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Case report

Perforated Solitary Jejunal Diverticulum : a rare case report

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ABSTRACT

Solitary jejunal diverticulae are very rare entities. A 70-year-old male presented with a 4-day history of generalized abdominal pain, distension and constipation. An abdominal X-ray displayed air under both the domes of the diaphragm and ultrasound revealed ascites. On emergency laparotomy, feculent exudate with a perforated small solitary jejunal diverticulum was found in the abdominal cavity, which was treated with diverticulectomy. He had uneventful recovery.

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1. Introduction

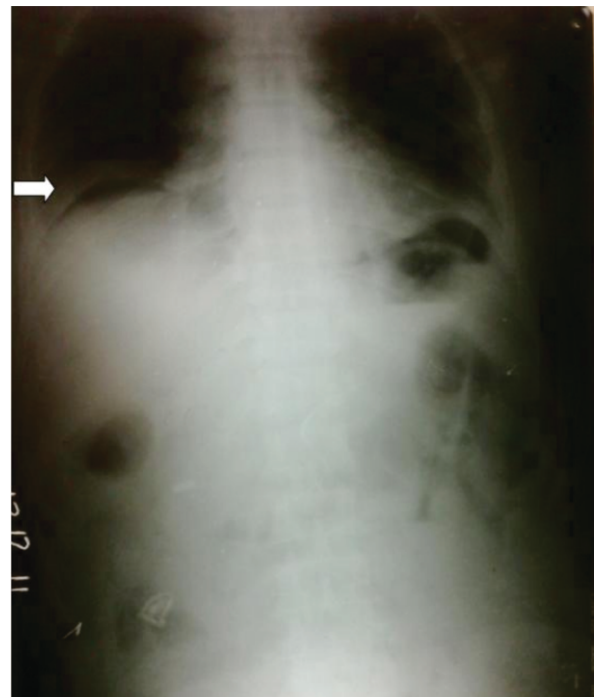
Jejunal diverticula are rare clinical entities, which occur in the population with an incidence of 0.7-2% [1]. Jejunal diverticula remain asymptomatic in 60 to 70% of cases [2,3]. Jejunal diverticulae are often multiple and a solitary diverticulum is rarely found. We report one such rare case, which presented as acute abdomen.

2. Case report

A 70-year-old male was admitted in our emergency department with a 4-day history of generalized abdominal pain, distension and constipation. On clinical examination he was febrile and moderately dehydrated. Abdominal examination revealed signs of peritonitis with guarding and rigidity. Hemogram and serum chemistry was unremarkable except for leucocytosis. Abdominal X-ray (Fig. 1) displayed air under both the domes of the diaphragm. Abdominal ultrasound revealed ascites. After resuscitation, emergency laparotomy was done. Laparotomy findings were 2 liters of feculent ascites with hyperemic small bowel. Usual sites of gastro-intestinal perforations such as duodenum, appendix, ileum, Meckel's diverticulum, hernial sites and stomach were normal. On thorough examination of entire small bowel, we found a 0.2x0.2 cm perforation at the tip of a 3x2 cm diverticulum on the mesenteric side of jejunum, 20 cm distal to the duodenal-jejunal flexure (Fig. 2).

Simple diverticulectomy including the perforation was done with closure of the bowel defect (Fig. 3). Extensive peritoneal lavage was performed. No other diverticulae were found. The patient made an uneventful recovery and histopathology of specimen showed diverticulitis with no ectopic gastric mucosa.

Figure 1: Plain X-ray Abdomen showing pneumoperitoneum (Arrow)



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Figure 2: Intra-operative image showing perforated solitary jejunal diverticulum (Arrow)

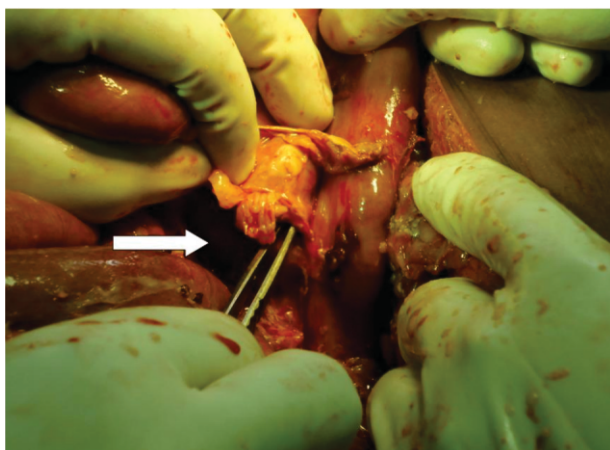


Figure 3: Intra-operative image showing closure of bowel defect after diverticulectomy (Arrow)



3. Discussion

Jejunal diverticulae are rare clinical entities with an incidence of 0.7-2% [1] and more frequently found in elderly males (58%) [4]. The most common location of the diverticula in the small bowel is the proximal jejunum (75%), followed by the distal jejunum (20%) and the ileum (5%) [5]. They are rarely solitary and more commonly multiple (77 %). Jejunal diverticula remain asymptomatic and found incidentally at laparotomy in 60 to 70% of cases [2,3]. Common acute complications of diverticulae include diverticulitis, hemorrhage, intestinal obstruction and perforation [6]. Perforation of jejunal diverticula is an especially rare complication and the clinical features are largely non-specific. The differential diagnosis for this acute includes perforated peptic ulcer, acute appendicitis, cholecystitis or colonic diverticulitis [7].

