

Case Report of a Patient with Jejunal Diverticulitis as a Cause of Acute Abdomen

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ABSTRACT

Jejunal diverticulitis is an uncommon condition that may lead to serious complications such as abscess, perforation, or intestinal obstruction, constituting an unusual cause of acute abdomen. We present the case of a male patient in his sixth decade of life with acute abdomen secondary to acute diverticulitis who required urgent surgical management. Computed tomography is the imaging study of choice, and treatment depends on the patient's clinical condition.

KEYWORDS: diverticulitis, jejunum, acute abdomen.

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INTRODUCTION

Diverticula may occur at any location in the gastrointestinal tract, with the colon, duodenum, and esophagus being the most common sites, whereas the jejunum and ileum are much less frequently affected.

The incidence of diverticular disease of the small intestine is estimated to range from 0.06% to 2.3%. (1)

Small-bowel diverticulosis is usually asymptomatic and is discovered incidentally on imaging studies (2). In advanced cases, it may present with various complications such as intestinal obstruction, hemorrhage, fistulas, and acute diverticulitis, the latter being the most frequent, with an incidence between 2% and 6%, and it may progress to perforation in up to 7% of cases. (3).

The objective of this case report is to describe the clinical presentation, diagnostic approach, and surgical management of a case of complicated jejunal diverticulitis presenting as acute abdomen, highlighting this entity as an uncommon cause of acute abdomen and the importance of considering it in the differential diagnosis.

CASE PRESENTATION

A 51-year-old male patient with no relevant medical history presented to the emergency department with an 8-hour history of abdominal pain, predominantly in the mesogastrium with subsequent generalization, rated 10/10 in intensity, accompanied by nausea, vomiting, and fever. Physical examination revealed a distended abdomen, absent bowel sounds, tenderness to palpation with rebound tenderness, and involuntary muscular rigidity.

Laboratory tests on admission showed: leukocytes 14.5 K/uL, neutrophils 12.4 K/uL, hemoglobin 15.3 g/dL, total bilirubin 0.65 mg/dL, creatinine 0.74 mg/dL, and lipase 14 U/L.

A non-contrast abdominal computed tomography scan was performed, identifying a sacular image in the jejunal region with a small amount of gas within it and wall thickening, associated with marked stranding of the surrounding fat planes and mild dilation of intestinal loops (Figures 1 and 2).



Figure 1. Axial non-contrast abdominal CT image showing a sacular lesion with inflammatory changes in the mesenteric fat.



Figure 2. Coronal image showing jejunal wall thickening and surrounding inflammatory changes.

Emergency exploratory laparotomy was performed. Findings included an inflammatory mass involving small-bowel loops and the omentum, purulent fluid in the abdominal cavity, and an interloop abscess. A 3 × 2 cm friable, perforated diverticular dilation was identified on the mesenteric border,

90 cm from the angle of Treitz (Figure 3). Approximately 15 cm of intestine, including the affected segment, was resected, followed by a hand-sewn two-layer end-to-end anastomosis (Figure 4).



Figure 3. Diverticular sac on the mesenteric border, 90 cm from the fixed bowel segment, with fibrinopurulent exudate.



Figure 4. Resected surgical specimen showing a perforated jejunal diverticulum on the mesenteric border.

Histopathological examination reported an intestinal segment with diverticular formations and extensive areas of autolysis, severe inflammation, and perforation, confirming the diagnosis of acute diverticulitis.

The patient remained hospitalized for postoperative monitoring for 4 days, with a favorable clinical course, and was subsequently discharged for outpatient follow-up.

DISCUSSION

Diverticular disease most frequently affects the sigmoid colon, occurring in up to 95% of patients, and has a much lower incidence in the small intestine. Among small-bowel segments, the duodenum accounts for approximately 79% of cases, compared with 18% arising in the jejunum and ileum. Its clinical presentation is usually nonspecific and may progress to acute abdomen in cases of abscess formation and intestinal perforation (4).

Most cases are observed in male patients between 50 and 70 years of age.

The pathophysiology of jejunoileal diverticulitis is thought to involve smooth-muscle motor dysfunction that causes disordered contractions, leading to increased intraluminal pressure and ultimately to herniation of the mucosa and submucosa through the mesenteric border of the intestine (5). Computed tomography is the imaging study of choice for diagnosis. Typical findings include focal, asymmetric thickening of the intestinal wall or a collection adjacent to the jejunum with inflammatory changes in the mesenteric fat (6). Treatment varies according to the clinical presentation and associated complications. Surgical exploration is indicated in the presence of signs of peritoneal irritation, hemodynamic instability, and failure to respond to medical treatment. Resection of the affected intestinal segment should be performed when required. (7)

The mortality rate associated with surgical treatment is 0–5%. Poor prognostic factors include advanced age, associated comorbidities, peritonitis, delayed diagnosis (40%), and the interval between perforation and surgery. (8)

In our patient, surgical intervention was necessary because of clear signs of acute abdomen.

CONCLUSION

Jejunal diverticulitis is an uncommon cause of acute abdomen whose clinical presentation may be nonspecific, making diagnosis challenging. Computed tomography is a fundamental tool for guiding the diagnosis and determining the presence of complications. In cases of perforation and peritonitis, as in the case presented, surgical treatment by resection of the affected intestinal segment provides definitive management.

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