CASE REPORT

Transanal removal of a broken drinking glass self-inserted and retained in the rectum

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SUMMARY

Retained rectal foreign bodies are increasingly reported in current clinical practice, and there is no clear consensus in the literature as to whether transanal extraction should be performed in the emergency or in the operating room. A 47-year-old presented to the hospital for a retained drinking glass in the rectum that was broken after an attempt at self-extraction. Physical examination showed no evidence of abdominal guarding nor bleeding from the rectum; abdominal and pelvic X-rays confirmed the presence of a broken glass, 8×6 cm in size and no signs of perforation. Initial anoscopy performed in the emergency room confirmed the partial fracture of the glass. The patient was transferred to the operating room and transanal extraction was carried out under general anaesthesia without complications.

BACKGROUND

The first report of a retained rectal foreign bodies (RFB) dates back to 16th century.¹ Although epidemiological data are still lacking, an increasing incidence of emergency room admissions for this condition has been noted over the past two decades.^{2–6} The main cause of RFB is intentional insertion of a variety of objects for sexual stimulation, but self-treatment of anorectal disorders or criminal intent (assault, concealment of illicit drugs, etc) have often been reported. The hospital presentation may be delayed due to perceived embarrassment and shame that often induce several attempts to self-retrieval of the object before seeking medical care. The management of these patients requires a systematic clinical protocol to rule out bowel perforation and bleeding and to decide the best extraction approach. Size, shape, surface and material of the foreign body may influence the therapeutic choice. Transanal extraction at bedside is often attempted but sometimes can prove hazardous. We present a rare case of a broken drinking glass retained in the rectum that was successfully extracted transanally under general anaesthesia.

CASE PRESENTATION

A 47-year-old man, hepatitis C virus positive and with a history of cocaine abuse, presented to the emergency room reporting a retained broken drinking glass in the rectum. He admitted having self-introduced the glass for sexual stimulation a couple of days before and unsuccessfully tried self-extraction. The patient appeared very anxious but haemodynamically stable; Glasgow Coma Score

(GCS) was 15, and the abdomen was painless and soft. The laboratory tests showed increased white blood cell (WBC) (0,02346 X10⁹/L) and C reactive protein (CRP) (12.8 mg/dL), with a normal haemoglobin level (14.1 g/dL). The chest film was unremarkable, and the pelvic X-ray confirmed the presence of a glass in the rectum which appeared with the bottom up and broken (figure 1). Anoscopy revealed a partially fractured drinking glass, 8×6 cm in size, lying proximal to the pectinate line.

TREATMENT

Informed consent was obtained and the patient was immediately transferred to the operation theatre. Under general anaesthesia and in the lithotomy position, a cautious digital anal dilatation was performed and a proctoscope was introduced. A free glass fragment was extracted. The edge of the glass was gently grasped and disengaged from the oedematous rectal mucosa; the glass was then rotated with the help of forceps protected by gauze and manually extracted without complications. Accurate haemostasis of a small mucosal abrasion was performed using absorbable gelatin sponges. This was followed by sigmoidoscopy to check for residual glass fragments and/or associated lesions.

OUTCOME AND FOLLOW-UP

Although the operative procedure was uncomplicated, the patient complained of abdominal pain and a CT scan was performed 6 hours after the extraction taking also into account both the increased WBC and CRP on admission. Mild bowel distension, no free abdominal air and mild rectum distension with wall thickening due to inflammatory reaction was found. The postoperative course was uneventful. The patient refused psychiatric consultation and was discharged home the following day.

