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Case Report

Unusual presentation of a rectal foreign body: a diagnostic dilemma

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ABSTRACT

Rectal foreign bodies present a challenge to surgeons from obtaining the correct diagnosis to managing the patient due to a wide array of presentation. Diagnostic dilemmas often arise as patients are sometimes unwilling to disclose the actual history and seek medical attention late. We present a case of a 65 year old Asian gentleman who present with history of per-rectal bleeding, tenesmus, acute urinary retention, constitutional symptoms with investigations suggestive of rectal malignancy. Intraoperatively identified a rubber-like foreign body tightly packed in the pelvic-cavity with severe injury to the rectum requiring abdominal-perineal resection.

Keywords: Bowel necrosis, Laparotomy, Rectal foreign body

INTRODUCTION

Rectal foreign bodies present a challenge to surgeons from obtaining the correct diagnosis to managing the patient due to a wide array of presentation. Diagnostic dilemmas often arises as patients are sometimes unwilling to disclose the actual history and seek medical attention late.[1,2] Ooi et al from a study of 35 patients reported that only 33% admit to transanal insertion, while 67% complained of anal pain at the point of presentation.[3] Other presentations are per-rectal bleeding, mucous discharge, there are reported cases of local injury or perforation in attempts to remove the object.[1] Various types of foreign body have been reported, from bottles to bones, toys, fruits, vegetables, drugs, pipe hose, egg ornament, sprays, cans and many more.[2,4] Majority of cases are inserted via anus for sexual adventures voluntarily and occasionally as result of assault or rape.[1] Most report successful transanal extraction with or without sedation, some with aid of tools and endoscopy, however some require a laparotomy where there was significant bowel injury or perforation.[4] We have encountered many rectal foreign bodies in our centre for the past few years, however this is the first rare form of foreign body with an unusual presentation.

CASE REPORT

A 65 year old Asian gentleman presented to the Emergency Department with urinary retention for 1 day, 1 week history of diarrhoea and tenesmus, per rectal bleeding and anal pain for a week. Patient had history of lower urinary tract symptoms for 2 months, loss of appetite and loss of weight for 2 months. On examination, he had fever of 38.2^{0}C, the abdomen was distended, but soft with no mass palpable. Per rectal examination reveals a firm mass 3cm from anal verge with irregular surface, obstructing the whole lumen with week anal tone. We were unable to perform a bedside proctoscopy as the patient complained of severe pain. In the emergency room, a urinary catheter was inserted and it drained 700mls of blood stained urine.

Blood investigations revealed a raised white cell count of 22×103/UL), a haemoglobin count of 12.0 g/dl, a normal platelet count (207×109/L), normal liver function test and a normal urea of 5.1 mmol/L, creatinine 57 umol/L. Urine tested positive for erythrocytes and leucocytes, and negative for nitrates. Urine culture was negative. He was started on intravenous broad-spectrum antibiotics.

Examination under anaesthesia (EUA) and a diverting colostomy was done due to impending obstruction and multiple biopsies of the anorectal mass were taken. EUA showed an irregular mass 3cm from anal verge with surrounding perianal induration and perianal abscess draining pus. Histopathology report of the biopsy showed necrotic tissue. Contrast enhanced CT showed a large rectal lesion with fatty attenuation, with few small mesentery lymph nodes, differentials of lipoma or liposarcoma. Further imaging with MRI showed similar finding of large rectal lesion with poor demarcation with prostate.

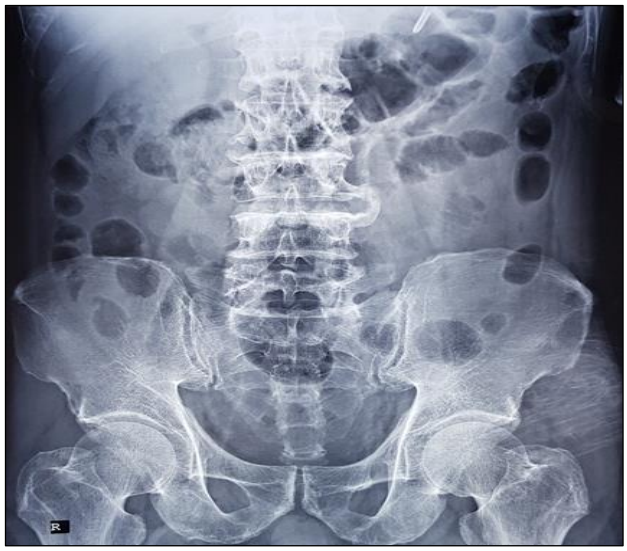

Figure 1: A plain abdominal X-ray at presentation with no free air, no dilated bowel and no obvious foreign body detected.

