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CASE REPORTS

Massive Fecal Impaction with Megacolon Mimicking Perforation Peritonitis. A Case Report and Review of Literature.

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ABSTRACT

Introduction: Massive fecal impaction with megacolon represents an uncommon yet serious complication of chronic constipation and can mimic acute abdominal emergencies, including perforation peritonitis.
Case Presentation: A 60-year-old woman with a 5-year history of chronic constipation and irregular laxative use presented with progressive abdominal distension, vomiting, and obstipation. Clinical examination revealed diffuse abdominal guarding and an empty rectum. Imaging findings suggested pneumoperitoneum, prompting emergency laparotomy. Intraoperatively, the cecum, ascending colon, and transverse colon were found to be massively dilated with extensive fecal loading up to the splenic flexure and impending cecal perforation. The radiographic appearance of air under the diaphragm was attributable to the dilated hepatic flexure abutting the diaphragm. Subtotal colectomy with end ileostomy was performed, and postoperative recovery was uneventful.
Conclusion: This case underscores fecal impaction as a potentially life-threatening consequence of chronic constipation, particularly in elderly patients. Misinterpretation of radiological findings can delay diagnosis. Timely recognition and prompt surgical intervention are essential to prevent catastrophic outcomes, including perforation and peritonitis. Increased clinical awareness of these risks is crucial for reducing morbidity.
Keywords: Fecal impaction; Megacolon; Chronic constipation; Perforation peritonitis; Subtotal colectomy;

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INTRODUCTION

Fecal impaction refers to the accumulation of feces in the colon resulting from chronic constipation. Although it can occur at any age, elderly patients are particularly susceptible due to the higher prevalence of constipation in this population. Clinical presentations range from mild discomfort to life-threatening complications, including perforation and obstruction. Healthcare professionals across all specialties involved in geriatric care should maintain awareness of this condition.

Case Report

A 60-year-old woman presented to the emergency surgical department with six days of progressive abdominal distension, three days of vomiting, and three days of constipation. She had a five-year history of constipation and irregular laxative use, as well as congenital scoliosis. There was no history of weight loss, loss of appetite, or family history of malignancy. On examination, her pulse was 110/min, blood pressure 104/72 mmHg, and respiratory rate 22/min; she was afebrile. Respiratory and cardiovascular examinations were unremarkable. The abdomen was grossly distended with diffuse guarding, and no palpable mass was detected. Per rectal examination revealed an empty rectum.

Baseline laboratory investigations revealed normal hemogram, electrolyte levels, and renal function. Abdominal radiography demonstrated apparent air under the diaphragm (Figure 1).

Following resuscitation, emergency laparotomy was performed for suspected perforated peritonitis. Upon entering the abdomen, mild ascites was observed without evidence of bilious or feculent contamination. The cecum, ascending colon, and transverse colon were grossly dilated, measuring approximately 30 cm in diameter, and contained hard stools.

The apparent air under the diaphragm observed on abdominal radiography was attributable to the dilated hepatic flexure abutting the diaphragm. The transition point was identified at the splenic flexure, beyond which the bowel was collapsed. The cecum exhibited signs of impending perforation. Subtotal colectomy was performed. The patient was extubated and transferred

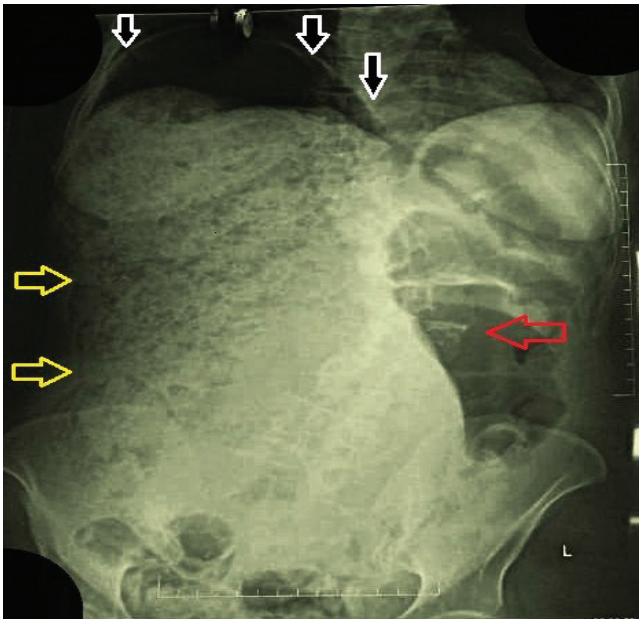

Figure 1. Abdominal X-ray showing air under the diaphragm (white arrows), Large fecaloma (yellow arrows), scoliosis (red arrow).

