

CASE REPORT

JEJUNAL DIVERTICULAR PERFORATION: A RARE CAUSE OF ACUTE ABDOMEN

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ABSTRACT: Jejunal diverticulosis is generally seen in elderly patients, and is relatively rare. Jejunal diverticula are generally asymptomatic, thus are usually only incidentally detected. Jejunal diverticulosis is sometimes associated with complications like small bowel obstruction, bleeding, or perforation. We present a case report of a 56 year old male who presented with jejunal diverticular perforation.

KEYWORDS: Jejunal diverticula, perforation.

INTRODUCTION: Jejunal diverticula are rare with an incidence of less than 0.5%.⁽¹⁾ Pathologically, they are pseudodiverticula of the pulsion type, resulting from increased intra-luminal pressure and weakening of the bowel wall. Despite most cases of jejunal diverticulosis remaining completely asymptomatic, complications are reported in 10 to 30% of patients. These include chronic abdominal pain, malabsorption, hemorrhage, diverticulitis, obstruction, abscess formation and rarely diverticular perforation. While chronic pain and malabsorption occurs in 40% of cases, perforation occurs only in 2.3–6.4% of all diverticula-bearing patients.⁽²⁾

CASE REPORT: A 56 yr old male, residing at Kurla, Mumbai came with chief complaints of sudden onset, severe pain in abdomen since 3 days. It was associated with multiple episodes of vomiting. No history of constipation or abdominal fullness. No history of fever. No history of any painkiller ingestion in recent past. Past history not significant for tuberculosis or contacts. On general examination, he was tachycardiac, normotensive. Per abdomen examination revealed a tender, guarded acute abdomen. Per rectal examination was empty. Patient was resuscitated and hydrated well with crystalloids. Plain radiograph of chest in erect position was taken immediately to confirm the surgical abdomen, which demonstrated a very thin rim of free gas under the right hemidiaphragm. Immediately, exploratory laparotomy was done and it showed multiple jejunal diverticula in proximal jejunum, out of which two at each end of diverticula bearing jejunum were inflamed [Fig. 2] and one was showing a 0.2x0.2 cm perforation with overlying slough [Fig. 1]. Irrigation with saline done. Whole segment of the proximal jejunum carrying diverticula [Fig. 3] starting 15 cms from duodenojejunal flexure was resected (total 30 cms) and primary anastomoses done. Post-operative recovery was uneventful and he was discharged after 8 days.

DISCUSSION: Jejunal diverticulosis is a rare condition, with a reported incidence rate of 0.1-1.5%.⁽¹⁾ The diverticula are generally seen in elderly patients and are false pulsion diverticula, containing only mucosal and submucosal layers. Diverticula are formed due to an increase in pressure inside the lumen at the entrance to the mesenteric vessels where the wall is weaker.⁽³⁾ Seventy-five percent of the diverticula in the small intestine are located in the proximal jejunum, 20% in the distal jejunum,

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and 15% in the ileum.⁽⁴⁾ Jejunal diverticula range in size from a few millimeters to 10 cm. In the present case, the diverticula were located in the proximal jejunum, and the perforated diverticulum was approximately 3cm in size.

The diverticula are generally asymptomatic. At times, the symptoms can be mild, such as chronic nonspecific abdominal pain, but they can also be life-threatening, such as malabsorption, diverticulitis, hemorrhage, obstruction, and perforation.⁽⁵⁾ Acute necrotizing inflammation, trauma, and foreign bodies can cause diverticular perforation. The most important complications of diverticula, which require urgent surgery are perforation, massive gastrointestinal bleeding, and intestinal obstruction.⁽⁶⁾ Perforation occurs in 2.3-6.4% of patients with jejuna diverticulosis.⁽⁷⁾ Our case had diverticular perforation due to necrosis and sloughing of a part of inflamed diverticulum and peritonitis as a result of the perforation. In cases of perforation, free air under the diaphragm may not always be visible in chest X-rays. Although barium scan of the small intestine is one of the best radiological contrast study to visualize diverticula, it is contraindicated in case of perforation or acute diverticulitis to suggest a perforation.⁽⁸⁾ Abdominal CT scans have been found to be helpful in the diagnosis of jejunal perforation.⁽⁹⁾

The chest X-rays of our patient showed free air under the diaphragm. Patients with perforated jejunal diverticulum often have localized or diffuse peritonitis. Novak et al., indicated that percutaneous drainage and IV antibiotic administration is sufficient for treatment of patients in stable condition with localized peritonitis.⁽¹⁰⁾ However, for patients with symptoms of generalized peritonitis, emergency laparotomy and segmental intestinal resection is recommended, as was done in our case.⁽¹¹⁾

CONCLUSION: Jejunal diverticula are rare and mostly asymptomatic. Patients may have nonspecific symptoms, such as chronic abdominal pain and change in bowel habits. However, the morbidity and mortality rates may increase due to perforation, obstruction, and bleeding. If acute abdomen due to perforation is suspected, jejunal diverticulosis and diverticular perforation must be considered in the differential diagnosis in elderly patients.

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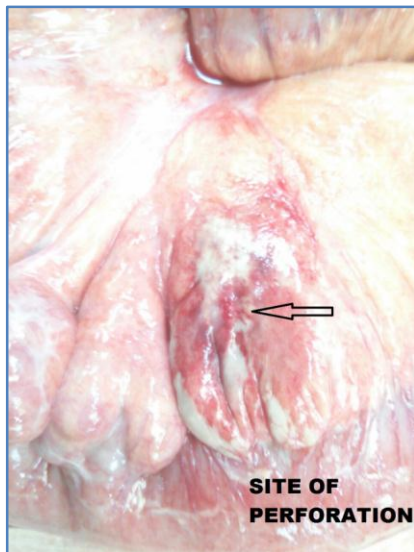


Fig. 1: Showing site of sealed-off perforation in the inflamed jejunal diverticulum

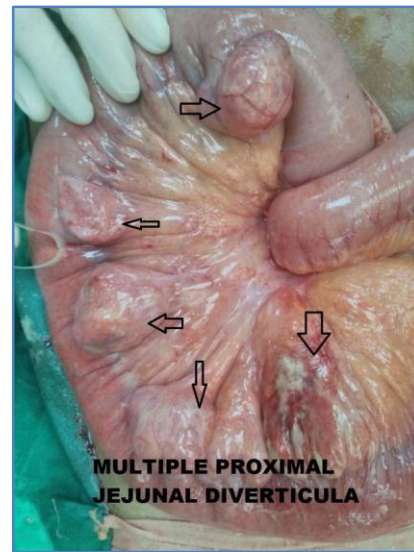


Fig. 2: Showing inflamed jejuna diverticulum

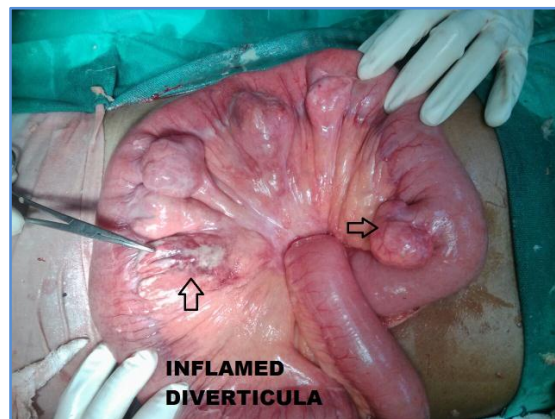


Fig. 3: Showing multiple jejunal diverticula spanning a long segment of small bowel

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