

Rectal Foreign Body in Male: A Case Report

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Abstract

The rectal foreign body is a rare presentation, often related to sexual gratification, sexual assault, or the result of ingestion and rarely accidental. The majority of rectal foreign bodies inserted by adults are for self-gratification. As a result, they will probably be smooth, rounded, tubular, or egg-shaped to make insertion and extraction easier. Herein, we describe a 55-year-old man with accidental insertion of a foreign body (tumbler made of steel) through the anus 1 day prior without peritonitis into a region 4cm from the anal verge. It should be noted that early diagnosis and timely intervention are important to prevent complications in rectal foreign bodies. Assessment of the shape, size, nature, and location of the object through appropriate imaging is necessary. Exploratory laparotomy is inevitable in cases of failed manual extraction techniques and complicated cases.

Keywords: Retained foreign object, consumer products, national electronic injury surveillance system, vibrator, sexual device, sexual health, foreign bodies, rectal, acute care surgery and trauma, lower gi or colorectal surgery.

Introduction

Rectal foreign body is a rare presentation, often related to sexual gratification, sexual assault or the result of ingestion and rarely accidental, and with rising incidence.⁽¹⁾ They are relatively common in the urban population and mostly seen in males of the 3rd and 4th decades.⁽²⁾ Earliest case reports of rectal foreign body date back to the 16th century.⁽³⁾ Management of a foreign body in the rectum is often challenging for a surgeon due to the variation in time of insertion, associated injuries, and type and location of an object. We present a case of a rectal foreign body, the nature and shape of which made the identification and removal even more challenging.

Incidence

The incidence of retained rectal foreign bodies is increasing ^[4]. Previous studies have shown that older men are at higher risk ^[4-6]. Most retained rectal foreign bodies are sexual stimulation devices, which may pose a significant health risk ^[8]. While most patients can be treated with manual retrieval in the emergency department (ED), some require surgery including an exam under anesthesia or laparotomy ^[5,6]. Several small studies and few organizations have provided recommendations for treatment. Currently, there is a paucity of large national studies describing this diagnosis. The annual incidence of presentations for rectal foreign bodies increased from **1.2 in 2012 to 1.9 per 100,000 persons in 2021**.

Case presentation

A 55-year-old married male (heterosexual) presented to the emergency department with an alleged history of accidental insertion of a water glass (tumbler made of steel) through the anus one day prior. He denied purposeful insertion and give history of slippage and fall on water glass while taking bath. He had not passed stool and flatus for one day , and there was no abdominal distension.

It was associated with lower abdominal and rectal pain but no per-rectal bleeding. He had tried to remove the glass himself but had been unsuccessful. There were no comorbidities, and the patient did not have any history of psychiatric illnesses. The patient's mood, behaviour patterns, and insight were normal at the time of examination.

On physical examination, the abdomen was soft and non-tender, the foreign body was not palpable, and there were no signs of peritonitis. On digital rectal examination (DRE), there was no anal injury or bleeding, and the anal tone was decreased, lower margin of the glass could be felt in the anorectal junction.

The patient was admitted and investigated. The preoperative investigations were within normal limits. An erect abdominal X-ray showed a foreign body resembling a water glass in an inverted position in the lower rectum but no pneumoperitoneum (Figure 1).

