



MANAGEMENT OF RECTAL FOREIGN BODY: A RARE CASE REPORT

General Surgery

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KEYWORDS

Introduction

Anorectal foreign bodies are encountered infrequently. Although these foreign bodies are most often related to altered sexual behavior, they can also result from ingestion, sexual assault, self-treatment of anorectal disease or some medical procedure.^[1] Numerous objects, including glass or plastic bottles, various fruits and vegetables, bones, nails, Impulse body spray cans, wooden or rubber objects, bulb, tube light, axe handle, broomstick, vibrators, sex toys, utensils, v-p shunt, etc. can be found in anal canal or rectum.^[2-3] Involuntarily inserted objects like thermometers and enema tips, orally ingested objects such as tooth picks, chicken bones, coins, bottle caps are sometimes retained in rectum. Because of the wide variety of objects and the variation in trauma caused to local tissues of the rectum and distal colon, A systematic approach to the diagnosis and management of rectal foreign bodies is essential.^[4] Per anal removal is possible in majority of cases using various techniques. In case when it is not possible, colotomy is necessary. Even after extraction, delayed perforation of rectum or significant bleeding from the rectum may occur.

History and Investigations

An 18-year-old male labourer from low socio-economic class consulted the emergency department with complain of self-insertion of plastic bottle in anal canal. Patient had complain of perianal pain and discomfort. There was no other complain. On examination, vital signs were normal. Abdomen was soft and non-tender with palpable foreign body in hypogastrium. Closed end of foreign body was palpable high up on rectal examination. There was no bleeding per rectum or tear at anal verge. Patulous anal canal was present. X-ray abdomen-pelvis showed the foreign body in lower abdomen and pelvis. Ultrasonography was normal. Routine blood investigations were normal.

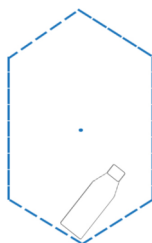


Fig. 1: Diagrammatic representation of foreign body



Fig 2: Plain X-ray abdomen-pelvis showing foreign body in pelvis

Management

Manual removal by holding the base of the bottle was impossible without anesthesia. After reassurance and administration of general anesthesia, in lithotomy position several attempts of manual removal had been attempted. The bottle could not be brought downwards in anal canal. The foreign body even shifted higher up in rectum making the transanal extraction extremely difficult and dangerous.

Lower midline laparotomy was performed. The bottle was tipped to the sigmoid loop. Attempt was made to remove foreign body per rectally, but it failed. A longitudinal colotomy opening of 5cm over the neck of the bottle was made on ante-mesenteric border and the plastic bottle was extracted from the sigmoid colon. Sigmoid colon and rectum was assessed for vascularity and injury and was found normal. No peritonitis was present. Primary repair of colotomy was done in single layer of continuous interlocking suture using silk 2-0. Laparotomy was closed with a drain in pelvis. The post-operative course was uneventful and the patient was started clear fluids on second post-operative day and soft diet from fourth day. Patient passed soft stool on forth post-operative day. Drain was removed on fifth postoperative day. Patient was discharged from hospital on the sixth day. Laparotomy sutures were removed on tenth day. Patient had laxity in anal tone but there was no anal incontinence. Patient was lost in follow-up. So we couldnot assess return of laxity.



Fig 3: Foreign body inside sigmoid colon



Fig 4: Removal of foreign body by colotomy



Fig 5: Foreign body- A plastic cold drink bottle of app. 15 length and 5cm diameter

Discussion

Anorectal foreign bodies are not an uncommon presentation to the emergency surgical department. Majority of cases are reported from Eastern Europe. Males are commonly affected. The age group is 16–80 years. However, 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.^[5]

Rectal foreign bodies have been categorized as voluntary versus involuntary and sexual versus nonsexual. Most common category is voluntarily insertion for sexual stimulation. Involuntary sexual foreign bodies are exclusive in rape and sexual assault. Bodies packing being another form which is used by drug and gold traffickers.^[4] Involuntary nonsexual foreign bodies are found in the elderly, children or the mentally ill. The object length varies between 6 and 15 cm.

