Laparoscopic Management of Rectal Perforation Secondary to Self Induced Foreign Body – A Rare Case Report

Aditya Yelikar\(^*\) Tejinder Singh Chhabda\(\dagger\)
Pravin Suryawanshi\(\ddagger\)

\(^*\)MGM’s Medical College and Hospital, Aurangabad, Maharashtra, aditya.yelikar@yahoo.com
\(\dagger\)MGM’s Medical College and Hospital, Aurangabad, Maharashtra
\(\ddagger\)MGM’s Medical College and Hospital, Aurangabad, Maharashtra

Copyright ©2014 The Berkeley Electronic Press. All rights reserved.
Laparoscopic Management of Rectal Perforation Secondary to Self Induced Foreign Body – A Rare Case Report

Aditya Yelikar, Tejinder Singh Chhabda, and Pravin Suryawanshi

Abstract

Laparoscopically managed rectal perforation secondary to self induced foreign body is a very rare case. Most common causes of rectal perforation are trauma and rectal impalement1. Males are commonly affected2, 3. Late presentations in rectal perforation can prove fatal. Our case was a 23 year-old well-educated who presented with severe abdominal pain, vomiting, 1 episode bleeding per rectum, and acute urinary retention. He gave no other history. On examination, he had diffuse pain in the abdomen, without guarding or rigidity, and with fresh blood on digital rectal exam. Ultrasonography suggested features of sub acute intestinal obstruction and standing abdominal X-ray showed no abnormality. He was admitted to the surgical ward. A Riles tube was inserted. Intravenous fluids and antibiotics were initiated. After 8 hours of admission, his abdominal pain increased despite appropriate analgesic administration. He developed guarding of his abdomen, tachypnea, and tachycardia. His repeat standing abdominal X-ray showed a small amount of air under his right diaphragm. He was taken for emergent laparoscopic exploration. Intraoperatively, there was evidence of two intact green leaves in the peritoneum with a perforation of the anterior and middle third of the rectum. The leaves were extracted. The perforation was closed primarily. Thorough peritoneal irrigation was performed. A diverting sigmoid loop colostomy was created. The postoperative period was uneventful for complications. Later on in the postoperative period, the patient gave a history of per rectal insertion of a pointed wooden stick with leaves at its tip on same morning of presentation. The diverting colostomy was closed after 6 weeks without complications. Traumatic rectal perforation should be considered as one of the differential diagnoses in cases of perforated peritonitis in young patients with no other obvious etiological factor. Self-induced foreign body can be a cause of rectal perforation in young patients. Immediate surgical intervention is the treatment of choice and has a good prognosis. Some cases of rectal perforation may be managed successfully by a laparoscopic method.

KEYWORDS: rectal perforation, self induced foreign body, auto-eroticism
Laparoscopic Management of Rectal Perforation Secondary to Self-Induced Foreign Body- A Rare Case Report

Aditya Yelikar- Chief Resident, Dept of Surgery, MGM’s Medical College and Hospital, Aurangabad, Maharashtra

Tejinder Singh Chhabda - Associate Professor, Dept of Surgery, MGM’s Medical College and Hospital, Aurangabad, Maharashtra

Pravin Suryawanshi - Professor and Head, Dept of Surgery, MGM’s Medical College and Hospital, Aurangabad, Maharashtra

Keywords – rectal perforation, self induced foreign body, auto-eroticism
ABSTRACT

Laparoscopically managed rectal perforation secondary to self induced foreign body is a very rare case. Most common causes of rectal perforation are trauma and rectal impalement\(^1\). Males are commonly affected\(^2,3\). Late presentations in rectal perforation can prove fatal. Our case was a 23 year-old well-educated who presented with severe abdominal pain, vomiting, 1 episode bleeding per rectum, and acute urinary retention. He gave no other history. On examination, he had diffuse pain in the abdomen, without guarding or rigidity, and with fresh blood on digital rectal exam. Ultrasonography suggested features of sub acute intestinal obstruction and standing abdominal X-ray showed no abnormality. He was admitted to the surgical ward. A Riles tube was inserted. Intravenous fluids and antibiotics were initiated. After 8 hours of admission, his abdominal pain increased despite appropriate analgesic administration. He developed guarding of his abdomen, tachypnea, and tachycardia. His repeat standing abdominal X-ray showed a small amount of air under his right diaphragm. He was taken for emergent laparoscopic exploration. Intraoperatively, there was evidence of two intact green leaves in the peritoneum with a perforation of the anterior, middle third of the rectum. The leaves were extracted. The perforation was closed primarily. Thorough peritoneal irrigation was performed. A diverting sigmoid loop colostomy was created. The postoperative period was uneventful for complications. Later on in the post-operative period, the patient gave a history of per rectal insertion of a pointed wooden stick with leaves at its tip on same morning of presentation. The diverting colostomy was closed after 6 weeks without complications. Traumatic rectal perforation should be considered as one of the differential diagnoses in cases of perforated peritonitis in young patients with no other obvious etiological factor. Self-induced foreign body can be a cause of rectal perforation in young patients. Immediate surgical intervention is the treatment of choice and has a good prognosis. Some cases of rectal perforation may be managed successfully by a laparoscopic method.