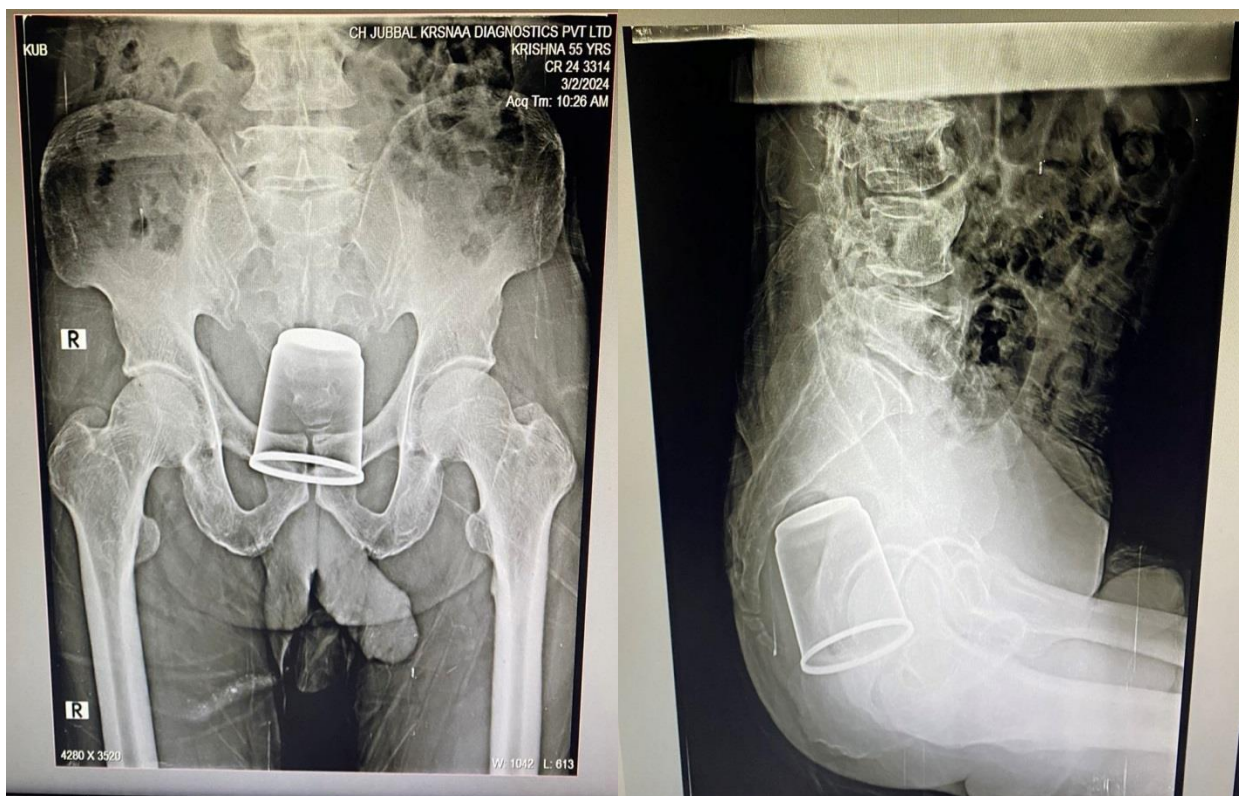


Figure 1 X-ray abdomen erect-AP and lateral.

Patient and patient party were counselled about various modalities of treatment and surgery. The appearance of the glass on imaging showed that attempting sigmoidoscopy would be futile due to the presence of features of obstruction, the size of the glass, the direction of insertion, and the likelihood of breaking it on removal. So, the patient was kept in a lithotomy position analgesics were given and

manual removal of glass via anal opening done with help of lignocaine jelly and holding the visible margins of glass at 3 and 9 o'clock position and with gentle rotatory movements glass was removed.



Discussion

Rectal foreign bodies, even though rather infrequent, are no longer considered clinical oddities in urgent care facilities and emergency departments, and it appears that their incidence is increasing, specifically in urban populations⁽⁹⁻¹¹⁾ Although the medical literature is replete with numerous case reports and case series of RFB in patients of all ages, genders and ethnicities the majority are male in their 3rd and 4th decades⁽⁹⁻¹¹⁾ Foreign bodies can be inserted in the rectum for sexual gratification or non-sexual purposes –in body packing of illicit drugs and voluntarily or not. Numerous types of objects have been described in the literature (ranging from fruits and vegetables:cosmetic containers cans or bottles, batteries, light bulbs and children or sex toys and all of them should be regarded as potentially hazardous of causing significant injury.

More often than not, patients who present to the emergency department with RFB have attempted to remove the object unsuccessfully prior to seeking medical care.³ Pelvic or even abdominal pain, if perforation has occurred above the peritoneal reflection, bleeding per rectum, rectal mucous drainage, even incontinence or bowel obstruction can be the presenting symptoms. One should always bear in mind that individuals with FRB may be reluctant to reveal the true reason for their ER visit and may have delayed presentation for many hours, even days, in hope of spontaneous foreign body passage. It is important to maintain a high degree of suspicion should someone present with the aforementioned symptomatology.

Physical examination is centered around ruling out peritonitis. A rectal examination should be performed, to assess the distance of the RFB from the anal verge and to determine sphincter competency. It is uncommon for the sphincter to have been injured in cases of voluntary insertion. Routine laboratories are recommended to assess the extent of physiologic derangement from the presence of the RFB. An abdominal series would define the nature, size and shape of the foreign body, its location, and rule out sub diaphragmatic free air. Computed tomography of the abdomen and pelvis may be considered if the RFB has been in place for more than 24 h.