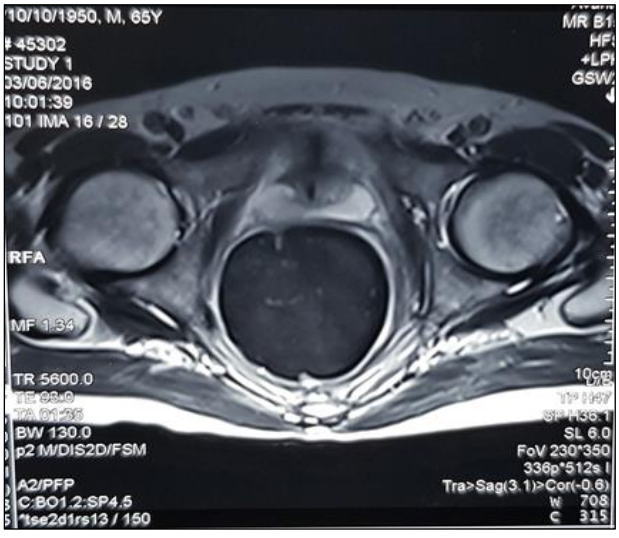

Figure 2: Axial view of MRI pelvis of lesion within rectal lumen.

Due to the incongruity between the pathology and examination finding, rectal biopsy of the mass was repeated, however similar results of necrotic tissue was obtained with no evidence of malignancy. After extensive workup for malignancy, in view of the large obstructing 'tumour' with ultra-low location, patient and family members were counselled for an abdomino-perineal resection of the tumour. At that point, patient and family members still did not reveal any history of foreign body insertion and consented for the surgery. Intraoperatively, a large intra-luminal mass identified, fixed tightly to the pelvic cavity, with narrow operating window. Foreign body identified intraoperatively, rectal mucosa necrotic and severely damaged with perforation, proceeded with abdomino-perineal resection and a permanent end colostomy. Patient recovered from sepsis post operatively and was referred to psychiatry department for assessment. However, he claimed to have no recollection of the incident and did not know how the foreign body was inserted.

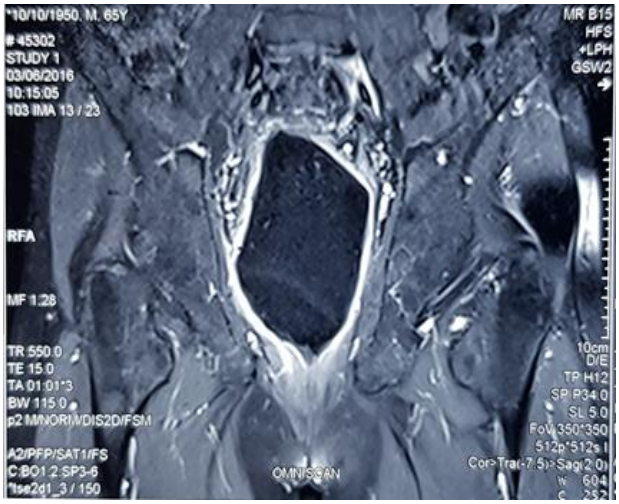

Figure 3: Coronal view of hypointense lesion within rectal lumen.

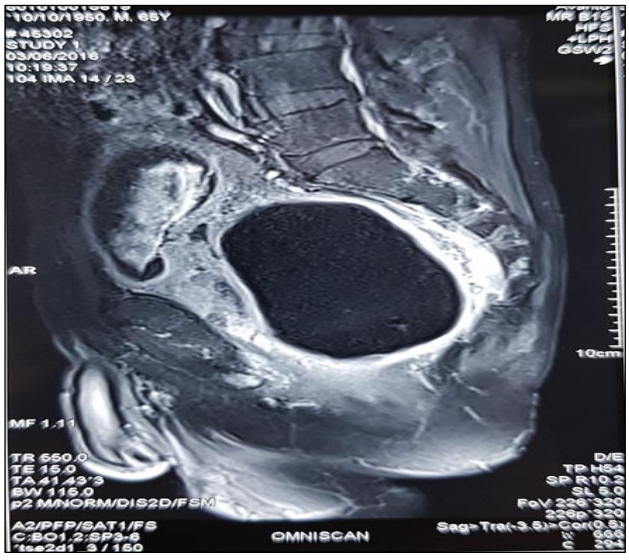

Figure 4: A sagittal view of MRI T1FS pelvis showed a well defined lesion within the rectal lumen which is hypointense in all sequences.