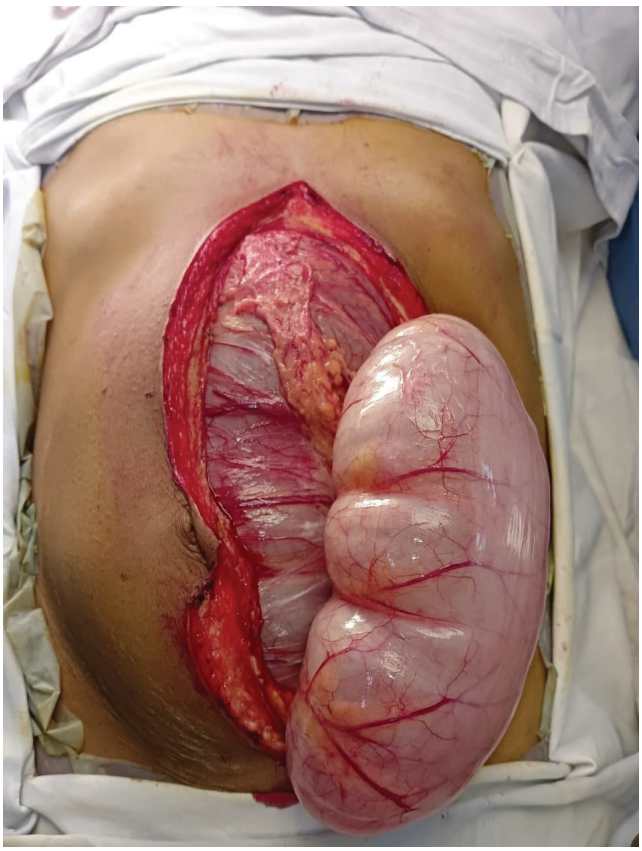

Figure 2. Intraoperative image showing grossly dilated colon.

Figure 3. Resected specimen with feces-loaded cecum, ascending colon, and transverse colon with collapsed descending colon.

Figure 4. Cut-open colon showing a large volume of impacted stool

to the surgical intensive care unit postoperatively. Examination of the resected colon revealed a large volume of impacted feces extending to the splenic flexure (Figures 3 and 4).

There was no mass/ stricture in the colon. A subtotal colectomy with end ileostomy was performed. Her postoperative period was uneventful, and she was discharged on postoperative day 7. The pathology report was suggestive of idiopathic megacolon.

DISCUSSION

Fecal impaction is a recognized complication of chronic untreated constipation. Its incidence increases with age, placing the geriatric population at highest risk. The global incidence of constipation is approximately 15%, (1) while fecal impaction occurs in about 0.7% of the general population and up to 42% in geriatric hospital units. (2)

Patients with fecal impaction experience higher healthcare costs and reduced quality of life compared to their peers. (3) Symptoms range from mild inconvenience to severe complications, including bowel ulceration, obstruction, perforation, and death. (4)

In children, etiologies include anatomical (anal stenosis or atresia), neuromuscular (Hirschsprung's disease), or functional (stool withholding) factors. In elderly individuals, contributing factors include weakness of abdominal and pelvic musculature, neuropsychiatric illnesses (such as multiple sclerosis, Parkinson's disease, Alzheimer's disease, dementia, spinal cord injury, Chagas disease, impaired mental status, diabetic polyneuropathy), medication-related, metabolic, or functional causes. (5)

In this case, the patient's lifelong scoliosis may have contributed to the development of constipation.

Fecal impaction develops when stool remains in the colon for prolonged periods, gradually drying and hardening. Contributing factors include inadequate dietary fiber, insufficient fluid intake, physical inactivity, and delayed defecation. In patients with colonic motility disorders, slow transit leads to excessive water absorption from stool, further increasing its hardness. If stool reaches the rectum and is not expelled, it may solidify into a large, stone-like mass. Such a mass can compress adjacent tissues, impair defecation reflexes, and result in partial or complete obstruction. Paradoxical diarrhea may occur when liquid stool from the proximal colon bypasses the impacted mass and leaks involuntarily, potentially leading to misdiagnosis and delayed treatment. (4)

Fecal impaction is typically preceded by prolonged constipation. The initial presentation may be nonspecific and subtle. Patients usually present with constipation, bloating, and gradually progressing abdominal distension. Some may have a previous history of fecal impaction.