Patient complains of abdominal pain, rectal bleeding or pain and sometimes constipation.^[2,3,5] Symptoms of infection or perforation may be evident in some cases. Physical examination includes careful abdominal examination to assess for signs of peritonitis. The rectal foreign body can be palpated in either the left or right lower quadrant of the abdomen. Rectal examination should be performed after X-ray abdomen to prevent accidental injury to the surgeon from sharp objects. The foreign body may be palpable in the distal rectum. Bright red blood per rectum is often seen. Status of the sphincter should be assessed.

Laboratory tests include routine investigations. In case of perforation, leukocytosis and acidosis may be present. Urine examination after catheterization is done and any haematuria can be assessed. These laboratory tests are not very helpful. Radiologic evaluation by antero-posterior and lateral x-rays of the abdomen-pelvis should be obtained to delineate the foreign body position and determine shape, size and presence of pneumoperitoneum. If there is free air or obvious peritonitis indicating a perforation, then the patient needs immediate resuscitation with intravenous fluids and broad-spectrum antibiotics. In stable patient with suspected perforation, a computed tomographic scan often helps to determine same. Ultrasonography has limited role and plastic cannot be evaluated by ultrasonography. When a foreign body is removed or absent in the rectal vault, rigid proctoscopy or endoscopic evaluation may reveal the rectal injury or the foreign body located higher in the rectosigmoid.^[4]

In clinically stable patients without evidence of perforation or peritonitis, depending on the size and shape of the object various transanal methods have been described. Patient is relaxed with a perianal nerve block, a spinal anesthesia or intravenous conscious sedation.^[4,5] The high lithotomy position facilitates downward abdominal pressure and removal of most objects. Lord's dilatation is done. If the foreign body can be easily palpated, using the surgeon's hand for removal of foreign body is the best method. Some smooth foreign bodies create a seal with the rectal mucosa and placing a Foley catheter alongside the balloon above it helps in extraction. Obstetric vacuum extractors have been described to grasp the object, widen the anal canal and release the rectal seal.^[4,6] Other instruments like polypectomy snares and Sengstaken-Blakemore tube are also used.^[7]

Plastic bottle with open end at lower end can be removed by inserting plaster of paris inside bottle with a metal spatula and allowing it to dry and take shape. After sometime the spatula is pulled to remove the plastic bottle with or without anesthesia depending on pain threshold of patient. Removal of the sharp objects is difficult and these objects should be removed under direct visualization through a rigid or flexible endoscope. A repeat plain film to detect iatrogenic perforation is done.

Removal of illicit drugs packets is challenging as using too much force could result in the rupture of the packets. Signs or symptoms of perforation or drug ingestion/toxicity be observed and then exploratory laparotomy for removal of the remaining packets and aggressive medical treatment for the overdose is warranted.

Flexible endoscopy is reserved for objects that are located more proximally in the rectum or the distal sigmoid colon. It also provides excellent visualization of the mucosa to look for gross changes in the rectal mucosa. Laparoscopy can be used as an aid to push the object more distally into the rectum for a transanal removal.

Surgery is indicated if the foreign body cannot be removed transanally and in patients with perforation or peritonitis. A colotomy and removal of the foreign object is done. This colotomy can be primarily repaired. Diversion is done for patients with frank peritonitis, instability and perforation with extensive fecal contamination.^[3,4]

Post removal observation depends on several factors, such as the clinical status of the patient, comorbidities, delay in presentation, and whether or not there was any resultant trauma to the rectum or surrounding tissue. Post extraction endoscopy is must to detect tears, bleeding, ischemia and perforation.^[3,4] Bleeding from lacerations in the rectal mucosa is generally self-limited. Death from sepsis and multisystem organ failure may occur rarely. Traumatic disruption of the anal sphincter can result in mild to severe fecal incontinence. Repair can be done later on if there is infection.

Conclusions

Rectal foreign bodies present a difficult diagnostic and management dilemma. The evaluation of the patient with a rectal foreign body needs to progress in an orderly fashion. In the nonperforated stable patient, the object should be removed with a local block or anesthesia via the transanal approach. Surgery with a laparotomy should be reserved for patients with perforation or ischemic bowel or cases of failed transanal attempts. After removal of the foreign body, a period of observation, a rigid or flexible endoscopy and repeat plain films to examine for evidence of injury and perforation that may have occurred during the extraction process should be done.

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