

Jejunal diverticulitis masked by subhepatic collection

S Neragi-Miandoab, J Terlizzi, C Mills, J Steele

Citation

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Abstract

With the exception of Meckel diverticulum, small bowel diverticulitis is a very rare disorder. Jejunal diverticulitis presents as a focal inflammatory mass involving the proximal small bowel. Epigastric pain, fever, nausea, and vomiting associated with elevated white blood cells (WBC) are presenting symptoms. Computer tomography (CT) scan may show ominous signs of inflamed bowel loop. Because of its unorthodox presentation, the diagnosis remains a challenge for surgeons and radiologists. CT scan in combination with physical findings and the patient's symptoms might be helpful in establishing the diagnosis. Conclusion: Early intervention is crucial to prevent perforation and sepsis. Laparotomy or laparoscopic approach with resection of inflamed bowel and side-to-side anastomosis remain the cornerstones in the management of acute jejunal diverticulitis.

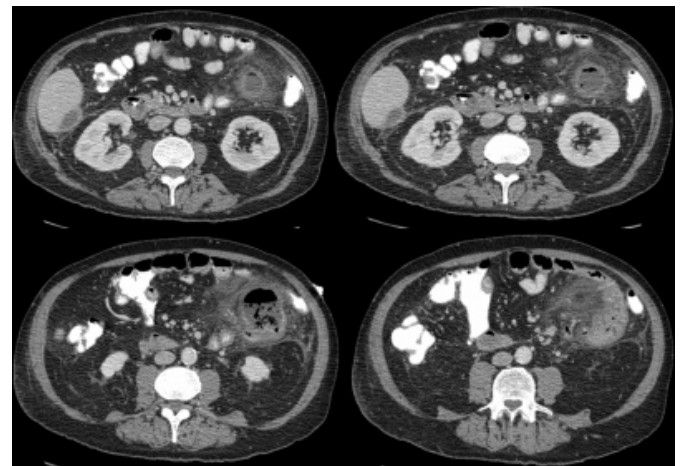
CASE DESCRIPTION

The patient is a 64-year-old man who underwent laparoscopic cholecystectomy for acute cholecystitis. A leakage from the cystic duct was identified intraoperatively, and a Jackson-Pratt Drain (JP) was left in place. Due to persistent bile leakage, the patient underwent endoscopic retrograde cholangiopancreatogram (ERCP) followed by sphincterotomy and stent placement three weeks after cholecystectomy. The patient returned to hospital few days following ERCP with severe abdominal pain. He developed sepsis-like physiology with a temperature of 101°F, pulse rate of 120 beats per minute, blood pressure of 100/60 mm Hg; and his white blood cell count (WBC) was 17000/dl. His physical exam demonstrated moderate guarding and a palpable mass in the left mid to lateral upper abdomen.

A CT of the abdomen demonstrated a subhepatic collection under the right lobe (segment 8) of the liver. A 5cm inflammatory mass was also seen on CT scan correlating with the physical exam. The inflamed loop of bowel was described as colitis by radiology staff personal.

Figure 1

Figure 1: CT finding of jejunal diverticulitis. Inflamed loop of jejunum and fat stranding in left upper quadrant.



A previous CT scan prior to laparoscopic cholecystectomy did not demonstrate any diverticulitis or diverticular disease.

The patient was admitted to the surgical intensive care unit (SICU) and started on Piperacillin/Tazobactam 3.375 mg intravenously (IV) every 6 hours, parenteral fluid resuscitation and pain management. The patient was maintained on nothing per mouth.

