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### Stercoral Colitis Leading to Hypotension and IVC Syndrome with Respiratory Failure Following Fecal Disimpaction

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# ***Stercoral Colitis leading to Hypotension and IVC Syndrome with Respiratory Failure following Fecal Disimpaction***

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### **Abstract:**

Constipation is an extremely common chief complaint in the emergency department, contributing to approximately 700,000 emergency department visits in 2011 (1). Severe constipation can result in stercoral colitis which in turn can lead to development of ulceration and colonic perforation leading to fatal peritonitis (2). As a result, prompt recognition and treatment of this condition with bowel cleansing and fecal disimpaction are often recommended (2,3). Here, we will discuss a case of a 62 year old male with a history of schizoaffective disorder who came into the Emergency Department (ED) hypotensive with stercoral colitis secondary to severe constipation. Following bedside fecal disimpaction, the patient developed sudden respiratory failure and required emergent intubation.

### **Case Presentation:**

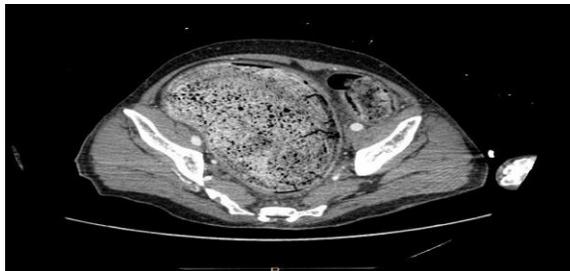
A 62 year old male from a group home presented to the Emergency Department (ED) via EMS minimally responsive, hypoxic, and hypotensive. History obtained from EMS team revealed that the patient had a history of schizoaffective disorder, hypertension and constipation. He was sent in from the facility for increased work of breathing and abdominal distension.

His vital signs on initial presentation were blood pressure (BP) 75/51 in the right arm; heart rate (HR) 121; temperature 97.5 degrees Fahrenheit, pulse oximetry (SpO2) 87% on room air and respiratory rate (RR) 48. The patient was then placed on two liters oxygen via nasal cannula which increased his pulse oximetry to 94%.

Physical exam included a male with BMI of 22.4, minimally responsive but withdrawing to pain and moving all extremities. He had a rigid abdomen with no rebound or guarding. He was not responsive to voice, however demonstrated no focal neurologic deficits, and physical exam was otherwise negative.

The patient's white blood cell count (WBC) was  $10.4 \times 10^3/\mu\text{L}$  with hemoglobin of 10.2g/dL. He had transaminitis with AST elevated to 212 and ALT 120. His electrolytes were normal with the exception of sodium of 146 and calcium of 6.7. He had an AKI with creatinine elevated to 2.29 and BUN 40. He had bacteria in his urine and blood cultures sent with lactate elevated to 6.1. Due to concern for sepsis, the patient was started on empiric vancomycin and piperacillin/tazobactam and lactated ringer bolus.

Upright chest x-ray performed at bedside was concerning for a possible subdiaphragmatic pneumoperitoneum. Surgery was consulted immediately for an acute abdomen. Repeat blood pressures in the right arm did not improve with initial fluid bolus, however it was discovered that the patient's blood pressure in the opposite arm was elevated to 176/89. Due to the blood pressure discrepancy and concern for possible intra-abdominal perforation, he was sent immediately for computed tomography angiogram (CTA) to rule out aortic and intraabdominal pathology. The study was read as negative for aortic dissection or aneurysm, however it did demonstrate massive stool distension of the colon with thickening suspicious for stercoral colitis but no perforation. Surgery evaluated the patient and performed a bedside disimpaction. Very soon following the disimpaction, the patient became extremely anxious, expressing angor animi, became cyanotic and hypoxic to 61% with a



### **Case Presentation Continued:**

nonrebreather. At this time, due to concern for respiratory failure, the patient was intubated with a 7.5 cuffed tube and placed on pressure regulated volume control (PRVC) with positive end expiratory pressure (PEEP) of 8, fraction of inspired oxygen (FiO2) of 100%, tidal volume (TV) of 500, and RR of 18, which the patient tolerated well with resultant SpO2 of 96%. The patient was then started on levophed for persistent hypotension and admitted to the intensive care unit (ICU) for further management and hemodynamic monitoring.