Elderly or institutionalized patients with dementia or psychosis may present with increased agitation, confusion, or autonomic dysfunction. (4,5) Complicated cases of fecal impaction may manifest as acute abdomen, bowel obstruction, perforation, abdominal compartment syndrome, respiratory distress, urinary retention, hydronephrosis, or lower limb edema secondary to venous compression. (4,5,6,7)

Physical examination in complicated fecal impaction may reveal tachycardia and hemodynamic instability. Abdominal examination typically demonstrates distension, and a feces-loaded colon may be palpable as a tubular structure. Guarding and rigidity are suggestive of perforation or obstruction. Rectal examination may reveal hard fecal loading, although it may be empty in cases of higher obstruction, as observed in this patient. Laboratory investigations may indicate leukocytosis and electrolyte disturbances secondary to vomiting and severe dehydration.

Abdominal radiography is the initial imaging modality and assists in diagnosing perforated peritonitis, bowel obstruction, and fecaloma. In this case, the patient exhibited a grossly distended colon that mimicked air under the diaphragm on radiography. Contrast-enhanced computed tomography (CECT) was not performed due to clinical signs of peritonitis. CECT is valuable for delineating the extent of fecaloma, bowel obstruction, and associated complications such as hydroureteronephrosis and vascular compression. (6,7,8)

Management of fecal impaction focuses on relieving obstruction, evacuating the colon, and preventing recurrence. In cases of simple rectal impaction, manual removal following per rectal examination, often aided by enemas, may be performed and may require analgesia or sedation. Prior to disimpaction, it is essential to exclude clinical contraindications such as perforation or significant hemorrhage. Reported complications of manual evacuation include iatrogenic perforation, bleeding, sphincter injury, and arrhythmias resulting from vagal stimulation. (3)

After removal or partial relief of impaction, oral

osmotic solutions may be administered to facilitate complete evacuation. These agents are contraindicated in cases of obstruction due to the risk of perforation. Resistant impactions may necessitate endoscopic disimpaction under sedation. If endoscopic measures are unsuccessful, surgical intervention is indicated. (3, 9)

Surgical management of fecal impaction is determined by the location and associated complications. Soft fecaloma in the distal rectum may be evacuated by manual decompression under general anesthesia. Megacolon secondary to fecal impaction can result in significant dilation of the affected and proximal colonic segments. In contrast to acute colonic obstruction, colonic dilation in chronic constipation may be massive and persist for extended periods without acute complications, thereby increasing fecal load and fecaloma burden. Megacolon secondary to chronic constipation has been documented in multiple reports. (10,11)

Segmental colon resection is the preferred approach, as the dilated segment is unlikely to regain function following manual stool removal. Resection is mandatory in the presence of gangrenous or impending gangrenous changes. Segmental resection has reported success rates of approximately 50%, with symptom recurrence in less than 25% of cases. (12)

However, due to frailty and hemodynamic instability in the geriatric population, resectional procedures may not be well tolerated. Postoperative mortality and morbidity rates are elevated following emergency surgery in elderly patients. (13)

Damage control procedures, including colotomy with fecaloma evacuation, Hartmann's procedure, and diversion ileostomy, have demonstrated short-term success. Definitive resection of the megacolon may be performed in a subsequent operation once the patient's condition stabilizes to prevent recurrence. In this case, subtotal colectomy was performed due to extensive colonic involvement and stable hemodynamics.

Prevention primarily involves lifestyle modification and addressing underlying risk factors. Bowel regularity can be improved through regular physical activity, increased dietary fiber intake, and adequate hydration. (1)

Normal defecation habits can be reinforced by establishing regular toileting regimens, particularly in institutionalized settings. Medication review is essential; constipating agents should be avoided or administered with prophylactic laxatives. Peripherally acting opioid antagonists, stool softeners, and scheduled laxatives may be recommended for high-risk populations, such as long-term opioid users. Early detection and prevention are facilitated by education of patients, caregivers, and healthcare professionals.

CONCLUSION:

This case emphasizes fecal impaction as a potentially life-threatening consequence of chronic constipation, particularly in elderly patients. Misinterpretation of radiological findings can delay diagnosis. Timely recognition and prompt surgical intervention are critical to preventing catastrophic outcomes, including perforation and peritonitis. Enhanced clinical awareness of risk factors and complications is essential to reduce morbidity.

Declarations

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Conflict of Interest.
The authors declare that they have no competing interests.

Ethical Considerations.
This article describes a clinical case managed according to current standards of medical care. In accordance with institutional policies and international ethical principles, formal approval from an ethics committee was not required for the publication of this case report.

Informed Consent. Written informed consent was obtained from the patient (or the patient's legal representative) for publication of this case report and any accompanying clinical data and images. A copy of the signed consent is available for review by the Editor-in-Chief upon reasonable request.

Data Availability Statement. All data supporting the findings of this case report are included within the article. Additional information is available from the corresponding author upon reasonable request, provided that patient confidentiality is maintained.

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