Once work up is complete, rigid proctoscopy should be undertaken – especially for foreign bodies high up in the rectum, when digital examination is insufficient – to assess the degree of rectal mucosal injury, visibility of the foreign body and its distance from the anal verge. Care should be taken to prevent further pushing the rectal body higher up in the rectosigmoid.

Transanal approach

After complete assessment, an attempt at manual extraction transanally should be made. This is successful in the majority of cases. Pudendal nerve block spinal anesthetic and/or intravenous conscious sedation can be utilized as needed to help the patient relax, decrease anal sphincter spasm and improve visualization and exposure, and thus improve chances of successful retrieval. The anal canal should be dilated gently, and if the foreign body is palpable, it may be grasped and extracted manually, following the recto sigmoid axis. If the foreign body is higher up, the anal canal should be gently dilated with a speculum and the rectum insufflated. A long Kocher clamp or ringed forceps can be used for extraction. Having the patient perform a Valsalva maneuver during the attempt may facilitate the process. In case of fragile items, such as light bulbs and bottles, attention should be paid at excessive manipulation so they do not break inside the rectum creating further injury.

Sliding a Foley catheter past the foreign object and inflating the balloon above it may help pull the RFB toward the anal canal, however, this may not always be feasible if the item is tightly wedged. Delivery

forceps and obstetric vacuum extractors have also been described, but their use should be limited to those with experience in manipulating them.

Endoscopic methods

Endoscopy is mainly helpful in cases where the foreign body is located high in the rectum or even in colon. Endoscopic snares and gentle insufflation in the bowel to help loosen the seal around the RFB have both been described. When the RFB was in the sigmoid approximately 55% of cases eventually required celiotomy for removal, as opposed to only 24% in cases of rectal objects.

Transabdominal exploration

If transanal and endoscopic approaches fail to retrieve the foreign object or there are peritoneal signs the patient needs to be taken for surgery. Predictors of surgical intervention, as described by Lake et al.⁽¹¹⁾ and Yaman and their colleagues respectively include foreign bodies which are larger than 10 cm, hard or sharp, or located in the proximal rectum or distal sigmoid. With general anesthesia trans-anal retrieval should be reattempted and might be successful, as the anal sphincter is completely relaxed. Some authors have recommended a laparoscopic attempt first to push the RFB distally to allow for transanal removal, specifically if the objects have migrated proximally and need to be advanced back down into the rectum with gentle transperitoneal pressure. Goldberg and Steele⁽⁹⁾ suggest that downward pressure on the object in the left iliac fossa can greatly aid moving the object toward the rectum and stabilize it when attempting to grab and extract it transanally.

Laparotomy is the last option. A lower midline incision is ideal. The first step is to assess the sigmoid distally to rule out transmural injury. An attempt to gently push the foreign body into the rectum for transanal retrieval should be made. If the RFB is successfully extracted, the distal colon should be assessed again for injuries using proctoscopy. Those with lacerations of the colon that involve less than one third to half the circumference and are fresh and not accompanied with gross peritoneal contamination can be repaired primarily. If the orientation and shape of the object are unfavorable, a colotomy can be made and the item can be extracted through the peritoneal cavity. The colotomy can be repaired primarily and tested for leak using proctoscopy.

With higher circumference injuries a Hartmann's procedure may be needed. Diversion should also be considered in patients with delayed presentation, significant fecal contamination, signs of sepsis and hemodynamic instability. It is of paramount importance to inspect the distal colon endoscopically to rule out inadvertent injuries upon successful extraction.

Symphysiotomy

If none of the above measures are successful, specifically in cases of large objects tightly wedged in the pelvis, symphysiotomy can be undertaken. This method of extraction has not been described before in the surgical literature to the best of our knowledge, but it represents the logical next step in attempting to expand the pelvic volume and facilitate foreign object extraction.⁽¹²⁾

Internal fixation can be done in the absence of local contamination that would jeopardize the sterility of the implanted hardware.

A schematic representation of the above suggested algorithm at approaching foreign rectal bodies is illustrated in Fig. 3.

