

A RARE CASE OF DUPLICATED JEJUNAL DIVERTICULA

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Abstract- Small jejunal diverticulitis is extremely uncommon, occurring in about 0.06% to 1.3% of people. Diagnosis is difficult since many people are asymptomatic or present with vague symptoms including malabsorption and stomach discomfort. Acute perforation may be seen in up to 6% of individuals. Here, we discuss a case of a 67-year-old man who underwent final surgery after presenting with vague pain in abdomen, multiple episodes of bilious vomiting. We emphasize the value of early resuscitation, a wide differential, and fast surgical therapy in complex jejunal diverticulitis. In this case for example, definitive surgery served as both a diagnostic and a therapeutic procedure, despite the fact that supplementary investigations like computed tomography may be beneficial in stable individuals.

Keywords: small bowel resection, small bowel diverticulitis, perforation, jejunal, diverticulitis.

Introduction:

Multiple herniations of the mucosa and submucosa through the bowel's muscular layer are the hallmark of jejunal diverticulosis. Diverticula like this are considered to develop at locations where the vasa recta penetrate the muscularis propria due to muscular layer deficiencies [1]. Because the diverticula itself do not contain the muscular layer of the gut, the pathophysiology of jejunal diverticulitis is that of pulsion-type false diverticula, as was previously stated. Contrastingly, real jejunal diverticula have also been documented; they are often single and are frequently mistaken for Meckel's diverticula [2].

Small intestinal diverticula are extremely uncommon, with a frequency of about 0.06% to 1.3%, and were initially identified by Sommering and Baille in 1794. Men and people in their sixth to eighth decades of life are more likely to experience it [3,4]. The majority of minor intestinal diverticula, or 79% of instances, occur in the duodenum, followed by the jejunum and the ileum [5]. Diagnosis of small intestinal diverticula is challenging since many instances are asymptomatic or show nonspecific symptoms such as malabsorption, stomach discomfort, vomiting, and nausea. Only around 29% of people experience symptoms and signs [6]. Although the exact cause of their development is unknown, it has been suggested that intestinal dyskinesia, irregular peristalsis, and excessive intraluminal pressure are the likely culprits [4]. Small intestinal diverticula are commonly discovered inadvertently during imaging or during surgery. These include malabsorptive consequences, pseudo-obstruction, and stomach discomfort [7].

Acute complications including perforation, obstruction, adhesions, fistulae, peritonitis, and lower gastrointestinal hemorrhage affect 10–30% of patients overall [8]. About 2-6% of cases, jejunal diverticula can perforate, which is a serious consequence [4]. In this situation, prompt operational management is essential. Diverticulitis of the jejunum or ileum should be taken into consideration, and one should be ready to conduct a small bowel resection if necessary. Here, we outline the tactical handling of such a circumstance.

Case presentation

A 67-year-old man presented to our institution complaining of a two-day history of abdominal pain and multiple episodes of vomiting. In the emergency department, he was hemodynamically unstable with a blood pressure of 75/36 mmHg, heart rate of 94 beats per minute, temperature of 98.1°F, and oxygen saturation of 95% on room air. The patient was in clear discomfort but remained alert and oriented. Abdominal examination was remarkable for diffuse peritonitis with slightly more tenderness on his left side.

Intravenous fluid resuscitation was initiated with lactated Ringer's solution administered as two 1 L boluses considering her hypotension and recent multiple episodes of bilious vomiting. Patient was kept nil by mouth. Ryles tube was inserted. Foley's catheterization was done to monitor urine output.

The patient's hypotension transiently responded to fluid resuscitation, and therefore, an erect abdominal xray was performed which revealed free air under the right hemidiaphragm suggestive of pneumoperitoneum with possibility of a perforation. No small bowel dilation, evidence of obstruction were appreciated.



The patient's clinical situation and the risks and benefits of surgery were discussed with the patient and his family and informed consent was obtained for surgery. Patient was placed in supine position after giving general anaesthesia. Part was painted and draped. Right paramedian incision was given. Abdomen was opened in layers. On reaching the abdominal cavity serosanguinous and bilious fluid was noted. Irrigation with normal saline was done followed by suctioning. Two outpouchings from anti mesenteric border of proximal jejunum about 30 cm with perforation of one of the diverticula was noted. Resection and anastomosis of the segment of jejunum with perforated diverticula was done. The remainder of the bowel was inspected, and the ileum and colon were unaffected. Resected segment was sent for biopsy along with the adjacent omentum. Hemostasis was achieved. A Drain was placed in the pelvis. Wound was closed in layers.



Figure 1 Site of the perforated jejunal diverticulum



Figure 2 Resected segment along with the perforated diverticula

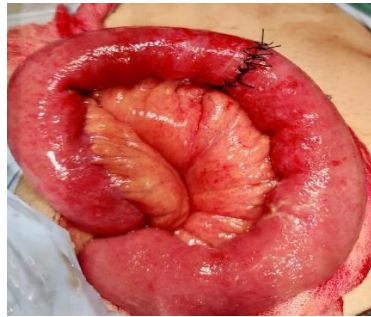


Figure 3 End to end anastomosis done

The procedure was completed without any complications, he had a relatively uncomplicated postoperative course. He was extubated on postoperative day (POD) zero and was kept nil by mouth. Vitals, urine and drain output were monitored. Drain was removed on postoperative day four.

He was discharged on postoperative day six. The final pathology of the small bowel showed ulcerated mucosa of diverticulum with mixed inflammation, congested blood vessels and edema in lamina propria.

Discussion

It is crucial to have a wide differential diagnosis since jejunal diverticulitis sometimes presents with vague symptoms that make the diagnosis difficult to make. In the event that there has been a perforation and the patient is hemodynamically unstable, immediate resuscitation and surgical treatment are recommended. We got imaging in our case since the cause was unknown, resuscitation was still being administered, and the patient remained fluid responsive.

Beginning with a comprehensive history and physical examination, such cases are evaluated. Risk factors for perforation should be mentioned in the history, including recent endoscopy, surgery, cancer history, inflammatory bowel or diverticular illness, and ingestion or insertion of foreign bodies. The physical examination is essential for detecting widespread peritonitis or, in our instance, localized upper abdominal discomfort.

Operative management was clearly indicated in this case involving a patient with peritonitis who only transiently responded to fluid resuscitation. A thorough examination of all of the bowel was also performed and is crucial in any case where the diagnosis or site of perforation is unclear. This allows one to identify any concurrent, otherwise potentially missed, disease [10]. Unlike this case, uncomplicated colonic and small intestinal diverticulitis can be managed nonoperatively with intravenous fluids, bowel rest, and antibiotics [8,11]. Perforated small bowel diverticulitis often requires surgical intervention. The mortality rate of jejunal diverticula ranges from 0% to 5%, but this risk increases to 40% in cases of perforation [11].

Although jejunal diverticulitis is rare, it is important to include it in the differential diagnosis of patients with abdominal pain and no colonic diverticulitis. Early diagnosis is key to prompt treatment to improve patient outcomes.

Conclusions

The symptoms of small bowel diverticulitis can range from being asymptomatic to having vague abdominal pain to perforation and open peritonitis. Jejunal diverticulitis has a low occurrence, making it easy to ignore in the working differential diagnosis; nonetheless, it is crucial to have a high level of clinical suspicion. To improve patient outcomes in situations of complex jejunal diverticulitis, early detection and immediate surgical surgery are essential.

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