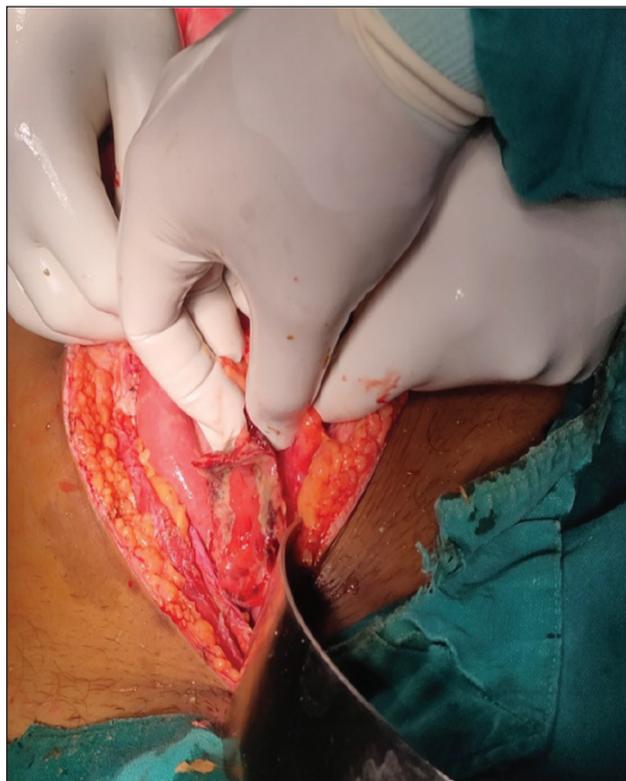
bottle was seen intraperitoneally protruding through perforated sigmoid colon. There was a 3x3cm perforation in sigmoid colon through which a 375 ml vodka bottle was protruding half way through with frank peritoneal fecal contamination. The foreign body was extracted and primary repair of sigmoid colon was done. A diverting loop sigmoid colostomy was created and a pelvic drain was kept.



**Figure 1.** Erect Chest X-ray suggestive of pneumoperitoneum.



**Figure 2.** Abdominal X-ray suggestive of bottle inside the abdomen.



**Figure 3.** Laparotomy finding: sigmoid colon perforation.



**Figure 4.** Laparotomy finding: vodka bottle inside peritoneal cavity.



**Figure 4.** Retrieved foreign body.

Post-operatively patient developed superficial incisional surgical site infection and pneumonia which was managed accordingly. Drain was removed on post-operative day 7. Patient was discharged on post-operative day 22.

The patient is doing well on follow-up and there is good anal tone on digital rectal exam. A colostomy reversal has been planned 6 weeks after the index operation following a flexible sigmoidoscopy.

## DISCUSSION

Placement of foreign bodies are categorized as voluntary versus involuntary (eg rape, assault)

and sexual versus nonsexual. Most foreign bodies are introduced through the anal canal voluntarily during sexual practices.<sup>5</sup> Involuntary nonsexual foreign bodies involve patients with psychiatric illness and children.<sup>6</sup> Voluntary non sexual placement includes concealment of drugs in condoms or plastic bags by drug traffickers called “body-packers”.<sup>7</sup> Our patient was sexually assaulted and a bottle was introduced per anus under intoxication.

Patients usually present with anorectal pain, abdominal pain, per rectal bleeding. Most of them usually admit about the rectal foreign body when directly asked about it.<sup>1,8</sup> Presentation varies from hours or days after placement, and in rare instances after years.<sup>9</sup> In case of perforation, patients present with severe abdominal pain, fever, vomiting along with signs of sepsis. Physical examination should ascertain presence of peritonitis first along with signs of tachycardia, hypotension and fever. This should be followed by acquisition of an abdominal X-ray. Digital rectal examination should be deferred initially to prevent accidental injury to surgeon by sharp objects. A digital rectal exam can provide clues regarding the extent of local injury and position of the object.<sup>5,10</sup> In our case the patient presented with symptoms and signs of generalized peritonitis and abdominal X-ray was suggestive of a blunt object i.e. a bottle. Hence, we performed a digital rectal exam.

