



Colorectal Foreign Body: Series of Three Case Reports

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Authors' contributions

This work was carried out in collaboration among all authors. Author TKC designed the study and wrote the first draft of the manuscript. Authors AS and RC managed the analyses of the study. Author UK managed the literature searches. All authors read and approved the final manuscript.

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Case Report

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ABSTRACT

Introduction: Although patients presenting with retained colorectal foreign bodies are uncommon, yet various incidences of it are well documented in the literature. The reasons related to it are homosexual practices, anal autoerotism, physical assault or can be a result of body packing. The patients may have minimal symptoms, or entirely asymptomatic or can develop complications like abdominal pain, sepsis, bleeding, or perforation leading to death. Delayed presentation due to social embarrassment is the most often reason for worsened results. Management and approach depends on the presentation of patient. In this article, we report a series of three cases, with distinct presentation and highlight the approaches taken to remove the foreign bodies.

Case Presentation: In the first two cases, transanal extraction with sedation or spinal anaesthesia was done to remove the foreign body. In the third case, laparotomy with an enterotomy and primary repair of sigmoid was done to remove the foreign body.

Keywords: Colorectal; foreign body; transanal approach; laparotomy.

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1. INTRODUCTION

Retained colorectal foreign body is an unusual presentation with which a patient presents to the surgical emergency department, but in the recent past its incidence has significantly increased [1]. Most objects are inserted through the anus, however some rare incidences are also reported in which a foreign body is swallowed, it passes through the gastrointestinal tract and gets entrapped in the rectum [2]. Such practices are most often related to achieve the sexual gratification with homosexual practices, anal autoerotism, however other reasons may include physical assault and body packing. Various objects like vegetable, fruits, alcohol bottles, glasses, metallic cans are the common objects which are introduced, however multiple cases of body packers are also noted around the world [3]. In majority of cases the foreign body produces minimal symptoms or be entirely asymptomatic. However, sometimes these get stuck and may cause severe life threatening complications like bleeding or perforation peritonitis. The diagnosis is usually made on proper history, clinical examination and plain radiographs. Due to diverse presentation it poses significant challenge to the surgeons and hence the surgeons need to have a systematic approach and familiarity with the different extraction techniques to manage the colorectal injuries.

In this article we report a series of three cases, with distinct presentation and highlight the approaches taken to remove the foreign bodies.

2. CASE PRESENTATION

2.1 Case 1

A 28 year old male body packer was arrested and brought by the customs officer to the surgical emergency department. The patient did not reveal any medical complaints and also denied the insertion of anything inside the rectum.

On examination, the patient was vitally stable. On per abdomen examination, the abdomen showed no signs of peritonitis. Systemic examination was unremarkable. On the digital rectal examination, the anal sphincter tone was reduced with no visible mucosal tear of the rectum. An object was felt inside the rectum approximately 4-5 cm from the anal verge. A plain abdominal radiograph was done which showed two rectangular objects in the pelvic region (Fig. 1). The patient was put under mild

sedation and analgesia and the trans-anal extraction was done by using grasping forceps and digital manipulation through the proctoscope. Two gold bars of approximate dimension 10 cm × 2 cm × 1 cm (Fig. 2) were taken out and handed over to the customs officers after due documentation. Relook proctoscopy was done after the procedure showed no mucosal tears. Repeat abdominal radiograph showed no foreign bodies. The patient was admitted for observation and was discharged to police officers on post-procedure day 2.



Fig. 1. Abdomen x-ray showing rectangular foreign body



Fig. 2. Extracted rectangular gold bars

2.2 Case 2

A 24 Year old male with no known comorbidity presented to the surgical emergency room with complaints of severe pain in the pelvic and anal region because of the round shaped glass bottle which he had inserted in his rectum two days back. Since then he developed intermittent, severe crampy pain in the lower abdomen. The patient reported that he had inserted bottles previously also which he used to remove manually but this time he was unable to take it

out. There was no history of abdominal distension, nausea, vomiting, or per rectal bleed.

On examination, the patient was vitally stable with no pallor. On presentation, the abdomen showed no signs of peritonitis. The rest of the systemic examinations were within normal limits. On digital rectal examination, the anal tone was normal but a round-shaped smooth object was felt approximately 5-6 cm from the anal verge. On proctoscopy, a glistening round object was noticed inside the canal with no evidence of mucosal tear. X-ray abdomen and pelvis (Fig. 3) were done which showed a round bottle like an object of approximate size 15cm× 5 cm with its base towards the anal opening. Despite maximal intravenous sedation and analgesia, the patient complained of pain while we tried to remove it per rectally. So the patient was taken to operation theatre where spinal anaesthesia was given to relax the sphincters. The transanal extraction was achieved by digital manipulation and grasping forceps while the patient was asked to perform the Valsalva maneuver. Post removal rectal examination did not reveal any rectal injury except for minor mucosal tear. The endoscopic colorectal examination was done on post-operative day 1 which showed no injury. The post-operative period was uneventful and the patient was discharged on post-operative day 2.



