Perforated Jejunal diverticulitis with extensive diverticulosis: a case report

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Abstract

Jejunal diverticulitis is a rare condition and usually occurs in the elderly. Its association with extensive diverticulosis is exceptional and makes the management more challenging. We report a case of a 74-year-old man with perforated jejunal diverticulitis with extensive diverticulosis who underwent a surgical management.

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Clinical key message:

Jejunal diverticulitis is a rare condition and usually occurs in the elderly. Its association with extensive diverticulosis is exceptional and makes the management more challenging.

Key words : Jejunum, Diverticulitis, surgery

INTRODUCTION:

Diverticular disease was first described by Soemmerring in 1794 and later by Astley Cooper in 1809. In 1906, Gordinier and Shil performed the first operation for diverticulum [1]. In less than 30% of cases, jejunal diverticula are revealed by complications such as diverticulitis, obstruction, hemorrhage or perforation [2,3].

We report a case of perforated jejunal diverticulitis. We propose to describe diagnostic and therapeutic modalities.

CASE PRESENTATION:

A 74-year-old man with history of diabetes mellitus presented to the emergency department with a severe epigastric pain and vomiting for 24 hours. On examination, there was tenderness in epigastric region. Laboratory tests revealed elevated leukocytes (16300/mm^3) and normal level of lipase.

CT scan showed multiple jejunal diverticula. One of the diverticula had a thickened enhancing wall with a surrounding significant inflammatory reaction and extraluminal gas bubbles suggestive of perforation. There was no abscess formation nor fluid collection (Figure 1).

Figure 1: CT scan showing diffuse jejunal diverticula (red arrow), thickened enhancing wall with a surrounding significant inflammatory reaction (yellow arrow) and extraluminal gas (blue arrow).

An urgent surgery was performed. During laparotomy, multiple large jejunal diverticula were found (Figure 2A). One of diverticula was frankly inflammatory with false membranes (Figure 2B: blue arrow) without obvious perforation, free fluid or abscess. A 50 cm intestinal resection removing this diverticulum was performed followed by a side-to-side mechanical anastomosis.

Figure 2: intraoperative findings: A- multiple jejunal diverticula.

B- Intraoperative findings: diverticula frankly inflammatory with false membranes (blue arrow) without obvious perforation, free fluid or abscess.

The postoperative course was uneventful and the patient was discharged on the 7^{th} postoperative day.

The patient did not present any recurrence of pain at 12 months of follow-up.

DISCUSSION:

Acquired small bowel diverticulum corresponds to a herniation of the intestinal mucosa and submucosal through penetration sites of vasa recta, which represent weak points of intestinal wall. Unlike congenital Meckel's diverticulum, there is no muscular layer in the diverticular wall. It is a rare condition (1 to 4.6%) that occurs usually between 60 and 70 years[3].

The most frequent complication is diverticulitis. Two factors were incriminated in its genesis: the stasis of the jejunum contents in the diverticulum and the mucosal edema with subsequent obstruction of the diverticular neck [3–5]. However, the diverticulitis is much less common in the jejunum than in colonic diverticula probably because of diverticulum larger size, better intra-luminal flow and lower concentration of bacteria [3].

The perforation of jejunal diverticulum is rare (2.1 to 7% of diverticulitis), probably because of intestinal intraluminal low pressures [3,6].

Non complicated cases can be clinically silent or may mimic irritable bowel syndrome symptoms: chronic abdominal pain, bloating sensation after food intake, abdominal cramping of unexplained cause and diarrhea [6]. In case of diverticulitis, symptoms are similar to an acute peritonitis secondary to perforated duodenal ulcer.

On CT scan, jejunal diverticula are shown as round structures outside of the small bowel lumen and containing some combination of contrast material, air, and debris. The large jejunal diverticula can be distinguished from adjacent small-bowel loops by their different contents and by the absence of conniving valvulae [7]. Frequent findings seen in diverticulitis are an inflammatory mass which may contain gas, wall thickening of an involved segment, edema of the surrounding tissues and fluid collection [1,5].

Non perforated jejunal diverticulitis is managed conservatively with antibiotics, intravenous fluids, and bowel rest [8,9]. For perforated jejunal diverticula, surgery is mandatory. The recommended technique is resection of the involved intestinal segment. [3,7,10]. In case of multiple diverticulum (like our patient), resection should be performed only for complicated one. The anastomosis can be performed only in the absence of generalized peritonitis and septic shock, and it should be done on intestinal segments without diverticula.

CONCLUSION:

Jejunal diverticulitis represents a rare disease. Diagnosis is based on CT scan. Surgical resection is recommended for perforated cases but the association with jejunal diverticula makes management more challenging.

Conflicts of interest

None

Data Availability Statement

Personal data of the patient were respected. No data is available for this submission.

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Ethic Statement: personal data have been respected

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Figures :

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