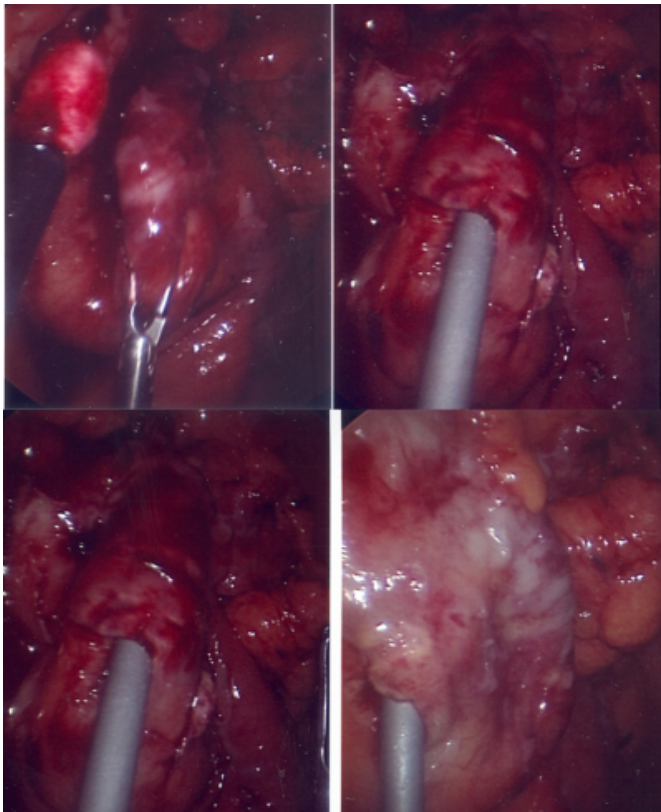
On hospital day 2, the patient underwent a CT-guided drainage of the subhepatic collection with an 18 French pigtail catheter with the assumption that the subhepatic collection was the source of the patient's symptoms.

Evaluation of aspirated fluid did not show any evidence of abscess or infection. The patient continued to have abdominal pain in the left upper quadrant. At this point, the decision was made to perform an exploratory laparoscopy.

On hospital day 3, the patient underwent laparoscopic exploration of the abdomen, which demonstrated diverticulitis of proximal jejunum arising from the mesenteric border (Figure 2).

Figure 2

Figure 2: The appearance of inflamed jejunum during laparoscopy.



The jejunum, proximal and distal to the diverticular mass, was carefully mobilized and resected using a gastrointestinal anastomosis stapling device. A side-to-side anastomosis was performed. Pathology revealed ruptured diverticulitis and abscess formation on a segment of small bowel. The patient recovered rapidly and the rest of his hospital course remained uneventful. He was discharged home on postoperative day 4.

Wilcox et al. described that using insufflation to make the bowel lumen become prominent can help to identify the location of diverticula.¹ Our patient underwent endoscopy, ERCP, and stent placement into the common bile duct. An insufflation of air into the bowel lumen in this patient might

have contributed to distension and inflammation of existing diverticula causing an acute inflammation and rendering the diverticula to a diverticulitis.

COMMENT

Jejunal diverticulosis was first reported in 1807 by Sir Astley Paston Cooper.² The exact etiology is unknown; however, it has been speculated to be a result of abnormal peristalsis, dyskinesia, and high intraluminal pressures. A luminal obstruction leads to bacterial stasis and a localized inflammatory reaction.³ The incidence of small bowel diverticula is 1-5% in the population¹³, of whom only 10% develop complications such as diverticulitis, perforation, hemorrhage, or obstruction.³ Mortality correlates with the patient's age, emergent nature of symptoms, and the extent of complications.

The most common presenting symptom of jejunal diverticulitis is nonspecific epigastric pain, which can progress to peritonitis-like symptoms. The abdominal pain might have a colicky character. Fever, localized tenderness, and a palpable mass are other symptoms. Fever, with or without signs of peritonitis, is suggestive of perforation or abscess formation.⁴ Jejunal diverticulitis may lead to non-specific chronic or acute symptoms. The clinical presentation can mimic other acute intraperitoneal inflammatory conditions.⁵

Computed tomography (CT) scan shows a focal inflammatory lesion. Abdominal CT scan (Figure 1) with contrast (oral gastrographin and intravenous contrast) is a useful tool for identifying the inflamed area or the presence of a phlegmon in the retroperitoneal space.⁶ The differential diagnosis includes perforated neoplasm, foreign body perforation, trauma-induced hematoma, medication-induced ulceration, Crohn's disease, carcinoid tumors, gastrointestinal stromal tumors (GISTs) and lymphoma.⁷

Surgical management of small bowel diverticulosis was first described in 1906 by Gordinier and Sampson.⁸ Management of jejunal diverticula depends on the patient's symptoms. Jejunal diverticulitis is treated by surgical excision of the abnormal segment with primary side-to-side anastomosis.⁹ A laparoscopic approach for exploration is widely applied at centers with adequate experience.⁵ The mortality rate ranges between 0% and 5%.^{10,11}

CONCLUSION

The clinicians should have a heightened awareness and a

high index of suspicion for jejunal diverticulitis. Perforation occurs with delayed diagnosis and is associated with poor outcome. An early diagnosis and resection of the affected area is associated with a favorable outcome.

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