INTRODUCTION

Foreign bodies are commonly introduced in the rectum for diagnostic or therapeutic instrumentation, self administered treatment, criminal assault, ingestion, or auto-eroticism\(^4\). Anorectal stimulation and penetration is a common sexual practice. For the diagnosis of rectal impalement, special attention should be focused on the patient history and physical examination to evaluate for sexual abuse. The objects placed as a result of assault, trauma, or eroticism consist of a diverse collection including sex toys, tools and instruments, bottles, cans, jars, pipes and tubing, fruits and vegetables, stones, light bulbs and flash lights\(^6\), etc. Iatrogenic foreign bodies include thermometers, enema tips, catheters, etc. Foreign bodies in the low or mid-rectum up to a level of 10cm from anal verge can be most often removed transanally, while those above 10cm may require laparotomy for retrieval\(^7\). Therapeutic protocols rectal perforations include primary repair of perforation with fecal diversion\(^5\). Additionally, some such patients may warrant psychological evaluation to avoid subsequent self-inflicted traumas or minimize psychological trauma in assault cases.
CASE REPORT

A 23 year-old male presented with pain in abdomen for 10-12 hours, vomiting (3-4 episodes), 1 episode of blood stained stools, and acute urinary retention. The patient was immediately catheterized and 1 liter of urine was drained. However his abdominal pain was not relieved. He was given appropriate analgesics. On examination, he had diffuse pain in the abdomen, without guarding or rigidity, and with fresh blood on digital rectal exam. Ultrasonography demonstrated features sluggish peristalsis suggestive of sub acute intestinal obstruction. Standing abdominal X-ray showed no abnormality.

He was admitted to the surgical ward. A Ryle’s tube was inserted. Intravenous fluids, intravenous antibiotics, and analgesics were administered. Laboratory investigations showed: Hb 12.7, TLC 11,070, Plt 220,000, BUN 31, Cr 0.5, Na 136, and K 3.8. After 8 hours of observation, his abdominal pain increased despite appropriate analgesic administration. The patient developed abdominal guarding, tachypnea (28 cycles/min), and tachycardia (110 beats/min). Repeat standing abdominal X-ray showed small amount of gas under his right diaphragm. The patient was immediately taken for laparoscopic exploration.

Intraoperative findings showed 2 intact green leaves in the peritoneal cavity (pelvic region) with 500mL turbid/purulent fluid in the peritoneum. The fluid was aspirated. The leaves were removed. Thorough exploration was conducted for perforation of the stomach or small bowel. Surprisingly, there was a 3-4cm transverse perforation on the anterior wall of middle third of rectum with inflamed, greenish (chemical burns) edges of perforation. Biopsies were taken from the edges. The edges were cleaned and sutured primarily with absorbable suture. Thorough peritoneal lavage was performed and a diverting loop colostomy created. A drain was placed in the pelvis. The postoperative period was uneventful for complications.

Post operative abdomen with colostomy
On postoperative day 2 after thorough interaction with the psychiatrist, the patient gave history of per rectal insertion of a pointed wooden stick with leaves at its tip for auto-eroticism on the same morning of presentation. He continued to follow with the psychiatrist. He was discharged home on postoperative day. His colostomy was closed after 6 weeks without complication.

**DISCUSSION**

Reports of rectal foreign bodies are uncommon in Asia, and majority of case series are reported from Eastern Europe. The common age group is 16-80 years. Abdominal pain and bleeding per rectum are the common presenting symptoms. Digital rectal examination is the corner stone in the diagnosis. Anorectal impalement injuries have favorable outcomes when diagnosed early. Among these injuries, the cases of intraperitoneal perforations or multiple traumas to adjacent pelvic organs constitute real emergencies and require a more careful examination. Traumatic rectal perforations can be managed by primary closure alone or primary closure with fecal diversion. The main complication after penetrating perineal injuries is subsequent wound infection, abscess formation, and sepsis. This is why fecal diversion is still a mainstay of management.

The most common and least reported conditions under which foreign bodies are introduced into the anus is that of autoeroticism. In our case the misdiagnosis of rectal impalement was due to concealment of the history by the patient himself. As soon as perforation was diagnosed clinically and confirmed on X-ray, the patient was taken for laparoscopic exploration.

**CONCLUSION**

In cases of perforated peritonitis in young patients with no other obvious etiological cause the rectum should be considered the site of perforation specially if there is history of bleeding per rectally. Rectal perforations in young patients with no other obvious cause should raise suspicion for self induced rectal foreign body as the etiologic factor. Immediate surgical intervention is the treatment of choice with good prognosis. Such perforations may be managed successfully by laparoscopic method. Additionally, some such patients may warrant psychological evaluation to avoid subsequent self-inflicted traumas or minimize psychological trauma in assault cases.

**REFERENCES**