

中文題目：在有慢性便秘與中風病史的老年人出現糞性結腸炎合併直腸穿孔

英文題目：Stercoral colitis and rectal perforation in an elderly with chronic constipation and ischemic stroke

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## Introduction

Stercoral colitis (SC) was first described by Berry et al. in 1894 and is defined as rare inflammatory colitis caused by chronic constipation, which is related to the impacted fecal material leading to distention of the colon and eventually fecaloma formation [1]. Fecalomas, which cause colonic distention and increased intraluminal pressure, may compromise the vascular supply, followed by ischemic colitis, ulcerations and perforation [2]. The most common site of the ulcerations are in the sigmoid colon and the rectum [2]. When it is complicated with intestinal perforation and ischemic colitis, morbidity and mortality can be as high as 32% to 60% [2]. Due to high mortality rates in these patients, the clinicians should make early diagnosis and urgent intervention with the interpretation of the radiographic findings in concert with the clinical manifestations. Here we present a case of stercoral colitis complicated with rectum perforation, which posed a challenging diagnostic dilemma for the primary team.

## Case Presentation

An 83-year-old housewife with underlying histories of hypertension, type II diabetes mellitus, lacunar stroke, and lumbar spine compression fracture treated with surgery ten years ago, complicated with areflexic bladder and Foley insertion afterwards, presented with one-week history of intermittent abdominal distension.

According to the family, she was ADL partial dependent, ECOG 3. Chronic constipation was noted for many years and was regularly followed up at Colorectal Surgery (CRS) outpatient department seven years ago. During the last follow-up at CRS outpatient department about six months before this admission, sigmoidoscopy was performed and revealed negative findings except mild hemorrhoid swelling. Thus, as usual, laxative was given, and we suggested that she undergo a colonoscopy if the symptoms progressed.

This time, intermittent abdominal distension developed one week before this admission. The distension was gradually aggravated, leading to poor intake and sleep quality. Symptoms such as tenesmus sensation and severe constipation were also noted. There was no hematochezia or

melena, and the patient denied nausea or vomiting. Physical examination revealed a temperature of 38°C, blood pressure of 148/79 mm Hg, the pulse of 115 beats per minute, 20 respirations per minute, and oxygen saturation of 90% on ambient air. Her abdominal exam revealed a soft abdomen but mild tenderness to light palpation over the lower abdomen. There was no rebound or guarding, and bowel sounds were normal. Initial laboratory investigations included elevated white blood cell count and hsCRP (2.37 mg/dL). Urinalysis showed evidence of infection. An abdominal X-ray was obtained, showing dilated bowel loops with large masses of fecal matter, accompanied by probably the signs of free air or pneumatosis intestinalis due to linear lucencies found (Fig. 1).

In the emergency department, the patient was given an enema. IV fluids and Ceftriaxone were used for urinary tract infection. She was hemodynamically stable and then admitted to the general medicine ward under the tentative diagnosis of stercoral colitis and urinary tract infection. During admission, the patient had several stool passages afterward. No melena or bloody stool was told. However, she still had a sensation of bloating and mild diffuse abdominal tenderness. Thus we arranged a colonoscopy for further evaluation. On the fourth day of admission, the patient complained about severe generalized abdominal pain. Physical examination revealed involuntary muscle guarding with rebounding pain. The left decubitus image was obtained immediately, showing massive free air, consistent with hollow organ perforation (Fig. 2). Soon, the patient lost consciousness with asystole. We started resuscitation, and she returned to spontaneous circulation 15 minutes later. After relative stabilization, the patient was transferred to the intensive care unit for further care. Emergency abdominal computed tomography (CT) was performed, which revealed rectal perforation with stool leakage and general bowel hypoperfusion (Fig. 3)

Then, the surgeon was consulted for emergency exploratory surgery, and we explained the benefits and risks to the family. However, the family could not bear to see her suffered in this manner, refused further surgery, and decided on palliative care after discussion. Sadly, the patient passed away on the same day under her family's witness.

## **Discussion**

To aggregate, this article presents a case of elderly with chronic constipation and stroke admitted under the impression of SC and subsequent rectal perforation. While SC is a rare form of inflammatory colitis [2], the diagnosis still needs to be kept in mind due to the increase in life expectancy in recent decades, and previous reports showed that SC was primarily seen in the elderly [2-4]. However, this diagnosis could also be considered in the younger age group. A recent systematic review of stercoral perforation reports declining in the median age of stercoral

perforation compared with previous studies [5]. This result may be associated with increasing use of opioid medication in young patients who had malignancy or need pain control after the operation [5, 6]. One of the most important differential diagnoses of SC is colorectal cancer. Colorectal cancer itself could result in fecal impaction by mechanical obstruction and ultimately bowel wall perforation [7]. However, the treatment was completely different since the patient with colorectal perforation due to cancer may receive not only bowel wall resection but also lymph node dissection and subsequent chemotherapy [7]. The clinical presentation of acute diverticulitis is similar to that of SC, and CT is the most commonly used modality for discrimination [3]. Some differential diagnoses of lower abdominal pain can co-exist with SC and confound the clinicians when interpreting the patient's clinical course. A. Elkoundi et al. [8] reports a 78-year-old female suffered from right lower abdominal pain, and ultrasound showed a dilated appendix diagnosed with acute appendicitis. However, subsequent respiratory failure and septic shock made the clinicians review the diagnosis, and CT scan revealed impacted stool in the rectosigmoid colon with pericolic stranding, which was consistent with the CT finding of SC [8, 9]. In our case, old age, chronic constipation, and previous ischemic stroke constitute the risk factors for developing SC. While stercoral perforation was identified timely by CT scan after stabilization and emergent operation was suggested, the family refused due to the patient's advanced age. This case report intends to describe a potentially fatal condition that may arise from elderly with chronic constipation. Paying more attention to those with the associated risk factors could preserve more time for subsequent treatment options and decrease patient mortality.

