

A Rare Case of Stercoral Perforation in Sigmoid Colon: Case Report

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ABSTRACT

Stercoral perforation is a rare clinical entity, very few cases were reported till date. Stercoral perforation presenting with fecal peritonitis is a surgical emergency and associated with high mortality. Chronic constipation is one of the important cause for fecal impaction. It can also rarely lead to catastrophic complications like perforation, colonic obstruction, and fecal peritonitis. We report a rare case of stercoral sigmoid colon perforation with fecal peritonitis in a 65years old female which was diagnosed on preoperative CT scan and an emergency laparotomy was done.

Keywords: Constipation, Fecaloma, Fecal Peritonitis, Stercoral Perforation.

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INTRODUCTION

Stercoral perforation may represent 3.2% of all colonic perforations and 2.2% of randomly selected autopsy examinations.¹ It generally occurs in older individuals.² Berry³ presented the first case of stercoral perforation of the colon to the Pathological Society of London in 1894, and it is a rare event with fewer than 90 cases reported in the literature till 2002.⁴ The postulated pathogenesis is from a rise in intraluminal pressure which becomes greater than the capillary perfusion pressure within the bowel. This then results in focal ischaemia, necrosis, ulceration, and ultimately perforation.⁵ Stercoral perforation and fecal peritonitis causing contamination of the peritoneal cavity due to various causes, most commonly diverticular disease and colorectal tumor. Stercoral peritonitis is associated with a high morbidity and mortality rate; therefore an early diagnosis is important.⁶ Here we report the case of a 65years old female presented with severe abdominal pain with gradual distension of abdomen and no passage of flatus and stool for the last 7 days. CECT scan of whole abdomen revealed a sigmoidal perforation subsequently an urgent exploratory laparotomy was performed.

CASE DESCRIPTION

A 65years old female was admitted in our department of general surgery for persistent gradually increasing abdominal pain starting from the below umbilical region then involving the whole abdomen with gradually increasing abdominal distension for the last 1 week. She was also complaining of no passage of flatus and stool for

last 7days. She had a known history of chronic constipation for last 10years and for that she was on syrup Lactulose 10ml daily at bed time.

In general survey BP was 90/60 mm of Hg, pulse 120/min with moderate pallor and patient was severely dehydrated. On physical examination abdomen was markedly distended with tenderness and rebound tenderness present mainly in the lower abdomen. In digital per rectal examination gloves was not stained with stool, anal tone was normal and no mass or growth palpated with finger. After proper resuscitation of the patient an urgent straight X-ray abdomen erect posture was done which revealed dilated stomach, small and large bowel [Fig-1]. USG whole abdomen revealed distended gas filled bowel with small free fluid in abdomen. CECT scan shows extensive extraluminal fecal matter in the peritoneal cavity (arrow) and air loculi, consistent with fecal peritonitis[Fig-2]. As the diagnosis of fecal peritonitis was made an urgent exploratory laparotomy was done which revealed abdominal cavity was filled with pus and flakes and greater omentum found to be adhered in the pelvis after gentle adhesiolysis was done a perforation was found 10cm above the recto-sigmoid junction[Fig-3] with signs of inflammation in the gut wall surrounding perforation. After proper abdominal wash with warm normal saline, resection of the unhealthy part of the sigmoid colon a proximal end colostomy with Hartman's procedure was done. Patient recovered from surgery without complications and was discharged on 12th post-operative day.



Figure 1: Straight x-ray abdomen Showing dilated stomach and colon

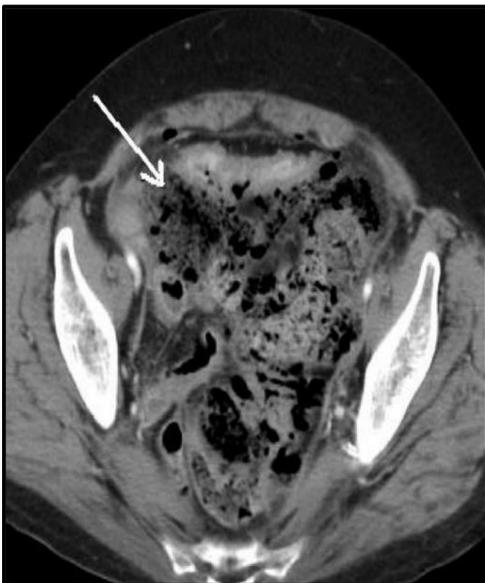


Figure 2: CECT abdomen showing air loculi in peritoneal cavity



Figure 3: Perforation in the sigmoid colon

DISCUSSION

Stercoral perforation is a relatively rare, life threatening condition which, if left untreated, has a mortality rate of up to 47%.⁸ The pathogenesis is related to poor hydration of the feces, resulting in hard and impacted feces, also called fecaloma. Stercoral perforation is a rare surgical condition, with fewer than 90 cases reported in the literature upto 2002. This condition was first described by Berry in 1894 and is defined as colonic perforation due to the pressure effect of hard fecalomas on the wall of an otherwise normal colon, in the absence of any other established pathology.⁷ The usual definition of stercoral perforation is "Perforation of the large bowel due to pressure necrosis from a fecal mass"⁹, and represents a cause of colon perforation. Severe chronic constipation is considered to be the main causative factor in the development of stercoral perforation of the colon.¹⁰⁻¹² Long-standing constipation may enhance the formation of stone-hard fecalomas and maintain a persistent pressure over the bowel wall leading to pressure necrosis of the mucosa. Nevertheless, stercoral ulceration of colonic mucosa does not always occur among constipation cases, and not every stercoral ulceration results in colon perforation.

The mean age of presentation in such cases is 59 years and the age range is 22–85 years.¹³ In 60% of cases of fecal impaction, there is a prior history of constipation.¹³ There are a few risk factors for stercoral ulcer perforation, which include chronic intermittent constipation and the use of nonsteroidal anti-inflammatory drugs or drugs-like amitriptyline, antacids, steroids, codeine, and heroin.¹⁴⁻¹⁶ On CT scan, the diagnosis of fecal impaction is obvious, with visualization of a dilated rectum and colon containing dense, lamellated fecal masses (fecalomas) with thin colonic walls. The CT scan findings of stercoral colitis include focal colonic or rectal wall thickening involving the dilated sigmoid colon and rectum, which demonstrate fecalomas. Pericolonic/perirectal fat stranding is usually seen due to colonic ischemia or wall edema. The presence of intramural or extraluminal air loculi suggests colonic perforation.

Maurer et al.¹³ described a few diagnostic criteria for stercoral perforation; these include 1. a rounded or ovoid colonic perforation, which is more than 1 cm in diameter and antimesenteric in location, 2. the presence of fecalomas within the colon, protruding through the perforation site, or found free within the abdominal cavity and 3. pressure necrosis, ulcer formation, and chronic inflammatory reaction around the perforation site microscopically. According to these criteria, the presence of any underlying colonic pathology, such as diverticulitis, infectious process, inflammatory bowel disease, or obstruction, excludes the diagnosis of primary stercoral perforation of the colon. It is important to diagnose stercoral colitis preoperatively particularly in elderly patients with severe chronic constipation or long history of use of constipating drugs and less commonly, young patients who are neurologically impaired. CT scan is particularly important in the preoperative diagnosis in the elderly age group since the laboratory findings may not always correlate with the actual pathology.

CONCLUSION

We conclude that in elderly patients with a history of severe or chronic constipation presenting with acute symptoms, the possibility of stercoral perforation should be considered. A proper surgical intervention can reduce the mortality eventually.

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