Fig. 3. Xray showing bottle in the pelvic region

2.3 Case 3

A 54 year old male presented to the surgical emergency with complaints of having a glass cup lodged into his rectum, which he had inserted for sexual pleasure 1 day back. The patient had complaints of ongoing crampy abdominal pain with no history of nausea, vomiting, or fever since the time of insertion. The patient and his

friend made multiple attempts to remove it manually and while attempting removal they got the glass broken, pieces of which came out transanally. Following it, there were episodes of minimal per rectal bleeding which stopped on its own.

On examination, the patient was vitally stable. The abdomen showed no signs of peritonitis. Digital rectal examination suggested a decreased anal sphincter tone with palpable sharp circular margins of bottle approximately 8 cm from the anal verge. Multiple small mucosal tears with no active bleed were noted in the visualized part of the rectum. The chest radiograph was normal while the abdominal radiograph (Fig. 5) showed a cup-shaped object in the pelvic region with its base towards the lower abdomen. Since the free edge of the glass was broken (also seen in X-ray), it was anticipated that the attempt to remove it manually by the transanal approach can further precipitate rectal injuries including perforation and bleeding. Therefore, Exploratory Laparotomy under general anaesthesia was decided and the patient was shifted to operation theatre after informed consent and initial optimization. Intraoperatively, the bottom of the glass was palpated at near to the recto-sigmoid junction for which the enterotomy was made and the glass was removed. Post removal primary repair of sigmoid with pelvic drain placement was done. The post-operative period was uneventful and the patient was discharged on post-operative day 6.



Fig. 4. Extracted bottle with the patient in lithotomy position

3. DISCUSSION

Colorectal foreign bodies are no longer considered peculiar presentations in the

emergency department and it appears that their incidence is increasing specifically in the urban population. Although the incidence has been reported in patients of all ages and gender, yet they appear to involve mostly 30-40 years old patients and the majority being males [4-5]. Because of the fear of social embarrassment or legal implications as in cases of body packers, they delay seeking medical advice which is the most common reason for poor outcomes. The diagnosis can be made by considering proper history, clinical examination, and radiographic evaluation. Obtaining a detailed history is necessary as the patient may fabricate stories, concealing the actual events making the diagnosis further difficult. The first thing in the physical examination is to look for signs of peritonitis and to determine whether the patient is stable or not. Careful per abdomen examination and vitals assessment should be done to rule out peritonitis. If so they need an emergent laparotomy and no attempts to remove the foreign body at the bedside should be made. Adequate optimization in the form of resuscitation with intravenous fluids and antibiotics should be considered as per individual presentation. Digital rectal examination should be done to assess the anal sphincteric tone, type of object, location of object and proctoscopy may be considered to look for rectal mucosal tear or edema. An abdominal x-ray done can reveal the shape and position of the object and also helps to rule out free air in the intraperitoneal space. CECT (contrast enhanced CT scan) for abdomen and pelvis may be considered if the foreign body position and shape are still uncertain and the duration of retention is more than 24 hours.



Fig. 5. Glass cup in the pelvic region

Some of the reports suggest watchful waiting for the objects to pass spontaneously, however, attempts to remove it should be made as multiple studies have shown retention of foreign body in the rectum as long as for 5 years [6]. Different

methods of extraction are transanal, endoscopic, and operative.

3.1 Transanal Approach

The transanal approach is successful in 60-75 % of cases, so it may be considered in every patient as the initial approach if the patient is stable and type and position of objects permit [7-8]. Removal through anus can be attempted with mild sedation or anaesthesia (general/spinal) as it helps in anal tone relaxation and subsequent easy manipulation. This can be combined with the suprapubic pressure applied by an assistant or Valsalva maneuver in conscious cooperative patients [9]. Various instruments such as ring forceps, obstetric forceps have been used for the extraction [10].

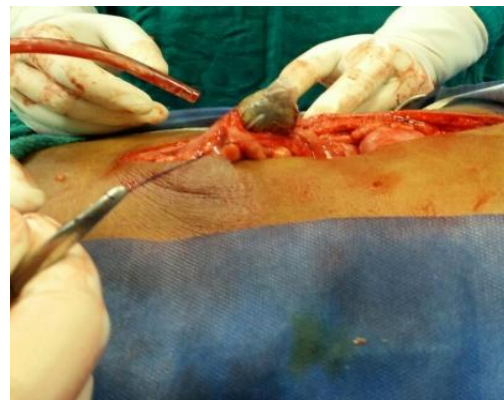


Fig. 6. Bottom of the glass seen through enterotomy site

3.2 Endoscopic Approach

The endoscopic approach can be helpful in cases of a small foreign body or where it is located high in the rectum or even in the colon. Endoscopic snares, balloon techniques and subtle insufflation of bowel to loosen the seal around the foreign body have also been described in the literature [11].

