Retained Rectal Foreign Body and its Management Protocol

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ABSTRACT:

Rectal foreign body is no longer a medical oddity. It is encountered often in the surgical practice. Anorectal eroticism with a wide variety of phallic substitutes comprises most of the cases. The presence of such a foreign body in the rectum has always been a challenge to the surgeons taking care of these patients. Numerous ingenious approaches have been devised to remove these impacted objects. Diagnosis of rectal foreign bodies is usually made by history, digital examination of the rectum, endoscopy and radiography. Majority of the cases are treated by transanal retrieval. Laparotomy is only required in impacted foreign body and/ or with perforation peritonitis. We are reporting a case of trans-anal introduction of a steel tumbler into the rectum by a patient who was eventually diagnosed as 'Behavioural Problem with Borderline Intelligence'. The management of retained rectal foreign body has also been shown herein as a simple flow diagram.

KEY WORDS: Borderline intelligence, foreign body, rectum.

INTRODUCTION:

Rectal foreign bodies are most frequently associated with anal eroticism. Various foreign bodies and their management have been reported, including bottles, spray cans, hosepipes, iron bars, and toys. Their misuse poses risk of serious injuries such as perforation. Management of rectal foreign bodies should begin with diagnosis. Primary clinical and rectal examination should be performed, followed by plain abdominal or pelvic X-rays. Depending on the position of foreign body, various options exist for its retrieval.[1]

CASE REPORT:

We report the case of a 40 year-old male patient who presented to Emergency Room (ER) of RMCH Bangalore with complaint of constipation for 3 days.There was no history of abdominal pain, distension or vomiting. On clinical examination, abdomen was flat, soft and non-tender, and bowel sounds were heard. Per rectal examination in left-lateral position revealed a hard smooth object palpable about 4 cm above the anal orifice, the upper border of which was not felt. Even after repeatedly asking the patient, he denied any foreign body insertion through the rectum or per-rectal bleed. An abdomino-pelvic plain radiograph was taken which showed a foreign body (tumbler) in the region of the rectum, obliquely placed, with the open-end facing downwards [Figure 1]. After further questioning, the patient admitted to deliberate insertion of the foreign body per rectally, when he was challenged by his friends four days back. The patient had tried unsuccessfully to retrieve the foreign body himself.

A single gentle attempt of digital removal of the object was made in the examination room with liberal surface anaesthesia, but was unsuccessful. After valid consent, the patient was taken to the operation theatre (OT) for further management. Under spinal anaesthesia, in lithotomy position, anal dilatation was done. A steel tumbler was noted to be obliquely placed with its open-end facing downwards. There was a partial thickness tear noted in the anal canal mucosa from 4'o clock to 6'o clock position, about 4 cm from the anal orifice along with mucosal edema (Figure 2), which might have occurred during the patient's

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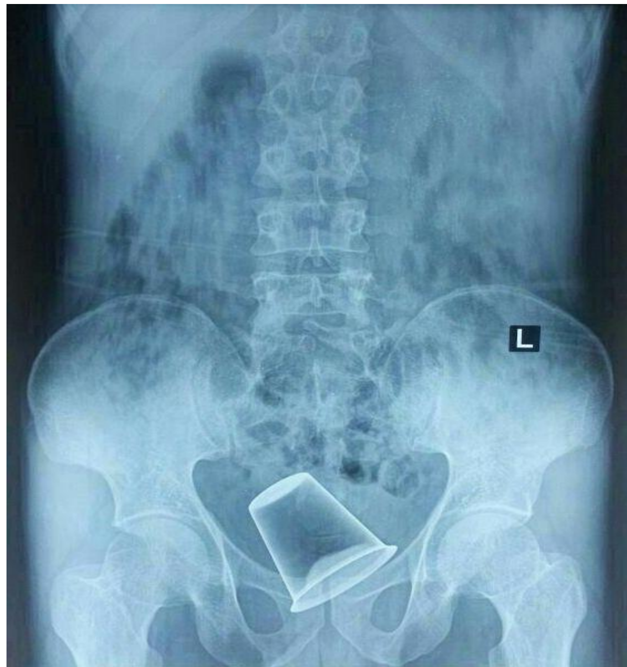


Figure 1: Plain Abdomino-pelvic X-ray showing foreign body (tumbler)

