

Foreign bodies in the rectum: report of a case series and review of the literature

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ABSTRACT

Foreign bodies in the rectum are remarkable, both in their variety, and in the methods used for extraction. We report four cases presenting to the surgical department having a variety of foreign bodies in the rectum. A review of the literature shows that fingers, endoscopes, catheters, screws, and various other instruments may be used for extraction of rectal foreign bodies which are an uncommon occurrence. The surgeon should be aware of these methods and be creative to enable safe extraction of these foreign bodies which may be of various shapes and sizes.

Keywords: Rectum; Foreign body; Endoscopy.

Introduction

Individuals insert objects into the rectum for different reasons but mainly for sexual gratification. Occasionally these objects may be retained, and will require surgical intervention. There is remarkable variation in the types of foreign body that a surgeon may find in the rectum [1]. Confronted by an unexpected problem, the surgeon may not know what to do and frequently need to devise a novel method or manoeuvre. The literature describes many ingenious techniques of removal of retained objects in the rectum. We report a series of four patients, who had retained rectal foreign bodies, and present a brief review of the literature.

Case reports

1. A 52-year-old man presented to the emergency department with pain at the anal region. He had inserted a wine glass into his anus two days earlier, and had been unable to retrieve it subsequently. He admitted to the habit of inserting a foreign body into his rectum for sexual gratification. Rectal examination revealed a foreign body impacted at the rectum, about 4 cm from the anal verge. The X-ray (Figure 1) showed a wine glass. Attempts were made to remove the object by digital manipulation, and even using an endoscope, but without success. At laparotomy, the glass was milked into the sigmoid colon, and extracted through a colotomy. A colostomy was created, and reversed after two months. At one year, the patient was well and had no incontinence.

2. A 62 year old homosexual gentleman presented with a retained plastic ball in the rectum. An abdominal X-ray

showed a rounded object in the rectum (Figure 2). Initially, we attempted to facilitate evacuation with large amount of oral laxatives which was unsuccessful. During an endoscopic manoeuvre we were unable to grip the ball with the endoscopic extractors due to the smooth and firm surface of the ball. Subsequently, the extraction was done under general anaesthesia where we used 2 small Langenbeck forceps inserted via the anus which helped scoop out the foreign body from rectum. The patient was discharged from hospital the following day.

3. A 45 year old man presented with lower abdominal pain and constipation for four days. He gave a history of inserting objects into his anus for sexual pleasure. Rectal examination was suggestive of a foreign body in the anus and was confirmed by X-ray. Retrieval via the anal orifice was attempted under anaesthesia but failed. At laparotomy, an 8cm diameter glass bottle was found in mid-rectum above the puborectalis sling. An incision was made in the rectum superior to the foreign body and the object was removed. A sigmoid colostomy was made. The patient was discharged well on the fifth postoperative day and later underwent reversal of the stoma.

4. A 32 year old single homosexual gentleman presented with a rectal foreign body after sex with his partner. We found a 5cm x 8cm vibrator on X-ray evaluation. Initially we attempted to extract the vibrator by endoscopic extraction, which failed. Furthermore, an attempt to extract the vibrator under general anaesthesia also failed. Subsequently the vibrator was extracted through a sigmoid colostomy which was repaired primarily without a stoma. He recovered well and was discharged 4 days after surgery.

Discussion

The presentation of a retained rectal foreign body is infrequent enough for a surgeon to be unfamiliar with the range of objects that can be retained. A very large clinical service may see up to one case each month [2]. It is essential

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Table 1. Methods of avoiding surgery, and an analysis of the success of methods used to remove a retained foreign body by the trans-anal route - a flow analysis

(* - Emergency Department ** - Operating Room)

| Total patients | | Starting number | Number remaining | Comment |
|--|-----------------------------|-----------------|------------------|---|
| Arriving at the ED | | 87 | | |
| Sent directly to OR | | 2/87 | 85/87 | Two cases had peritonitis |
| Extraction in ED* | Attempted | 31/85 | | |
| | Succeeded | 5/85 | 80/85 | |
| Extraction at bedside | Attempted | 77/79 | | One patient left against medical advice |
| | Succeeded | 58/77 | 21/79 | |
| Extraction in OR** under anesthesia | Attempted | 17/23 | | Includes 21 patients sent from the ward, and 2 sent directly from the ED to the OR because of peritonitis |
| | Succeeded | 15/23 | 8/23 | |
| Laparotomy | Immediately after admission | 2/87 | | Including 2 in whom extraction under anesthesia failed |
| | After evaluation in | 8/23 | | |

for a surgeon to be aware of the available methods of removal as well as to be creative in methods to extract such objects.

Epidemiology

Most patients (94.5%) are male [2]. The commonest reason for insertion of an object into the rectum is to fulfill a desire for sexual gratification. Sexual gratification was the reason for retained rectal foreign bodies in half of the cases [1]. Other reasons were self treatment for constipation or hemorrhoids (25%), assaults (12%), and accidents (9%). In a minority of cases psychiatric disturbances were the cause [1]. Retained items may be household objects (42%), sexual toys (16%), personal care items (14%), food items (6%), sports equipment (5.5%), and others [1]. While most objects (including sex toys) are smooth and cylindrical (79%), cylindroids, like bones and fruits (13%), and peculiarly shaped objects (8%) may also be found [3].