Ultimately, the patient's blood cultures grew out proteus mirabilis and he required maximal vasopressor therapy.. It was determined by surgery that the patient developed ischemic bowel with severe obstipation and the only option was surgical intervention, however the patient was determined to be too high risk for emergent surgery. He was ultimately put on comfort care per family request.

### **Discussion:**

The cause of the hypotension was thought to be hypovolemic shock and obstructive shock from IVC compression from fecal impaction, however it was further complicated by septic shock likely secondary to a UTI and ischemic colitis. Our patient was in acute respiratory failure from reduced functional residual capacity and atelectasis. It is thought that following the disimpaction the patient had a significant drop in intrathoracic pressure causing acute respiratory failure and hypoxia. Constipation is a very common complaint in the emergency department and one that we commonly treat conservatively outpatient. There are different causes of chronic constipation and few feared complications. Stercoral colitis is a very rare inflammatory process that occurs secondary to significant fecal impaction that involves the colonic wall. It is caused by fecaloma formation which can lead to focal pressure, necrosis and distension. This can compromise vascular supply and lead to ischemic colitis. The most common location of the fecaloma is the rectosigmoid colon.<sup>2</sup>

Stercoral colitis is a condition that is most commonly seen in elderly patients; usually those who are bedbound but may also be seen in patients who have metabolic, neurological or muscular disorders that cause chronic constipation.<sup>4</sup> The most common physical exam findings in these patients include abdominal tenderness and abdominal distension. In very severe instances patients can present with peritonitis, septic shock, or multiorgan failure, primarily if colonic ischemia or perforation has already occurred.<sup>2</sup>

Typical lab values of stercoral colitis may include leukocytosis and elevated acute phase reactants. Important things to look out for to assess the likelihood of ischemic colitis include lactic acidosis and anion gap metabolic acidosis. It is important to

### **Discussion continued:**

perform a full septic workup on these patients. Initially an upright chest X-ray should be performed to assess for free air, however the most sensitive and specific study is CT abdomen pelvis with IV contrast.<sup>2</sup>

CT findings suggestive of stercoral colitis are fecal impaction with dilation of the colon and in some circumstances fecalomas can be visualized as radiopaque masses in the colon.<sup>2</sup> Focal thickening of the wall are suggestive of edema or ulceration occurring adjacent to fecalomas. Stercoral colitis is distinguished from uncomplicated fecal impaction by looking for mucosal discontinuity showing decreased uptake of IV contrast in areas where blood supply is compromised compared to the typically thin colonic wall.<sup>2</sup> Other suggestive findings are pericolonic fat stranding.

Treatment depends on the severity and depends whether or not the patient is showing signs of peritonitis. Non-operative treatment includes manual disimpaction via the rectum or with endoscopically guided disimpaction, bowel regimen and admission.<sup>2</sup> Patients should always be NPO as these patients may require surgical intervention. If the patient is septic patients should be properly resuscitated and covered with broad-spectrum antibiotics covering for gram negative and anaerobic organisms. Operative management is reserved for patients with large segments involved or if they fail conservative management.<sup>2</sup>

The best predictors of mortality in stercoral colitis include perforation (32-59%), large segment involved (>40cm), and ischemic bowel which should be suspected in cases where the patient has an elevated lactic acid or septic shock.<sup>2</sup>

### **Conclusions:**

We describe the case of stercoral colitis that presented with hypotension and respiratory distress. Such complications are only seen in very severe cases. Hypotension is a very common complaint and the differential must be very broad, as there are atypical causes and can be superimposed. In our case we had a patient with stercoral colitis from severe constipation that ultimately lead to a decreased FRC with underlying septic shock secondary to a UTI.

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