

Rare Case of Small Bowel Diverticulosis Presenting As Intestinal Obstruction with Ileocaecal Knotting

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Abstract: A 45 year old male was admitted with complaints of abdominal pain, distention, vomiting and fever for the past 4 days. Abdomen x ray showed dilated bowel loops with multiple air fluid levels. Diagnosis of acute small bowel obstruction was made and planned for emergency laparotomy. The abdomen was opened with a midline incision, on opening the abdomen there was multiple diverticulosis involving the jejunum and ileum with ileocaecal knotting with adhesions and diverticulitis, proceeded with resection and anastomosis of the multiple diverticulum, end to end jejunoileal anastomosis was done in two layers. Abdomen closed in single layer after keeping bilateral flank drain. Specimen sent for HPE, the biopsy came as multiple jejunal and ileal diverticulosis with focal necrosis with diverticulitis. Post operative period was uneventful. Drain removed on eighth day, sutures removed on 12th post operative day and patient was discharged on 13th post operative day.

I. Introduction

1.1 Case Scenario

Mr.Subramani, 35 Yrs/Male, from Rasipuram admitted on 2/9/11 as a case of Acute abdomen chief C/O-Abdominal Distention -4 Days, Abdominal Pain-4 Days, obstipation-4 Days, Vomiting-4 Days.

P/A- Abdomen Distention, Diffuse Tenderness, Shifting Dullness Present, No Guarding/No Rigidity, P/R - Rectum Empty, Vitals are Stable. We offered X-Ray abdomen erect which shows multiple dilated loops with multiple air fluid level, ECG-old infarct wall MI, RFT-within normal limits

We diagnosed it as intestinal obstruction, planned for emergency laparotomy & proceed under high risk consent. On Exploration: About 500 ml of toxic fluid present in peritoneum, Multiple giant diverticulosis present in jejunum and ileum in anti mesenteric border. Diverticular parts adherent to each other with dense adhesions, areas of discoloration & unhealthy bowel, Part of bowel containing diverticulosis found to be twisted around caecum



Fig 1



Fig 2

1.2 Procedure

Diverticular part found to be unhealthy and with dense adhesions involving distal aspect of Jejunum approx 20 cm and proximal aspect of ileum approx 10 cm. jejunum and ileum with diverticulosis are resected out, end to end anastomosis done in two layers.² Other part of bowel are normal without any diverticulum

1.3 Macroscopic Findings

GROSS : 30 cm small intestine. Serosa shows multiple diverticuli, adhesions & focal black areas, cut surface shows opening of diverticuli.

1.4 Microscopy : Section of diverticula show mucosa & submucosa with lymphocytic infiltrate. Section of black areas-haemorrhage, necrosis & congested blood vessels in serosa. No evidence of granuloma/malignancy,

1.5 Impression : Small intestine – Diverticulosis with focal haemorrhagic infarct.
Oral diet starts on 5th POD, pt discharged on 13th POD

II. Discussion

Diverticulosis of the small bowel is a rare disease with variable clinical presentations. It was first described by Sommering in 1794, later by Astley Cooper in 1809.¹ Gordinier and Shil performed the first operation for diverticula in 1906. Jejunoileal diverticula (excluding Meckel's diverticulum) are pseudodiverticula, Resulting from a mucosal and submucosal herniation through the muscular layer of the bowel wall. Places of minor resistance to the intraluminal pressure such as the anatomic points where blood vessels penetrate the intestinal wall jejunoileal diverticulosis is usually multiple, more frequently located in the jejunum and in the terminal ileum probably due to the larger size of the vasa recta at these areas,

Associated disorders: Cronkhite-Canada syndrome, Fabry's disease, mitochondrial neurogastrointestinal encephalomyopathy, Ehlers-Danlos syndrome, Progressive systemic sclerosis, Myasthenia gravis, symptom triad as 'flatulent dyspepsia' -epigastric pain, abdominal discomfort, flatulence one or two hours after meals ..

Complications⁸: obstruction, hemorrhage, diverticulitis, perforation - occur in 10%-30% of the patients, Mechanical obstruction: caused by adhesions, stenosis due to diverticulitis, intussusception at the site of the diverticulum, volvulus of the segment containing the diverticula.¹¹ Characteristic triad of clinical and radiographic findings of jejunoileal diverticulosis are abdominal pain, Anemia, Segmental dilatation in the epigastrium or in the left upper abdomen. IN X-rays, computed tomography show focal areas of out-pouching of the mesenteric side of the bowel, Localized intestinal wall thickening due to inflammation, edema, abscesses, free abdominal fluids and pneumoperitoneum, Endoscopy does not identify diverticula but excludes other causes of obstruction or hemorrhage. Newer techniques: Wireless capsule endoscopy is a new technique for the detection of small bowel diseases, Large diverticula is a relative contraindication to capsule endoscopy because of

the possibility of the capsule's entrapment in small bowel diverticula, Laparoscopy becomes a valid diagnostic approach for complicated cases¹¹. Exploratory laparotomy and resection of affected intestinal segment with primary anastomosis is mandatory in case of Perforation, Abscesses, Obstruction, Asymptomatic jejunoileal diverticulosis does not require intestinal resection.



Fig 3

III. Conclusion

A small bowel diverticulosis is a rare case presenting as acute intestinal obstruction with ileocaecal knotting. This case is presented for its uniqueness and rarity.

References

- [1]. Kouraklis G, Glinavou A, Mantas D, Kouskos E, Karatzas G. Clinical implications of small bowel diverticula. *Isr Med Assoc J* 2002; 4: 431-433
- [2]. Wilcox RD, Shatney CH. Surgical implications of jejunal diverticula. *South Med J* 1988; 81: 1386-1391
- [3]. Liu D, Chen L. Management of the total bowel diverticular disease. *Hepatogastroenterology* 2009; 56: 1679-1682
- [4]. Veen M, Hornstra BJ, Clemens CH, Stigter H, Vree R. Small bowel diverticulitis as a cause of acute abdomen. *Eur J GastroenterolHepatol* 2009; 21: 123-125
- [5]. Fronticelli CM, Bellora P, Ferrero A, Anselmetti GC, Passarino G, Burlo P. Complicated jejunal diverticulosis: report of a case. *Surg Today* 1996; 26: 192-195
- [6]. Chiu KW, Changchien CS, Ch u ah SK. Small-bowel diverticulum: is it a risk for small-bowel volvulus? *J ClinGastroenterol* 1994; 19: 176-177
- [7]. Maglente DD, Chernish SM, DeWeese R, Kelvin FM, Brunelle RL. Acquired jejunoileal diverticular disease: Subject review. *Radiology* 1986;158:577-80.
- [8]. Ross CB, Richards WO, Sharp KW, Bertram PD, Schaper PW. Diverticular disease of the jejunum and its complications. *Am Surg* 1990;56:319-24.
- [9]. De Bree E, Grammatikakis J, Christodoulakis M, Tsiftsis D. The clinical significance of acquired jejunoileal diverticula. *Am J Gastroenterol* 1998; 93:2523-8.
- [10]. Hayee B, Khan HN, Al-Mishlab T, McPartlin JF. A case of enterolith small bowel obstruction and jejunal diverticulosis. *World J Gastroenterol.* 2003; 9: 883-884.
- [11]. Akhrass R, Yaffe MB, Fischer C, Ponsky J, Shuck JM. Small-bowel diverticulosis: perceptions and reality. *J Am Coll Surg.* 1997; 184: 383-388.