Abdominal plain radiograph may hint at perforation by revealing pneumoperitoneum and sonography by revealing ascites, but both have limited diagnostic utility. Abdominal computerized tomography (CT) appears to be more valuable in

identifying the presence, site and cause of GI tract perforation among imaging techniques [8]. Endoscopic procedures, such as double-balloon endoscopy and capsule endoscopy may be helpful in the diagnosis of small bowel diverticula, but have limited utility in emergency setting. Diagnostic laparoscopy is a valuable method and may sometimes prevent unnecessary laparotomies.

The treatment of choice for perforated jejunal diverticulum with peritonitis is segmental intestinal resection with primary anastomosis. The reported overall mortality rate is 24%, with a mortality rate of 14% in cases where resection of the involved segment with primary anastomosis was done [9]. The extent of the bowel resection depends upon the length of the bowel affected by the diverticulum and the patient's peri-operative condition [10]. In our case the decision to perform simple diverticulectomy including the perforation with closure of bowel defect was based on the age of our patient, inflamed bowel and fecal contamination.

4. Conclusion

Solitary jejunal diverticulum on mesenteric side presenting with perforation is a very rare clinical entity and can be revealed only by thorough inspection of the bowel at laparotomy. It should be considered in the differential diagnosis of acute abdomen, especially in the elderly patients. Diverticulectomy with or without segmental bowel resection is the treatment of choice.

5. References

- [1] Palanivelu C, Rangarajan M, Rajapandian S, et al. Perforation of jejunal diverticula in steroids and Nonsteroidal anti-inflammatory drug abusers: a case series. *World J Surg.* 2008;32:1420-424.
- [2] Altmeier WA, Bryant LR, Wulsin JH. The surgical significance of jejunal diverticulosis. *Arch Surg.* 1963;86: 733-745.
- [3] Wilcox RD, Shatney CH. Surgical implications of jejunal diverticula. *South Med J.* 1988; 781: 1386-1391.
- [4] Tsiotos GG, Farnell MB, Ilstrup DM. Nonmeckelian jejunal or ileal diverticulosis: An analysis of 112 cases. *Surgery* 1994;116:726-32.
- [5] de Bree E, Grammatikakis J, Christodoulakis M, Tsiptsis D. The clinical significance of acquired jejunoileal diverticula. *Am J Gastroenterol.* 1998;93:2523-8.
- [6] Woods K, Williams E, Melvin W, Sharp K: Acquired jejunoileal diverticulosis and its complications: a review of the literature. *Am Surg.* 2008, 74(9):849-854.
- [7] Akhrass R, Yaffe MB, Fischer C, et al. Small-bowel diverticulosis: perceptions and reality. *J Am Coll Surg.* 1997; 184:383-8.
- [8] Furukawa A, Sakoda M, Yamasaki M, et al. Gastrointestinal tract perforation: CT diagnosis of presence, site, and cause. *Abdom Imaging.* 2005; 30:524-34.
- [9] Roses DF, Gouge TH, Scher KS, Ranson JH. Perforated diverticula of the jejunum and ileum. *Am J Surg.* 1976;132:649-52.
- [10] Mattioni R, Lolli E, Barbieri A, D'Ambrosi M: Perforated jejunal diverticulitis: personal experience and Diagnostic with therapeutical considerations. *Ann Ital Chir.* 2000,71(1):95-98.

8. References

- [1] Blazquez R, Pinedo A, Cosin J, Miralles P, Lacruz C, Bouza E. Nonsurgical cure of isolated cerebral mucormycosis in an intravenous drug user. *Eur J Clin Microbiol Infect Dis*. 1996;15:598–599.
- [2] Verma A, Brozman B, Petito CK. Isolated cerebral mucormycosis : report of a case and review of the literature. *J Neurol Sci*. 2006;240:65–69.
- [3] Yohai RA, Bullock JD, Aziz AA, Markert RJ. Survival factors in rhino-orbito-cerebral mucormucosis. *Surv Ophthalmol* 1994; 39:3-22.
- [4] Peterson KL, Wang M, Canalis FR, Abemayor E. Rhinocerebral mucormycosis: Evolution of the disease and treatment options. *Laryngoscope* 1997; 107:855-62.
- [5] Parfrey NA. Improved diagnosis and prognosis of mucormycosis. A clinicopathologic study of 33 cases. *Medicine* 1986; 65:113-23.
- [6] Weprin BE, Hall WA, Goodman J, Adams GL. Long-term survival in rhinocerebral mucormycosis : Case report. *J Neurosurg*. 1998;88:570–575.
- [7] Boelaert JR, Fenves AZ, Coburn JW. Desferrioxamine therapy and mucormycosis in dialysis patients: Report of an International Registry. *Am J Kidney Dis* 1991; 18:660-67.
- [8] Ochi JW, Harris JP, Feldman JI, Press GA. Rhinocerebral mucormycosis: Results of aggressive surgical debridement and amphotericin B. *Laryngoscope* 1988; 98:1339-42.
- [9] Abedi E, Sismanis A, Choi K, Pastore P. Twenty-five years experience treating cerebro-rhino-orbital mucormycosis. *Laryngoscope* 1984; 94:1060-62,
- [10] Rangel-Guerra R, Martinez HR, Saenz C. Mucormycosis. Report of 11 cases. *Arch Neurol* 1985; 42:5478-81.