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Unusual rectal foreign bodies: Case series and discussion

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Abstract

A series comprised of 04 patients is presented. The symptomatology, physical and x-ray findings are described. Methods of management are discussed, with emphasis on the operative management of perforations and the conservative approach to retained foreign bodies. It is felt that these protocols will be useful to physicians who see this practice less frequently. X-rays of two more unusual cases are depicted. A thorough review of the literature is also presented.

Keywords: Foreign body, rectal trauma

Introduction

Insertion of foreign bodies via the rectum is a rare scenario in emergency care, with the sexual practice being a common cause within the cases. Patient assessment is usually difficult due to the patient's fear during the history, as he tends not to report what happened objectively. Attention should be paid to unusual objects as they can cause complications, such as in cases of perforation by glass objects, even though within the total cases, complications are rare. Below, we present a case series of management of a retained foreign body via the rectum.

Presentation of case

Case 1

35-year male came to OPD with history of insertion of glass per anal region by his friend under influence of alcohol. Patient came 8hrs post insertion.

On examination: Patient was vitally stable.

Per rectal glass was palpable 5 cm from anal verge.

Patient was planned for exploration.

Initially the pelvic approach was tried to remove foreign body but couldn't be removed and hence the abdomen was open. Even on milking the glass through rectum foreign body couldn't be removed. Hence a rent was made on rectum and finally the glass was removed. Rectum was closed in two layers and diverting transverse colostomy was done.

Post operative course was uneventful. Colostomy closure was done after 2 months.



Fig 1: Post operative picture of glass

Case 2

45 yr. old came with a history of pain in abdomen.
On examination: Patient was vitally stable, per abdomen was tender and guarded.

X-ray abdomen showed air under diaphragm

Patient was planned for exploratory laparotomy. Intra operative a foreign body (brinjal) was found intra abdomen. On further examination rectal perforation was seen around 4x2cm and 200cc feculent contamination was present. Rectal perforation was repaired in two layers and diversion ileostomy was done. Foreign body was removed. Post operative patient gave history of insertion of brinjal per anal region to relieve constipation. Postoperative course was uneventful and ileostomy closure was done after 3 months.



Fig 2: Intra operative picture of brinjal

Case 3

30y male came with history of insertion of rubber ball per anal region by his friends under influence of alcohol
On examination: Patient was vitally stable
Per rectal examination: Rubber ball was palpable.
Patient was taken for surgery in a lithotomy position with the help of obstetric forceps and a rubber ball was removed per rectally.
Post operative course was uneventful.



Fig 3: Intra operative picture of rubber ball removal

Case 4

45y male came with history of insertion of plastic glass by his friends under influence of alcohol foreign body was 15 cm from anal verge. Colonoscopy removal was tried but couldn't be removed. Hence exploration was planned and foreign body was removed by making a small incision on sigmoid colon and primary closure of sigmoid colon was done. As the patient had good bowel preparation and was not in obstruction hence diverting stoma was not done. Post operative course was uneventful.



Fig 4: Intra operative picture of plastic glass in large bowel



Fig 5: CECT abdomen image

Discussion

Retained rectal objects are a rare complaint in the emergency department, but with an increasingly important occurrence in recent year. There is a bimodal age distribution, observed in the twenties for anal erotism or forced introduction through anus, and in the sixties mainly for prostatic massage and breaking fecal impactions. Males are commonly affected. A useful classification of rectal foreign bodies has been to categorize them as voluntary versus involuntary and sexual versus nonsexual. One of the most common categories of rectal foreign bodies is objects that are inserted voluntarily and for sexual stimulation. The foreign bodies commonly reported were plastic or glass bottles, cucumbers, carrots, wooden, or rubber objects. Other objects reported are bulb, tube light, vibrators and dildos. Involuntary sexual foreign bodies are almost exclusively in the domain of rape and sexual assault. One of the most common types of rectal foreign body is best known as body packing and is commonly used by drug traffickers. Involuntary nonsexual foreign bodies are generally found in the elderly, children, or the

mentally ill. The objects are usually retained thermometers and enema tips; aluminum foil wrapping from pill containers and orally ingested objects such as toothpicks, chicken bones, plastic objects such as erasers or pill bottle caps, and even coins or small plastic toys. The objects can cause severe injury. Therefore, all retained rectal foreign bodies should be treated as potentially hazardous.