3.3 Operative Interventions

Though the laparotomy is considered as the last stand, yet in conditions of unstable patients with abdominal sepsis and bowel perforation, it becomes the life-saving procedure. In cases of abdominal contamination with faeces, the 4 D rule for rectal injury should be considered i.e debridement, diversion, distal wash, drain placement. Hartmann's procedure or primary repair with diversion colostomy after adequate

rectal wash may be considered depending on the position, size, and condition of the patient.

If none of the above is successful and the size of the object is large enough to be entrapped in the pelvis, symphysiotomy followed by internal fixation can be considered and is reported in the literature [12].

3.4 Post-Extraction Considerations

Repeat proctoscopy, sigmoidoscopy should be done to rule out mucosal damage or any retained foreign body. An abdominal radiograph can be done to rule out any retained foreign body. Psychiatric opinion to rule out any illness should be considered. Digital rectal examination to assess the sphincteric damage should be done after the removal of the foreign body. The decreased sphincteric tone had shown good long term prognosis and usually resolves on observation. However, sphincteroplasty after routine workup may be needed in cases with faecal incontinence.

In our first case, the patient was a body packer and presented to us in stable asymptomatic condition. Transanal extraction using forceps was done under mild sedation. In our second case, the patient was a young male who inserted the alcohol bottle for sexual gratification and presented it to us in stable condition. Transanal extraction was successfully attempted under spinal anaesthesia while the Valsalva maneuver is performed by the patient. In our third case, the patient was an old age male who presented in stable condition with a history of multiple unsuccessful attempts to remove the glass and during which the glass was broken. Because of sharp margins of broken glass, transanal extraction was not attempted and the patient was taken to operation theatre for laparotomy. Post extraction abdominal x-ray, proctoscopy, and anal sphincteric tone were normal in all three cases. In case number one and three, no psychiatric illness was noted in the preliminary evaluation while the patient in the second case was an alcohol and marijuana addict. All three patients were advised for follow up in the psychiatric out patient department for detailed evaluation after discharge.

4. CONCLUSION

The management of the patients with colorectal foreign bodies begins with the evaluation of the type and location of the foreign body, and determine if the condition of the patient is stable

or not. After detailed history and investigation, the transanal approach combined with different maneuvers is the most common and the initial approach for extraction. The endoscopic approach may be considered if the transanal approach fails. The laparotomy is needed either if the patient is unstable at presentation or if the transanal and endoscopic approach fails. Symphysiotomy may be considered if the foreign body is large enough to get stuck in the pelvis. Post extraction proctoscopy, abdominal radiographs, and psychiatric consultation should be made.

CONSENT

As per international standard or university standard, patient's written consent has been collected and preserved by the authors.

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Memon JM, Memon NA, Solangi RA, Khatri MK. Rectal foreign bodies. *Gomal Journal of Medical Sciences*. 2008;6(1): 1-3.
2. Akhtar MA, Arora PK: Case of unusual foreign body in rectum. *Saudi J Gastroenterol*. 2009;15 (2):131-132. DOI: 10.4103/1319-3767.48973
3. Covarelli P, et al. Therapeutic options for body packers: Surgical or conservative treatment?. *Ann. Ital. Chir*. 2015;86:371-377.
4. Goldberg JE, Steele SR. Rectal foreign bodies. *Surg Clin North Am*. 2010;90:173-184.
5. Kurer MA, Davey C, Khan S, Chintapatla S. Colorectal foreign bodies: A systematic review. *Colorectal Dis*. 2010;12(9):851-861.
6. Ozbilgin, Mücahit, et al. Five years with a rectal foreign body: A case report: *International Journal of Surgery Case Reports*. 2015;6C:210-3.

7. Cologne KG and Ault GT. Rectal foreign bodies: What is the current standard? Clin Colon Rectal Surg. 2012;25:214-218.
8. Crass RA, Tranbaugh RF, Kudsk KA, Trunkey DD. Colorectal foreign bodies and perforation. Am J Surg. 1981;142:85-88.
9. Sharma H, Banka S, Walton R, Memon MA. A novel technique for nonoperative removal of round rectal foreign bodies. Tech Coloproctol. 2007;11:58-59.
10. Kouraklis G, Misiakos E, Dovas N, Karatzas G, Gogas J. Management of foreign bodies of the rectum: report of 21 cases. J R Coll Surg Edinb. 1997;42:246-247.
11. Khan SA, Davey CA, Khan SA, Trigwell PJ, Chintapatla S. Munchausen's syndrome presenting as rectal foreign body insertion: A case report. Cases J. 2008;1:243.
12. 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.

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