Perforated Jejunal Diverticulitis in a Patient with Suspected Rupture of Abdominal Aortic Aneurysm: The Lesser of Two Evils

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Citation

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Abstract

Despite being a rare entity, perforated jejunal diverticula should be included in the differential in patients who present with an acute abdomen. We present a case of a 74-year-old man with a past medical history significant for recurrent GI bleeds, coronary artery disease, chronic obstructive pulmonary disease, insulin-dependent diabetes mellitus, and a 4.5 cm abdominal aortic aneurysm (AAA) was awoken from sleep with abrupt and overwhelming LLQ abdominal pain. He initially presented to an outside hospital but was immediately transferred to our tertiary care institution due to concern for a ruptured AAA. An ultrasound done at the outside hospital could not confirm a ruptured AAA, but was noted to have possible free fluid. We obtained a contrasted CT scan of the abdomen and pelvis, which demonstrated multiple large 2 cm jejunal diverticula. This case is discussed in this case report.

INTRODUCTION

Small bowel diverticula are uncommon and generally asymptomatic, with 0.1 to 1.5% prevalence rate at autopsy and more frequently discovered in older populations [1]. Diverticula are most commonly found in the duodenum, followed by the jejunum and ileum, respectively [2]. Symptoms, when described, are usually vague and consist of mainly of non-descript abdominal pain and blood per rectum. However, small bowel diverticula may perforate resulting in emergent presentation with an acute abdomen [3]. The rare incidence of small bowel diverticula combined with potentially vague initial symptoms may delay the diagnosis and subsequent management. We present a case of a 74-year-old-man who presented with abrupt left lower quadrant (LLQ) abdominal pain and perforation of jejunal diverticulum seen on computed tomography (CT) scan.

CASE REPORT

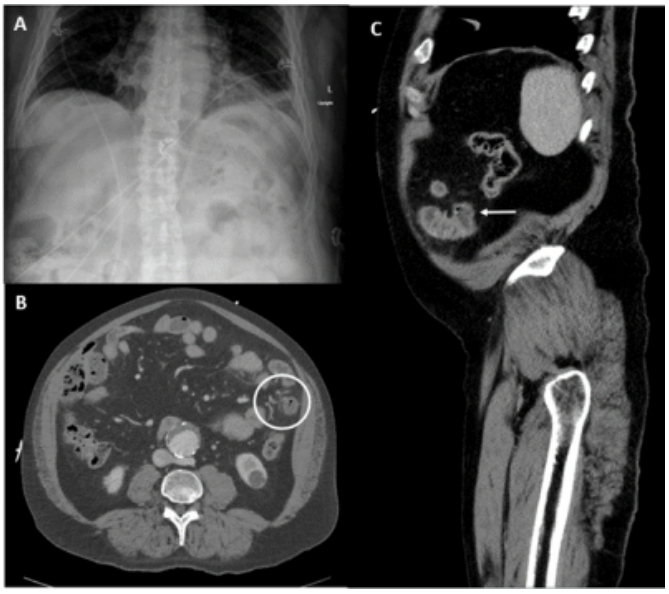
A 74-year-old man with a past medical history significant for recurrent GI bleeds, coronary artery disease, chronic obstructive pulmonary disease, insulin-dependent diabetes mellitus, and a 4.5 cm abdominal aortic aneurysm (AAA) was awoken from sleep with abrupt and overwhelming LLQ abdominal pain. He initially presented to an outside hospital but was immediately transferred to our tertiary care institution due to concern for a ruptured AAA. An ultrasound done at the outside hospital could not confirm a ruptured AAA, but was noted to have possible free fluid. He arrived at our institution approximately three hours after the initial onset of LLQ pain.

Upon our examination, the patient was hemodynamically stable and complained of left lower quadrant abdominal pain that progressed over one hour to diffuse abdominal pain concerning for an acute abdomen. He had palpable distal pulses and denied any back pain, difficulties with urination, or recent melena/hematochezia. He stated that his most recent colonoscopy was a few years prior and had found polyps as well as some colonic diverticula. An upright abdominal film was obtained and did not demonstrate free air (Fig.). Initial laboratory values were obtained and showed a white blood cell count of 13.6 thous/mm3, hemoglobin of 13.6 g/dL, platelet count of 285 thous/mm3, and a lactic acid level of 2.3 mmol/L. His comprehensive metabolic panel was unremarkable. Intravenous (IV) antibiotics were started in the emergency department.

We obtained a contrasted CT scan of the abdomen and pelvis, which demonstrated multiple large 2 cm jejunal diverticula (Fig.). Several locules of extra-luminal gas with surrounding mesenteric inflammatory changes were noted, suggesting perforation of visualized diverticulum (Fig.). The known AAA was visualized without signs of rupture.

Figure 1

A, Abdominal radiograph obtained on presentation. B and C, CT imaging demonstrating perforated jejunal diverticulum with dots of free air and surrounding inflammatory changes.



The patient was taken to the operating room for exploratory laparotomy. A midline incision was created with purulent fluid present upon entry into the peritoneal cavity. The small bowel was eviscerated and ran in a retrograde fashion beginning at the ileocecal valve. An area of inflammation was encountered in the mid-jejunum that had adhered to the mesentery of an adjacent loop. Exploration of this area showcased a perforated diverticulum with associated abscess. The bowel was then ran proximally to completion with a visualization of a second and third diverticulum within 15 cm of the perforated diverticulum. These were noted to be friable, but non-perforated. The colon was also examined and there were no diverticula or areas of concern present. We elected to resect a 20 cm segment that contained both the perforated and friable diverticula and was bordered by normal appearing bowel. The patient was admitted to the general ward following the procedure and discharged on post-operative day four without adverse event.

DISCUSSION

Perforated jejunal diverticula are a rare cause of acute abdomen and can present with non-specific symptoms, such as diffuse abdominal pain. A large portion of small bowel diverticula may also present with coexisting colonic diverticula, the latter of which typically presents with LLQ pain [3]. The patient in this case presented with LLQ pain progressing to diffuse abdominal pain. In total, he was found to have one jejunal perforation with associated intra-mesenteric abscess and two additional friable, but non-perforated diverticula. The presence of multiple diverticula is more frequently encountered in the jejunum, as compared to duodenum and ileum [1, 4].

The management of small bowel diverticula can range from conservative treatment if mildly symptomatic (bowel rest, IV fluids and antibiotics) to surgical resection and anastomosis if complications develop. However, the limiting factor to prompt surgical care is the recognition of perforations or abscess formation, which may be difficult due to its rare incidence and vague presenting symptoms. The patient in this case also had a history of a 4.5 cm AAA, which may have led to potential anchoring bias in the initial work-up prior to transfer. The concern for a AAA rupture is understandable, as this diagnosis has dire consequences. His stable vitals, lack of back pain normally associated with AAA rupture, as well as a negative CT scan confirmed that he did not have an AAA rupture.

CONCLUSION

Despite being a rare entity, perforated jejunal diverticula should be included in the differential in patients who present with an acute abdomen. Prompt recognition of this diagnosis can be made with CT scan and surgical intervention includes resection with jejuno-jejunal anastomosis. It is important to be aware of life-threatening causes of acute abdomen, however, even if a patient has a history of AAA, this does not necessarily mean that it has ruptured and should not be the reason to exclude other potential causes.

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