Stercoral perforation in a patient on suboxone treatment

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INTRODUCTION

Opioids commonly cause constipation, and the rate of prescription and non-prescription opioid use in the United States has increased since the mid-1990s.1 Patients who are on long-term opioid treatment or suboxone therapy are advised to increase fiber intake, stay well-hydrated, and use OTC stool softeners to prevent constipation and alleviate symptoms.2

Stercoral perforation is an uncommon complication of chronic constipation. Fewer than 200 cases have been reported since first described by Berry in 1894.3, 4 Stercoral perforation occurs when fecal impaction causes focal pressure and ischemic necrosis in the colonic wall, leading to ulceration and perforation.6 Stercoral perforation accounts for just 3.2% of all colonic perforation but carries a mortality rate of 32% with surgical intervention.3,5 Therefore, it is important that healthcare providers are aware of the risk factors and presenting symptoms in order to prevent and promptly treat cases of stercoral perforation.

CASE REPORT

We present a case of a 32-year-old Caucasian female who was transferred from an outside regional hospital for management of nausea, vomiting, and abdominal pain. She had a history of multiple abdominal surgeries and began using prescription opioids for pain management 10 years ago. She was also addicted to IV heroin since the last 7 years for which the patient had recently completed 3-4 weeks of inpatient rehab and was in remission with suboxone therapy. She presented to an outside hospital several days before admission with coffee ground emesis, small hard stools, and blood in the stool while straining. An abdominal CT was concerning for ileus, indicating multiple dilated loops of small bowel, air in the colon, and hard stool. She was transferred to our hospital and managed with enemas.

On physical exam, she had a temperature of 99.0 °F, pulse of 130 bpm, blood pressure of 115/73, and respirations of 25 breaths/min. She appeared uncomfortable and agitated. An abdominal CT scan was obtained due to increasing WBC level and significant abdominal pain, and it indicated perforation in the distal sigmoid colon with feculent peritonitis. The patient was then taken to the operating room for exploratory laparotomy and required a total colectomy and end ileostomy. Post-operatively, she remained in the ICU for 11 days for stabilization and pain management. The patient did not suffer from post-operative complications and planned to enroll in a methadone outpatient program.

DISCUSSION

The Rome criteria defines constipation as straining at stooling, passage of lumpy or hard stools, sensation of incomplete evacuation, necessity of manual maneuvers to facilitate defecation, and passage of <3 stools per week.2 Factors that increase the risk of chronic constipation also increase the risk for stercoral perforation. These include medications such as opioids, NSAIDs, antipsychotics, blood pressure medications, antacids, and muscle relaxants, as well as limited mobility, psychologic disorders, neurologic disorders, and endocrine abnormalities.7

Chronic constipation may progress to form a fecaloma, a hard-fecal mass that puts pressure on the intestinal wall. This leads to ulceration and may ultimately perforate the wall.6 Stercoral perforation most commonly occurs in the sigmoid colon or rectum, which are susceptible regions of the colon due to low water content of the stool, poor blood supply, and high intraluminal pressure.3,8

Opioids induce constipation primarily by suppressing neuronal excitability in the enteric system. The excitation of circular muscles has primarily inhibitory input by non-propulsive contractions whereas an inhibition of propulsive contractions by longitudinal muscles lead to more fluid absorption and formation of harder and dried stool. Opioid mediated reduced contractility and prolonged transit times exacerbate the constipating effects. As opposed to other side effects of opioids, the constipating effects on gastrointestinal motility typically do not improve over time.9 With the rise of analgesic and illicit opioid use in the United States, it is important to appropriately respond complaints of constipation by decreasing medications that may cause constipation, recommending increased intake of fiber and water, and treating with laxatives, opioid antagonists, or other medications.2

Symptoms of perforation include severe abdominal pain with rigidity, mental status changes, and septic shock.8 Abdominal x-rays show free intraabdominal air with fecal loading in 70% of patients.5 The best diagnostic imaging is abdominopelvic CT, which will reveal an oval fecaloma >1cm in diameter that extrudes from the perforation, with fecal contamination of the peritoneal cavity.10 It is a surgical emergency, and early recognition and treatment may be lifesaving.10

CONCLUSIONS

Stercoral perforation is a rare but serious complication of chronic constipation. Patients with long-term opioid use have an increased risk for stercoral perforation, and there should be a low threshold for imaging and prompt intervention.

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