Diagnosis

At presentation, patients are often embarrassed, and in about 10% of cases, will not offer the information about insertion. The physician must maintain a non-judgmental attitude; sadly this is not always the case [1]. The presence of atypical gender behavior, a lax anal sphincter, and a bloody or mucoid rectal discharge should alert the surgeon to the possibility of a foreign body within the rectum [3]. Only about two-thirds of foreign bodies will show up on an X-ray [4].

Transanal removal

The literature contains accounts of several maneuvers used to remove the foreign

body trans-anally; digital extraction combined with abdominal compression for smooth, firm foreign bodies in the rectum; balloon-tipped tubes such as Foley and Fogarty catheters, Sengstaken tubes, endo-tracheal tubes and even

an achalasia balloon. Forceps used include Kocher and bone holding for low lying objects. The obstetric vacuum extractor has been employed for glass objects. For high lying foreign bodies, an endoscope with a snare has been of value, in particular for those with a narrow waist. Unusual methods reported are defragmentation by argon plasma coagulation (apple), use of an electromagnet (metallic object) or myomectomy screw (carrot), filling hollow object with plaster of Paris over a stick and extracting the object after the plaster of Paris has hardened, as in a vase (Table 1). Some of the more ingenious methods used in special circumstances make fascinating reading [3], such as in one of our cases where we used a Langenback retractor to scoop out the foreign body.

Route of removal

In 90 percent of cases, it is possible to remove the foreign body trans-anally, though some patients may need to be managed under anaesthesia. The remainder will require a laparotomy. A foreign body in the sigmoid is more likely to need surgery as compared to one in the rectum. Lake et al reported that the object was in the sigmoid in 26% of operated patients but in only 9% of persons managed conservatively; 55% and 24% of patients needed surgery when the foreign body was in the sigmoid or rectum, respectively [5].

Vacuum effect

When a physician attempts extraction of a large object, a proximal vacuum effect may occur, preventing the item from moving. A useful method of relieving this vacuum is by the insertion of a Foley catheter or a narrow endo-tracheal tube past the foreign body to act as an air conduit - at times the physician may need to insufflate air into the catheter [1].

Dealing with body packers

There are special challenges in the management of illicit drugs retained in the rectum.

Most body packers use condoms filled with narcotics which they swallow. Forceps may rupture the packet, causing spillage and absorption of the drug. The best way of managing these packages is to wait until the packet is low enough to be removed with a finger. If the packet ruptures, the patient may need emergency surgery and steps taken to manage drug overdose [2].

Approach to a patient with a retained foreign body

Many authors have suggested algorithms for the management of retained objects [1,3,5]. Once an impacted foreign body is confirmed, the first step is to exclude bowel perforation, which will mandate surgery. Uncomplicated retained objects merit a trial of trans-anal extraction (unless the object is too high, hard and sharp) under sedation, local anesthesia, or general anesthesia. The operating room rather than the bedside may be the most appropriate place. Trans-anal extraction can be monitored on fluoroscopy, or even by concomitant laparoscopy. If the patient is anaesthetized, anal dilatation will help [2]. If trans-anal measures fail, the patient will need a laparotomy, often with a colostomy, as in our cases. Most patients recover rapidly after removal of a foreign body; incontinence and recurrence are rare [4], though psychological effects may remain.

Conclusion

Most individuals insert objects into the rectum for sexual pleasure. Ingenious methods have been described in the literature for removing these objects by the trans-anal route, which should be possible in the majority. Some patients will require surgical extraction of a retained rectal foreign body.

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Figure 1. Showing an inverted wine glass within the rectum

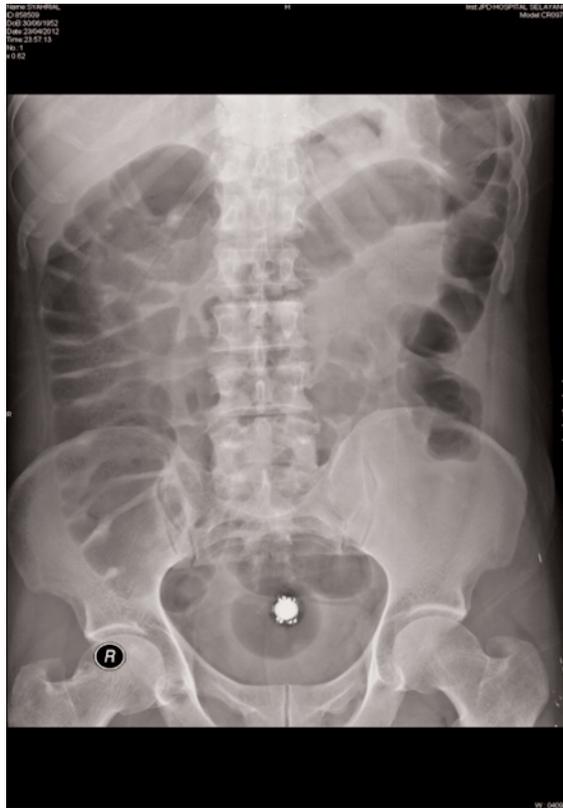


Figure 2. The retained plastic ball (radio-opaque feature in the pelvis).