## **Conclusion**

This article reports a case with SC and subsequent perforation based on clinical presentation and CT findings, which showed massive fecal impaction, pericolic stranding, and rectal perforation. Since SC may progress to life-threatening conditions, early identification can help clinicians to have more time to decide on treatment options and determine whether the patient should receive the surgical intervention or not. This finding will help improve the clinician's experience in evaluating elderly patients with SC.

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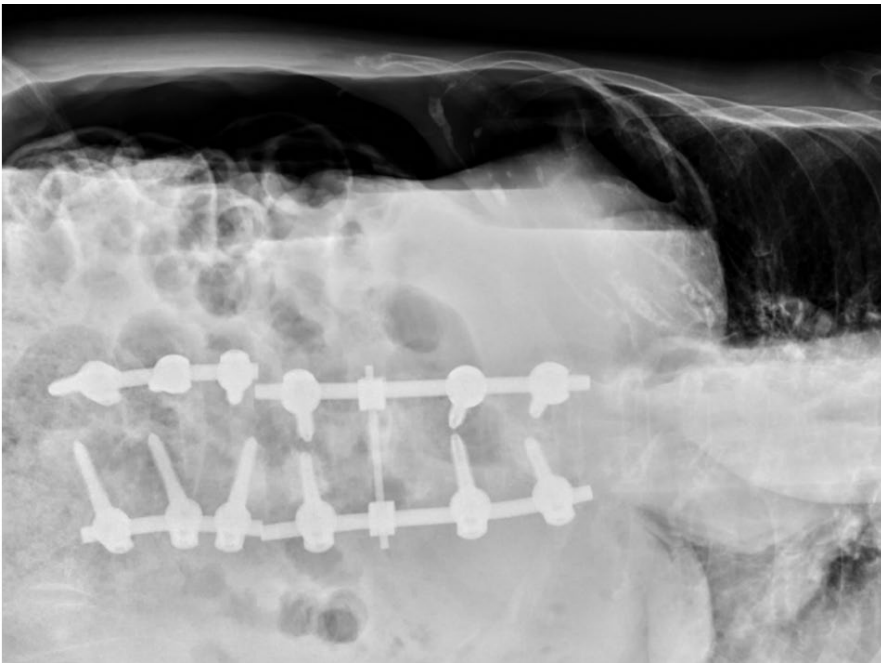
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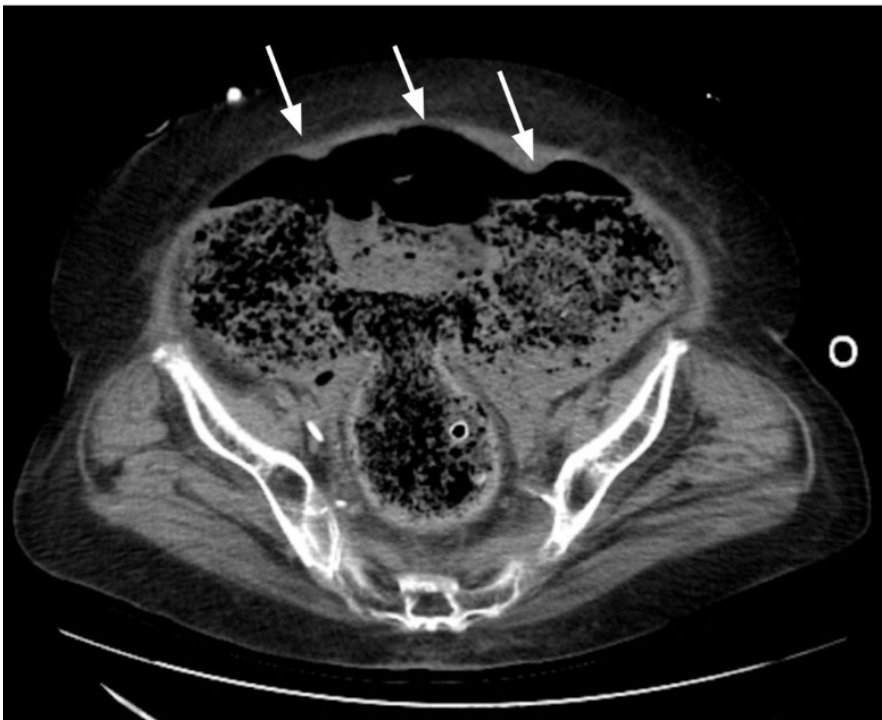
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**Fig. 1** Supine abdominal radiography shows dilated loops of bowel with large masses of fecal matter, with linear lucencies found.



**Fig. 2** Abdominal radiograph in left lateral decubitus position demonstrating large amounts of free air in the peritoneum.



**Fig. 3** Axial CT image shows upper rectum perforation with stool leakage. Large quantity of free air (white arrows) anterior to abdomen is also seen.