Figure 5 and 6: Rubber like foreign body extracted intraoperative.

DISCUSSION

The incidence of rectal foreign body was reported 0.13 in 100000 population, similar in population across the globe.[5] A systematic review shows that the incidence of retained colorectal foreign body is disproportionally higher in men, with a ratio of 37:1.[6] 90% of patients give inaccurate history at presentation, some reported to present with peritonitis and was not forthcoming even when facing life threatening situation.[1,4,5] The usual presentation are anal pain, per rectal bleeding, constipation.[1,5] In this case, a rare presentation of acute urinary retention and perianal abscess. The clinical presentation of perianal abscesses due to foreign bodies impacted in the anal canal mimics common causes of acute anal pain.[7] Further finding of a history of anorexia and loss of weight mislead towards a more chronic problem, which raise the suspicions of malignancy.

Most cases reported successful diagnosis after digital rectal examination or from plain radiograph, however in this case, the rubber material is not radiopaque and the surface was not smooth as other foreign body.[3,6,8] We believed that the rubber have been injected per rectal in liquid form which later hardens following the shape and curve of the pelvis, hence being severely impacted. Many patients present late after multiple failed attempts to remove the foreign body, leading to further damage and complications to the surrounding tissue.[1,9] Detection time of foreign body from literature ranges from few hours to 45 years after insertion, the later detection is usually after extensive workup for other differentials such as colorectal cancer.[10]

For the classification of rectal organ injury, the use of a system for penetrating and blunt injuries created by the Association of American Trauma Surgery (AAST) is helpful for evaluation of rectal foreign objects:[4, 11]

AAST rectal organ injury scale[11]

- Grade 1: haematoma: contusion or haematoma (without devascularization and/or partial laceration)
- Grade 2: laceration ≤50%, peripheral
- Grade 3: laceration ≥50%, peripheral
- Grade 4: full-thickness laceration extending to the perineum
- Grade 5: devascularized segment

There is no standardized protocol for surgical treatment of these patients and many different strategies have been described over the last years.[1] The management strategy depends on the time from insertion to presenting to the emergency room, the kind and location of the foreign body and if the patient presents with any symptoms of complications caused by the foreign body such as peritonitis or perianal abscess. First step in evaluating the patient should be assessment of peritonitis, signs of infection or sepsis, fever, tachycardia, hypotension to determine if the patient require urgent laparotomy or more intensive care and monitoring.[4] If the patient is unstable, no bedside procedure should be attempted to extract the foreign body.[4] Initial resuscitation with fluid, antibiotics and inotropic support if needed should be initiated prior to planning for emergency surgery.4 Management of perianal abscess due to foreign body includes incision and drainage of pus, removal of foreign body and antibiotics.[7]

Several techniques have been described for extraction of rectal foreign bodies. Transanal extraction is usually attempted in emergency with local anaesthesia with or without sedation. This usually yields 60-75% success rate.[4,12] This should not be performed if there are signs of perforation or with sharp objects. Endoscopic retrieval with flexible or rigid sigmoidoscopy can be used for those objects not reachable by tool or hand transanally.[2] If the above methods failed to retrieve the object, patient will need to undergo operative methods with general anaesthesia.[2] Starting with examination under anaesthesia, followed by laparoscopic assisted techniques and finally if still unable to retrieve, laparotomy with colotomy and transabdominal removal.[12] Management of rectal injuries includes diversion, debridement, distal wash and drain.[9] One case reported a retained foreign body for 5 years, with severe sphincter damage requiring a permanent colostomy.[9] In cases with large impacted foreign body in the pelvis, one author suggest symphysiotomy a known technique described for obstructed labour however by far no cases have been reported for rectal foreign body.[2]

CONCLUSION

The diagnosis of foreign body should be suspected in patients presented with short onset of symptoms or history that does not correlate clinically. Important key in managing rectal foreign body is careful history taking and

high index of suspicion if there are difference in the history given by patient and family members. Management involves the multi-disciplinary approach with radiologist and also psychiatry team. Most cases can be managed conservatively however complicated cases might require surgical intervention.

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