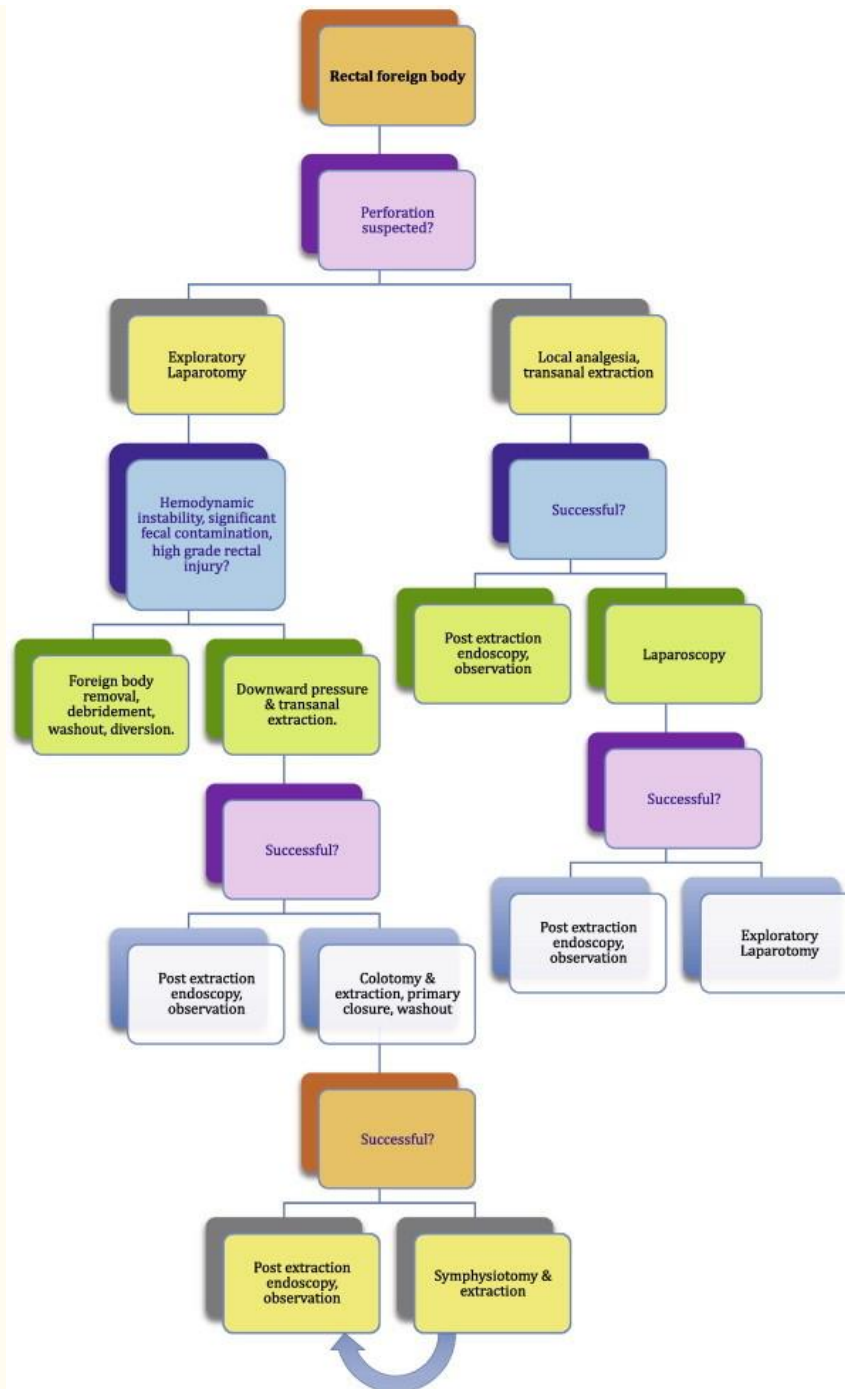


Fig. 3 Suggested work-up and management algorithm for patients with rectal foreign bodies.

Conclusion

Retained rectal objects are a rare complaint in the emergency department, but with an increasingly important occurrence in recent years. Physical examination should include an assessment of the abdomen and digital rectal examination. Imaging tests are mandatory for diagnosis, with abdominal and pelvis radiography being the most requested. Although there is no consensus on the most appropriate removal technique, less invasive initial approaches are recommended, with **transanal removal with a**

60–75% success rate under local anesthesia. The follow-up after the procedure depends on several factors, and in general, the patient should be kept under observation and attention should be paid to significant changes in the evolution and alterations in the imaging tests.

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