ISSN: 2581 – 3633
PubMed - National Library of Medicine - ID: 101745081

International Journal of Medical Science and Advanced Clinical Research (IJMACR)

Available Online at:www.ijmacr.com

Volume – 9, Issue – 3, May – 2026, Page No.: 36 – 40

Accidental Rectal Foreign Body Due to Jet Spray Insertion Requiring Staged Surgical Management: A Case Report

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How to citation this article: Shreya Khandelwal, Parth Desai, Mit Patel, Digant Patel, Jagrut Patel, Mukesh Pancholi, "Accidental Rectal Foreign Body Due to Jet Spray Insertion Requiring Staged Surgical Management: A Case Report", IJMACR – May – 2026, Volume – 9, Issue – 3, P. No. 36 – 40.

Type of Publication: Case Report

Conflicts of Interest: Nil

Abstract

Rectal foreign bodies are uncommon surgical emergencies and are most often associated with intentional insertion. Accidental insertion is rare and sparsely reported in the literature.

We present a case of a 37-year-old male who sustained accidental rectal insertion of a bathroom jet spray following a fall. Due to rectal injury and contamination, the patient required emergency exploratory laparotomy with diverting colostomy, followed by elective stoma closure. Timely diagnosis and staged surgical management resulted in a favorable outcome.

Keywords: Rectal foreign body, accidental insertion, jet spray, exploratory laparotomy, rectal perforation, colostomy

Introduction

Rectal foreign bodies (RFBs) are an uncommon presentation in surgical practice, accounting for only 0.0013% of colorectal emergencies[1]. Despite their rarity, they pose significant clinical challenges due to delayed presentation, diagnostic difficulties, and the potential for serious complications. Patients often hesitate to seek medical care due to embarrassment or social stigma, which may result in worsening of the condition.

The majority of reported cases involve intentional insertion, commonly associated with sexual practices. Other etiologies include assault, psychiatric conditions, or iatrogenic causes. In contrast, accidental rectal foreign body insertion is exceedingly rare and not well documented in the literature. Such cases are usually associated with unusual mechanisms, including falls or domestic accidents.

Clinical presentation varies depending on the nature and location of the foreign body and the presence of complications. Patients may present with anorectal pain, discomfort, bleeding, or signs of acute abdomen in cases of perforation. A detailed clinical history, digital rectal examination, and appropriate imaging such as plain radiographs or computed tomography are essential for diagnosis.

Management depends on multiple factors, including the size, shape, and location of the object, as well as associated complications. Non-operative approaches such as transanal extraction are preferred in stable patients with low-lying foreign bodies. However, surgical intervention is required in cases of failed extraction, high-lying objects, or complications such as perforation and contamination. The use of fecal diversion remains an important consideration in cases with rectal injury.

In this report, we present a rare case of accidental rectal foreign body insertion due to a bathroom jet spray following a fall, which required staged surgical management. This case highlights the importance of prompt diagnosis and individualized treatment in achieving optimal outcomes. The present case is unique due to the rare mechanism of injury involving a bathroom jet spray following an accidental fall. Such cases are scarcely reported in literature. Additionally, the presence of bilateral rectal perforations with contamination necessitating staged surgical management further distinguishes this case.

Case Presentation

A 37-year-old male presented to the surgical department with complain of accidental foreign body insertion per rectum following a fall in the bathroom. He complained of pain and discomfort without bleeding per rectum. Patient had tried removing it by himself but failed to do so. Per rectal examination was done and a hard foreign body was palpated. There was tenderness without any active P/R bleed and radiological imaging in the form of Xray PBH confirmed a rectal foreign body. Patient was vitally stable and Routine laboratory investigations were taken which were normal.