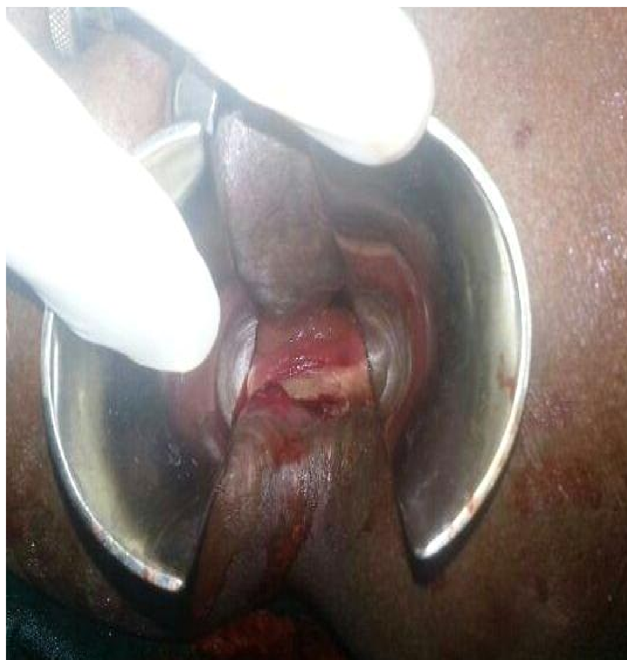


Figure 2: Proctoscopy showing tear in the Anal canal mucosa.

deliberate attempt to forcefully remove the foreign body. The distal most part of the tumbler was grasped with a pair of forceps. With good lubrication and proper retraction, the tumbler [Figure 3] was manipulated out of the anal canal without causing any further damage. The tear in the anal canal was primarily repaired. Sitz bath and antibiotics were administered from post operative day one (POD 1). The patient had an uneventful post-operative period. Psychiatric

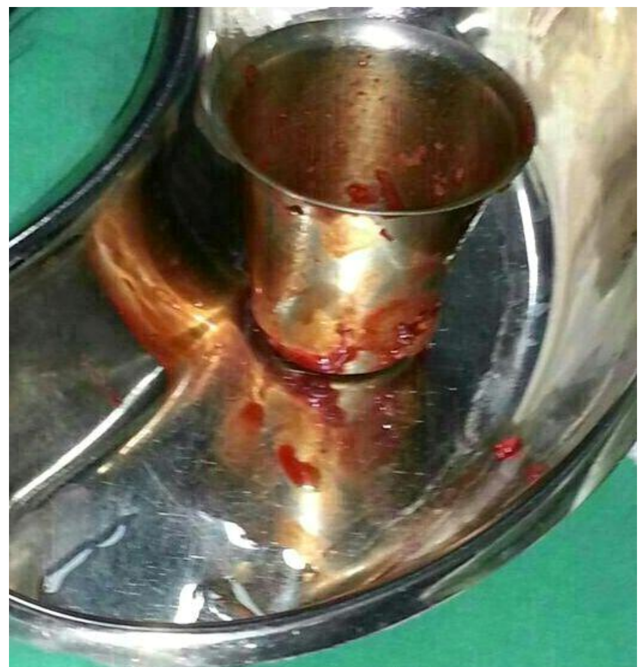


Figure 3: Foreign body removed (steel tumbler)

consultation was sought and after thorough evaluation, the patient was diagnosed to have 'Behavioural Problem with Borderline Intelligence'. He was discharged on the 5th day with appropriate medication. The patient was followed up in our OPD after 2 weeks and he was doing well.

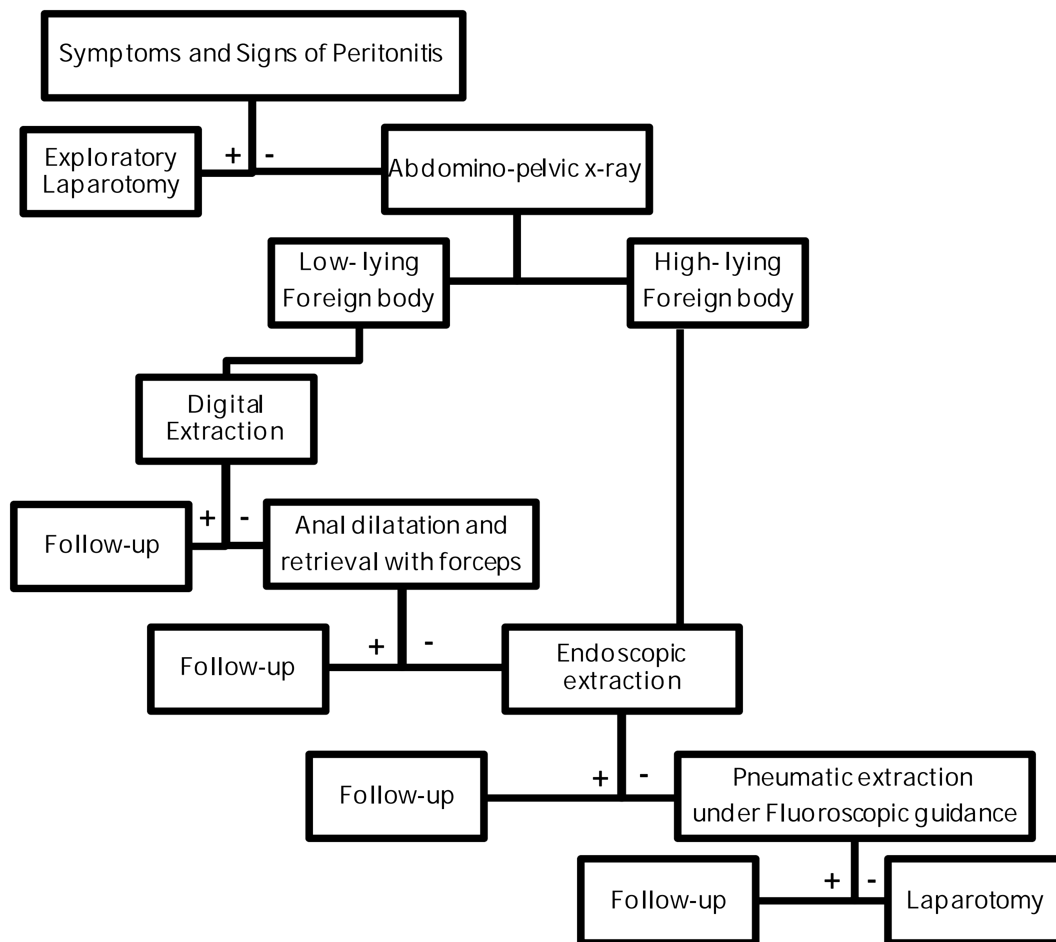
DISCUSSION:

Rectal foreign bodies are an unfortunate source of both humour and clinical intrigue for the surgical community. The incidence of rectal foreign bodies is unknown.[2] Even though the age of patients with retained rectal foreign bodies ranges from 14 to 76 years, there has been a case reported with retained rectal foreign body (a broken thermometer) in a 50 days-old baby.[3] Retained rectal foreign bodies are more commonly seen in males.[4]

No reliable data exists regarding the frequency of rectal foreign bodies.[5] Older literature consists of occasional case reports, but, more recently, case series and descriptions of evaluation and extraction techniques have been documented. It is likely that the use of various objects for anal eroticism is increasing, resulting in an increased incidence of retained rectal foreign bodies.

Foreign bodies of various types have been reported earlier. The variety of objects removed from rectum defies our imagination. Incidence varies from place to place, more commonly seen in Eastern Europe

Flowchart 1: Treatment Algorithm of Retained Rectal Foreign Bodies.



and uncommon in Asia.[4] There are several means of access to the rectum by foreign bodies.[6] They are listed as follows: 1) Auto-erotic instrumentation, 2) Assault or injury, 3) Diagnostic or therapeutic instrumentation, 4) Ingestion, 5) Erosion or entrance from adjacent tissues. Most such cases are seen as a result of erotic activity, wherein even large objects like bulbs, glasses, beer bottles, etc have been seen.[4]

Objects inserted for sexual stimulation are typically blunt. Repeated insertion of rectal foreign bodies results in increasingly lax rectal tone, which allows patients to insert progressively larger objects that may be more difficult to remove.[7]

This may be achieved by self introduction or with the help of a partner and often it may slip from the grip of the person or might get sucked in and get lodged in the rectum. There are instances in which foreign bodies have been introduced in the rectum accidentally, still further as a means of assault or for the reason of torture. There are also reports of self introduction of drugs in rectum for the purpose of concealment by drug traffickers. Self-introduction of foreign body for prostatic massage or due to curiosity in young adults for experimentation is also reported. But they come to light only after the foreign body slips beyond grip and self-effort of extraction is unsuccessful and further assistance is required. There are cases reported for accidental insertion of foreign body in rectum and instances where cause could not be ascertained (Munchausen syndrome by proxy).[8,9] Other causes for insertion are diagnostic or therapeutic reasons (examples would be a broken rectal thermometer and broken enema catheter tips), self treatment of anorectal disease (constipation), Klismaphilia (use of enemas for gratification). Rarely a swallowed object may reach the rectum for e.g. fish bone, swallowed tooth etc. The object length varies between 6 and 15 cm and larger objects are more prone for complications.[4] Eftaiha et al[10] classified foreign bodies in rectum as high lying or low lying depending on its relation with recto-sigmoid junction. Objects lying above recto-sigmoid junction are considered high lying

and are difficult to remove per-rectally even with procto-sigmoidoscope.