Generally, most patients because of embarrassment only present for medical attention after several unsuccessful attempts to remove the object alone, resulting in delay. Many of them have nonspecific complaints of lower abdominal pain, anorectal pain, constipation, or bleeding, so it is up to the examiner to maintain high suspicion and take a careful approach to reach the diagnosis. A good history should evaluate the nature of the inserted object, as well as the way of insertion, to decide the best way of removal, taking into account the material, size, and location of the object. Physical examination should include inspection, palpation, and abdominal auscultation to evaluate transabdominal palpable objects and rule out signs of peritonitis. Although the digital rectal examination is essential for diagnosis, as it provides data on the presence, size, and location of the object, in addition to assessing the state of the anal sphincter, an abdominal radiograph should be performed before its performance to rule out the presence of sharps or glass objects in the rectum, thus avoiding secondary injuries to the patient and the examiner.

Imaging tests are mandatory to confirm the diagnosis, with anteroposterior and lateral radiographs of the abdomen and pelvis being the most commonly requested to confirm the presence, number, and location of rectal objects, in addition to checking for the presence of free air. Chest X-ray should be considered in the initial evaluation to exclude pneumoperitoneum. Other imaging tests such as non-contrast computed tomography are important in the evaluation of non-opaque rectal objects, as well as assisting in suspected cases of intestinal perforation. Laboratory tests are not essential in the initial evaluation unless there are signs of peritonitis and preoperative preparation is required. In radiographic examinations performed in our patient, findings of distention of the descending, transverse, and ascending colon loops, with the presence of a radiopaque dumbbell-shaped foreign body in the rectosigmoid transition, but without signs of pneumoperitoneum or perforation.

In clinically stable patients without evidence of perforation or peritonitis, the rectal foreign body should be removed either in the emergency department or in the operating room, if general anesthesia is needed. Depending on the size and shape of the object various methods have been described. Most objects can be removed transanally and if not, then a transabdominal approach is used. The authors recommend direct visualization with rigid proctoscopy or flexible sigmoidoscopy for all patients after the object has been removed to evaluate the status of the rectum and rule out ischemia or wall perforation.

Although there is no consensus regarding the most appropriate removal technique, less invasive initial approaches are recommended. Studies suggest a 60–75% success rate for trans anal extractions under local anesthesia. Several techniques can be used if the patient is stable, with a bimanual extraction attempt being initially performed with the patient in the lithotomy position, and if the patient is calm, collaborative, and tolerates the procedure without the need for sedation, there is an advantage in asking to be performing the Valsalva maneuver actively at the correct time, other techniques include the use of forceps and finally endoscopic assistance. Emergency surgical

approach through laparotomy or exploratory laparoscopy should be reserved for cases of failure or for patients presenting with instability, fever, severe pain, or signs of peritoneal irritation that may indicate perforation. In the case of the patient, despite the location of the object being considered high, manual trans anal extraction was chosen, inserting the surgeon's forearm with some difficulty, without post-extraction complications.

Postoperative follow-up depends on several factors, from the patient's clinical condition, associated comorbidities, presence or absence of problems due to delay in seeking care, and possible trauma-related to removal. Serial imaging tests for control should be ordered to evaluate signs of peritonitis and perforation, when available, request endoscopic exams such as colonoscopy or recto sigmoidoscopy to rule out mucosal injuries, as well as evaluate anal sphincter injuries that could lead to certain degrees of fecal incontinence, with subsequent need for outpatient follow-up. The patient should be kept under observation and attention should be paid to significant changes in the evolution, such as the occurrence of fever, vomiting, and changes in imaging tests, and surgical evaluation should be considered in cases of need. In the case presented, the patient underwent imaging without signs of pneumoperitoneum in the first 12 h, remained hospitalized for 3 days, and progressed without complications, being discharged on the 4th postoperative day.

Conclusion

Rectal foreign bodies present a difficult diagnostic and management dilemma. This is often because of the delayed presentation, wide variety of objects that cause the damage, and the wide spectrum of injury patterns that range from minimal extraperitoneal mucosal injury to free intraperitoneal perforation, sepsis, and even death. The evaluation of the patient with a rectal foreign body needs to progress in an orderly fashion, with appropriate examination, laboratory and radiographic evaluation, and resuscitation with intravenous fluids and antibiotics. In the nonperforated stable patient, the object should be removed in the emergency department with a local block and/or conscious sedation via the trans anal approach. If this fails, then the patient should go to the operating room for a deeper anesthetic and attempt at trans anal extraction. Surgery with a laparotomy should be reserved for patients with perforation or ischemic bowel or cases of failed trans anal attempts. After removal of the foreign body, the authors suggest a period of observation, a rigid or flexible endoscopy to evaluate for rectal injury, and repeat plain films to examine for evidence of injury and perforation that may have occurred during the extraction process. Patient was referred to the psychiatrist for his perversion disorder, which was also mandatory for preventing recurrences.

Conflict of Interest

Not available

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