A biplanar plain X-ray of abdomen can identify majority of foreign body. It gives clues of number, size, shape, location and orientation of retained object. A plain chest X-ray detects the possible presence of pneumoperitoneum.<sup>11-13</sup> It is imperative to remember that foreign bodies have different radiopacity which affect their visibility. Therefore, non-visualization of object does not rule out its presence.<sup>(10)</sup> A plain X-ray can also predict the possibility of a transanal extraction in low-lying retained objects.<sup>1,14</sup>

The surgical treatment options vary depending on patient’s status, peritoneal contamination,

duration and bowel wall status. Primary repair can be performed in cases of small perforation with minimal peritoneal contamination.<sup>15</sup> The WSES-AAST guidelines of anorectal emergencies suggest a resection with primary anastomosis, with or without a diverting stoma in healthy patients, with good tissue quality and without risk factors for anastomotic leakage where a primary suture is not feasible. A Hartmann's procedure is suggested for the management of peritonitis in critically ill patients and in selected patients with multiple comorbidities and risk factors for anastomotic leakage (i.e., requirement of vasoactive drugs, hemodynamic instability, corticosteroid therapy). In case of unstable

patients, an emergent laparotomy is mandatory guided by damage control surgery principles.<sup>15</sup>

Since our patient presented late with signs of peritonitis, sepsis with frank peritoneal contamination, we performed a laparotomy with primary repair of perforation with diverting colostomy. Also the status of anal sphincter was in question as a very large object was inserted through the anal canal, so a diverting colostomy was mandated. Early diagnosis and timely intervention are important to prevent complications in rectal foreign bodies. Exploratory laparotomy is inevitable in cases of perforation.

## REFERENCES

1. Lake JP, Essani R, Petrone P, Kaiser AM, Asensio J, Beart RW. Management of retained colorectal foreign bodies: predictors of operative intervention. *Dis Colon Rectum*. 2004 Oct;47(10):1694–8.
2. Cohen JS, Sackier JM. Management of colorectal foreign bodies. *J R Coll Surg Edinb*. 1996 Oct;41(5):312–5.
3. Ayantunde AA. Approach to the diagnosis and management of retained rectal foreign bodies: clinical update. *Tech Coloproctology*. 2013 Feb;17(1):13–20.
4. Ayantunde AA, Oke T. A review of gastrointestinal foreign bodies. *Int J Clin Pract*. 2006 Jun;60(6):735–9.
5. Coskun A, Erkan N, Yakan S, Yildirim M, Cengiz F. Management of rectal foreign bodies. *World J Emerg Surg WJES*. 2013 Mar 13;8(1):11.
6. Martínez CE, Mateus L, Ibáñez H, Senejoa N, Medellín A, Obando A, et al. Enfoque del manejo de cuerpos extraños colorrectales: revisión de la literatura. *Rev Colomb Gastroenterol*. 2018;33:49–56.
7. Traub SJ, Hoffman RS, Nelson LS. Body packing--the internal concealment of illicit drugs. *N Engl J Med*. 2003 Dec 25;349(26):2519–26.
8. Ooi BS, Ho YH, Eu KW, Nyam D, Leong A, Seow-Choen F. Management of anorectal foreign bodies: a cause of obscure anal pain. *Aust N Z J Surg*. 1998 Dec;68(12):852–5.
9. Chiu WK, Hsiao CW, Kang JC, Feng JJ, Chao PC, Jao SW. Intrapelvic migration with long-term retention of a rectal thermometer: a case report. *Clin Pediatr (Phila)*. 2007 Sep;46(7):636–8.
10. Tseng HJ, Hanna TN, Shuaib W, Aized M, Khosa F, Linnau KF. Imaging Foreign Bodies: Ingested, Aspirated, and Inserted. *Ann Emerg Med*. 2015 Dec;66(6):570–582. e5.
11. Kurer MA, Davey C, Khan S, Chintapatla S. Colorectal foreign bodies: a systematic

- review. *Colorectal Dis.* 2010;12(9):851–61.
12. Nehme Kingsley A, Abcarian H. Colorectal foreign bodies. Management update. *Dis Colon Rectum.* 1985 Dec;28(12):941–4.
  13. Huang WC, Jiang JK, Wang HS, Yang SH, Chen WS, Lin TC, et al. Retained rectal foreign bodies. *J Chin Med Assoc JCMA.* 2003 Oct;66(10):607–12.
  14. Kasotakis G, Roediger L, Mittal S. Rectal foreign bodies: A case report and review of the literature. *Int J Surg Case Rep.* 2012;3(3):111–5.
  15. Tarasconi A, Perrone G, Davies J, Coimbra R, Moore E, Azzaroli F, et al. Anorectal emergencies: WSES-AAST guidelines. *World J Emerg Surg.* 2021 Sep 16;16(1):48.

**Citation:** Shrestha N, Belbase NP, Bhujel S, Koirala N, Timilsina B, Khatiwada S. Rectal Foreign Body Causing Perforation: A Case Report. *JCMS Nepal.* 2023; 19(1); 132-36.