Management and Outcome

Manual reduction of the rectal foreign body was tried under spinal anesthesia which failed due to opening of spray head inside the rectum. Then blood samples for routine investigations were sent and Xray PBH was done. Due to the size and position of the foreign body and its impaction on rectal wall with perforation which occurred due to multiple attempts beforehand by patient himself, patient was prepared for emergency laparotomy. A lower midline laparotomy was performed. A foreign body was palpated and rectum

was opened with small incision. Foreign body was extracted and rectal wall injury and contamination was noted. Perforation was visualized over right and left side of rectum. The jet spray was carefully extracted. Rectal wall injury with contamination was noted, 2 layered primary rectal wall repair and a diverting colostomy was performed to allow rectal healing. The postoperative period was uneventful. Pre and post operative psychiatric evaluation was done. Patient was discharged on POD 7 with advice for stoma care and follow up. Patient was re admitted at 6 weeks post op after distal patency and leak check for elective stoma closure which was performed successfully.

Figure 1:

Figure 2:

Figure 3:

Discussion

Rectal foreign bodies are uncommon but challenging surgical emergencies, with true incidence likely underreported due to social stigma and delayed presentation. Most reported cases involve males in the third to sixth decade of life. While intentional insertion accounts for the majority of cases, accidental rectal foreign bodies are exceedingly rare and sparsely reported.

Accidental insertions are usually associated with falls, assault, or unusual domestic accidents. Bathroom-related injuries are uncommon, making jet spray insertion a rare mechanism. Regardless of etiology, clinical management should remain focused on patient safety and prompt treatment.

Initial assessment should prioritize hemodynamic stability and exclusion of peritonitis. Digital rectal examination and appropriate imaging are essential diagnostic steps. Plain radiographs usually suffice to localize radiopaque foreign bodies, while computed tomography is recommended when perforation or intra-abdominal contamination is suspected.

A retained RFB can be classified as high- or low lying depending on its location relative to the rectosigmoid junction. Clinically, a low-lying RFB is considered when it is palpable on a digital rectal examination,

which could allow its extraction at bedside. In stable patients, less-invasive procedures such as transanal extraction by hand or forceps should be attempted first, and if unsuccessful, removal could require surgery. The patient should be placed in a lithotomy position to facilitate abdominal manipulation to apply the Valsalva maneuver. The success rate depends on the size of the clinician's hand and the adequacy of anal sphincter relaxation.

High-lying retained rectal foreign body usually necessitates endoscopic or surgical intervention. The endoscopic extraction technique involves the use of a flexible endoscope to extract a foreign body that is situated more proximally. This technique provides visualization of the mucosa, and a polypectomy snare can be used to help extract the foreign body. The endoscope can also be used to evaluate for mucosal injuries after successful extraction. A limitation of endoscopic removal is the size of instruments afforded by the endoscope, making removal of a larger RFB significantly more difficult. After the initial assessment and diagnosis, patients with signs of perforation should undergo laparotomy with prior resuscitation and antibiotics. Patients without signs of peritonitis may undergo manual evacuation or endoscopic removal if the RFB is located more proximally. Should these attempts fail, removal under general anesthesia can be attempted. Another indication for surgical intervention is acute bleeding.

if conservative measures are unsuccessful, extraction via a controlled colostomy is indicated, followed by primary repair. In the presence of perforation without gross contamination, primary anastomosis of a short-segment resection could be performed in an otherwise healthy bowel wall. In the presence of gross contamination, a Hartmann procedure is advisable.

The role of fecal diversion remains debated; however, most authors recommend temporary colostomy in cases of rectal wall injury or gross contamination to reduce the risk of pelvic sepsis and allow adequate healing. In the present case, staged surgical management resulted in a favorable outcome without postoperative complications.

Conclusion

Accidental rectal foreign bodies are rare but potentially serious clinical entities. Early diagnosis, careful assessment, and individualized surgical planning are essential. Complicated cases with rectal injury or contamination often require operative intervention and staged management with temporary fecal diversion.

With timely and appropriate treatment and proper patient counselling and follow up excellent outcomes can be achieved.

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