A Rare Occurrence of Jejunal Diverticula in a 52-Year-Old Male on Barium Meal & Follow Through: A Case Report

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Abstract
The small bowel pathology, namely jejunal diverticula has a worldwide prevalence of 0.5-1%. Jejunal diverticula mainly occurs as a pulsion diverticula secondary to intestinal dyskinesia. In most cases, diverticula are asymptomatic, but when symptomatic patients present with chronic symptoms such as pain, nausea, obstruction and peritonitis. We report a rare case of jejunal diverticula in a 51-year-old-male with presentation of severe epigastric pain, nausea, vomiting, abdominal fullness and absolute constipation, who was surgically managed with good post-operative prognosis.

Keywords: Jejunal Diverticula; Barium Meal; Barium Follow; Obstruction; LMIC; Pakistan


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Introduction
The small bowel pathology, jejunal diverticula has a prevalence of 0.5-1%.1 The true incidence may be higher because majority of jejunal diverticula are asymptomatic and essentially remain undiagnosed. Jejunal diverticula mainly occurs as pulsion diverticula secondary to intestinal dyskinesia.2 While the pathology is asymptomatic in most patients, chronic symptoms such as pain, nausea, obstruction and peritonitis may be present.3 We report a rare case of jejunal diverticula with presentation of severe epigastric pain, nausea, vomiting, abdominal fullness and absolute constipation, who was surgically managed with good post-operative prognosis.

Case Presentation
A 52-year-old male presented with an 8-year history of gastric ulcers with symptoms of epigastric pain. The epigastric pain was increasing in nature for the past 2-3 years. Post referral from the surgical department, the patient complained of severe epigastric pain, nausea, vomiting, abdominal fullness and absolute constipation for 2 weeks in the gastroenterology outpatient department. While the systemic examination was seemingly normal. Relevant abdominal examination revealed soft non-tender abdomen. No organomegaly was noted on superficial and deep palpation. Routine blood examination was also normal. Ultrasonography (USG) and barium follow through was advised and the patient was admitted for diagnostic laparoscopy. An ultrasound scan was conducted, which revealed no abnormalities. Barium follow through showed dilated proximal jejunal loops in the right hypochondrium confirming a stricture with proximal dilatation and delayed transit of contrast. The duodenojejunal junction was at its normal position (Figures 1-4). A provisional diagnosis of jejunal obstruction was made based on barium study findings, possibly due to jejunal diverticula, band, or stricture.

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Figures 1-4. Barium follow through studies.
A decision was made to proceed with diagnostic laparoscopy followed by exploratory laparotomy and adhesiolysis, with Roux end to side anastomosis of jejunum completed. After aseptic measures, single port diagnostic laproscopy was proceeded. Operative findings were noted and an upper midline vertical incision made on the abdomen. Rectus sheath and peritoneum were opened, along with gut examination from the duodenojejunal flexure to the caecum. A suspicious nodule and band in addition to around one half feet of jejunum diverticulum were excised and end to side anastomosis was done. Hemostatis was secured, a wide bore drain was placed in the pelvis, and the rectus sheath was closed. The skin closed with polypropylene sutures, and an aseptic dressing was applied. Operational findings revealed dilated proximal jejunum obstructed by jejunal diverticula causing internal herniation about axis of mesentery. Multiple bands formed at the base of the mesentery and an incidental finding of a nodule at the anti-mesenteric border of the distal ileum was made. Excised nodule and jejunal diverticulum were sent for biopsy. Nodule biopsy revealed a fibrous mass of abnormal tissue with fat necrosis and calcification. Small bowel with diverticula and mesenteric fibrosis was found on jejunal diverticula biopsy. Both resection margins were viable, and one reactive lymph node was also seen. In the post-operative phase, the patient was NPO until further notice and maintained on different injections including Tigecycline generic injection, Omson generic injection and Anthem injection. The patient made a slow yet steady recovery. The patient was discharged on Day 6 post-operation and followed-up in the outpatient department 3 weeks later. There were no further reports of discomfort and he was discharged from surgical follow-up.

Discussion
Dating back to Somerig in 1974 and Astley in 1807, jejunal diverticula (JD) was termed for mucosal and submucosal herniation of the mesenteric portion of the small intestinal wall along the muscular layer. The incidence of diverticula is highest in the proximal jejunum (75%) followed by the distal jejunum (20%) and the ileum (5%). Elderly males (mostly at the age of 62) are commonly which is in the age range of our patient. The etiology of JD is thought to be the result of abnormal peristalsis, intestinal dyskinesia and increased intra luminal pressure. JD are incidentally found on small bowel radiology such as double contrast electrolysis or during surgical procedures as in our case. Even though the jejunal diverticula are mostly asymptomatic, complications are seen in 10-30% cases. The complications of jejunal diverticula include bleeding, diverticulitis, intestinal obstruction and perforation.

Jejunal diverticulosis is typically difficult to locate via an endoscopic approach, with current imaging techniques containing to be unreliable. Commonly, barium follow-through studies and abdominal CT are helpful, although enteroclysis remains the investigation of choice. In the case of acute jejunal diverticula complications, urgent laparotomy is indicated as a diagnostic and therapeutic measure. Various cases have had success with complete small bowel resection with primary entero-entero anastomosis. Due to the low incidence of disease and unreliable diagnostic imaging in emergency departments, the diagnosis and subsequent management of diverticular disease is challenging, the treatment is often delayed for days or weeks post the initial presentation. It is essential to suspect and diagnose jejunal diverticula in similar presentations, and to consider laparotomy and surgical resection as preferred treatment choices.

Conclusion
Jejunal diverticula are often overlooked as a possible source of abdominal discomfort or infection in elderly patients, due to its rare occurrence. The findings are often elucidative as surgical presentations. Various
therapies may be employed depending on the general state of the patient and the severity of disease. While non-surgical treatment may be considered sufficient for jejunal diverticula without peritonitis or abscess, emergency surgical treatment with resection of the affected segment and primary anastomosis is mandated.

Conflicts of Interest  None

References

Authors Contribution
K.K.B: Conceptualization of Project
S.R: Data Collection
A: Literature Search
A.A: Statistical Analysis
Z.S: Drafting, Revision
A.S: Writing of Manuscript