DISCUSSION

The incidence of RFB is apparently increasing in the male adult population and is expected to further rise in the future.^{4–6} A variety of objects impacted in the rectum have been described: bottles, sex toys, vegetables, etc. Generally, patients with RFB try to retrieve the objects by themselves because of shame and embarrassment to seek medical care, but the majority fail in these attempts and eventually present to the emergency room. Management of these patients requires a respectful and non-condemnatory attitude on behalf of doctors and nurses. The initial clinical evaluation should

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Figure 1 Plain radiograph showing a broken drinking glass retained in the rectum.

include a careful history, abdominal examination, inspection of the perianal region and proctoscopy. Confirmation of the type, size, shape and location of the objects should be obtained with biplanar abdominal and pelvic X-ray before a digital rectal exam is performed. A chest film should also be performed to exclude free abdominal air. A pretreatment CT scan is necessary in special situations, for example, when RFB are non-opaque or for the confirmatory diagnosis of perforation and pelvic abscess.

It has been previously reported that patients with RFB without evidence of peritonitis can be successfully treated in the emergency room in up to 75% of cases.^{2,3} However, the patient's anxiety and discomfort, the poor illumination and suboptimal instrumentation available in this setting, and even more important, the risk of pushing the RFB upward in the rectosigmoid, should discourage the transanal approach especially in case of fragile glass objects. In our case, an additional reason to transfer the patient to the operating room was that the retained drinking glass had been previously broken during attempts at self-retrieval. Under general anaesthesia, transanal removal was uneventful. Narjis *et al*⁷ described a case of forced introduction of a drinking glass in the rectum. Attempt to manual extraction in the emergency room using obstetric forceps led to fracture of the glass, and therefore a laparotomy with colotomy for RFB retrieval and temporary colostomy had to be performed. In this patient, intestinal continuity was restored 3 months later.

Manual or endoscopic-assisted extraction under anaesthesia reduces anal sphincter contraction, improves direct visualisation and increases the chance of a successful transanal extraction. The added advantage of this approach is the possibility to switch to an immediate laparoscopic or laparotomic approach should the transanal extraction fails. A Foley catheter advanced proximal to the RFB and then inflated can aid delivery by balloon traction and break the vacuum effect. A number of surgical (grasping forceps, obstetric forceps, myomectomy screws, tonsil snares, vacuum devices) or non-surgical instruments (kitchen spoons, etc) have been used to retrieve the foreign body. Extraction through flexible sigmoidoscopy using polypectomy snares or biopsy forceps can also be attempted. Another minimally invasive option is transanal minimally invasive surgery (TAMIS) that consists of the insertion of a sealing trocar into the anus followed by insufflation to allow use of laparoscopic instruments. This technique provides high-quality magnified images that allow accurate mucosal inspection and identification of mucosal lacerations and transmural perforations.

A modified, low-cost type of TAMIS is feasible using a blunt tip trocar and standard laparoscopic instrumentation.^{6,8} Laparoscopic or open surgical approach with assisted transanal retrieval or direct extraction via colotomy should be reserved to patients with signs of perforation. In such circumstances, intestinal diversion or primary colonic repair should be considered based on the amount of contamination, severity of the perforation and the patient's general state.

It has been previously reported that the only factor predictive of surgical intervention is the upward migration of RFB into the sigmoid colon.² Because migration may be due to previous multiple attempts at bedside transanal extraction, management under general anaesthesia appears safer and more comfortable for the patient and should be considered the first-line approach even in the presence of a dangerous sharp objects such as a retained broken drinking glass. Prior to discharge, patients should be educated on the potential dangers of their habit (anal sphincter injury with incontinence, rectovaginal fistulae, anal strictures, perforations and bowel obstruction) and psychiatric counselling to rule out depression and/or obsessive-compulsive disorders should be advised.

Learning points

- ▶ Practices associated with anal sexual activity carry the potential for serious medical complications. Respect patient's right to dignity and gain patient's confidentiality in the management of self-inserted and retained rectal foreign bodies is of utmost importance.
- ▶ Multiple attempts at transanal extraction in the emergency room may cause severe patient discomfort and upward migration of the retained foreign body and increase the probability of surgical transabdominal intervention.
- ▶ Physicians should be aware of the risk of self-injury and infection that may occur during manipulation of retained rectal foreign bodies, especially glass objects.
- ▶ Transanal extraction of the foreign body under general anaesthesia and direct vision should be the first-line approach in these patients.

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