Inserted foreign bodies are more frequently brought to the clinician's attention because of one's inability to remove the object. An accurate history may be impeded by the patient's embarrassment, which is also responsible for delays in presentation. Fabricated histories are not uncommon, but gastrointestinal symptoms such as rectal or abdominal pain, decreased bowel movements, or bloody stools may signal real complications. The physician should seek an accurate history in a nonjudgmental and supportive manner, obtaining information about the substance, size, and shape of the object, duration of impaction, attempts at removal, and any symptoms that have occurred since insertion. The patient should be questioned regarding the possibility of assault.[7]

Abdominal and rectal pains, bleeding per rectum are the common presenting symptoms.[4] Patients may also present with constipation as in our case. Very rarely they may present with abdominal distension, signs of perforation and peritonitis. Per rectal examination is the cornerstone in the diagnosis, but in cases where history of foreign body insertion is available, it may be performed after X-ray abdomen to prevent accidental injury to the surgeon from sharp objects.[4] A digital rectal exam followed by anoscopy may reveal the object or signs of trauma proximal to the anal verge. Plain abdominal X-rays are indicated in almost all cases. Hollow objects may have a gas pattern in their general shape. Radiolucent objects may require the use of rectal contrast; however, in these cases computed tomography may be the better modality to definitively diagnose the foreign body. Computerized Tomography (CT) scans should be reserved for those with potential sepsis or equivocal peritoneal signs.[11]

Complications include bleeding, perforation[6,12] and peritonitis, infection or mucosal tear like in our case. Intussusception of intestine through the rectal foreign body has also been described in the literature.[13] Death resulting from rectal insertion of foreign objects is rare. Byard et al[14] described the case of a 56-year-old man attempting stimulation via the insertion of a shoehorn into his anus, tore his rectum, did not seek medical help, and bled to death.

The treatment of rectal foreign bodies has been discussed in the medical literature for many years. Controlled studies of patients with rectal foreign bodies have not been conducted, and the literature is largely anecdotal. These patients usually present to the ER because of pain, often after multiple attempts to remove the object. Presentation is almost always delayed because of embarrassment. The keys to adequate care for these patients are a) respect for their privacy; b) evaluation of the type and location of the foreign body; c) decision whether removal can be performed in the ER or if operative referral is needed, and d) use of appropriate techniques for removal. Caregivers should refrain from making comical remarks concerning the nature of the problem and prevent invasions of the patient's privacy by curious hospital staff. Low-lying rectal foreign bodies are normally palpable by digital examination and are candidates for ER removal. Objects that are above the sacral curve and recto-sigmoid junction are difficult to visualize and remove, and they are often unreachable by rigid procto-sigmoidoscope. Frequently, delay in presentation and multiple attempts at self-removal lead to mucosal edema and muscular spasms, further hindering removal.[5] Extraction of high lying foreign bodies should be performed in an operating room with general or regional anesthesia. The use of surgical instruments such as forceps or endoscopy might be indicated for foreign body extraction.[1] The treatment of retained rectal foreign bodies is summarised herein [Flowchart 1].

There are a few basic principles in removing a large foreign body trans-anally. The first rule is that the object has to be within reach of the fingers or a clamp to obtain an adequate grasp on the object. Another requirement is to have a full relaxation of the anal sphincter muscles. This can be achieved by a local, spinal, or general anesthesia. Last, the suction effect has to be broken. The lithotomy position is the most versatile because of the ease with which bimanual manoeuvres can be performed, if needed.[15] Extraction with a pneumatic dilatation balloon, inflated above the foreign body, may be an elegant and safe alternative when conventional techniques fail.[16] A standard Foley's catheter may be difficult to use because of its inherent flexibility, and at times it may be difficult to pass the Foley past the object. Therefore, it is recommended that a three-way Foley catheter with a large balloon be used. A well lubricated catheter is advanced past the object and the balloon inflated. If a three-way Foley is unavailable, a small-diameter endo-tracheal tube can be used. In either case, the catheter with the balloon inflated or the endo-tracheal tube is then slowly withdrawn. However, care must be taken not to force either tube past the object because of the risk of iatrogenic perforation. Two Foley's catheters

can be utilized if the object tapers near its distal end.[11] Rectal foreign bodies have also been removed in babies as young as 50 days old using foley's catheter under fluoroscopic control.[3] If these methods fail or clinical or radiologic diagnosis shows signs of perforation or peritonitis, laparotomy might be the final solution to retrieve the foreign body and/or repair any damaged tissue.[1] Open surgery should be reserved only for those patients with overt peritonitis or pelvic sepsis.[17] There have also been reports of the foreign body causing so much damage that necessitated a Hartmann's procedure.[18] After successful extraction, patients should be observed and psychological consultation should be offered.

CONCLUSION:

Retained rectal foreign bodies may be a matter of humour for the population in general and a cause of embarrassment for the patient, but not to the doctor. The surgeon in the ER is expected to be fully aware of the nature and also the consequences of such cases. Every attempt should be made to take the patient into confidence and extract an accurate history. Appropriate treatment to remove the retained foreign body does not ensure the completeness of the treatment. Psychiatric consultation should be provided to each of them including counselling wherever indicated along with regular follow-up.

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