Uncommon Cause Of Gastrointestinal Hemorrhage: Jejunal Diverticula

G Pignaton de Freitas, H Lima, A de Almeida Borges

Citation

G Pignaton de Freitas, H Lima, A de Almeida Borges. *Uncommon Cause Of Gastrointestinal Hemorrhage: Jejunal Diverticula*. The Internet Journal of Surgery. 2006 Volume 9 Number 2.

Abstract

A small bowel diverticulum is an uncommon cause of lower gastrointestinal bleeding, which should be considered in differential diagnosis of patients with non-diagnostic upper endoscopy and colonoscopy. This case reports gastrointestinal bleeding due to jejunal diverticula with surgical diagnosis and treatment.

INTRODUCTION

Small bowel diverticulum is an unusual diagnosis. Most of the patients are asymptomatic and diagnosis is made by chance during barium contrast examinations or during surgery for other reasons. About 10 percent of the patients may present with complications such as diverticulitis, bleeding, malabsortion or bowel obstruction. The purpose of this paper is to report an unusual case of massive blood loss due to jejunal diverticula and its surgical treatment.

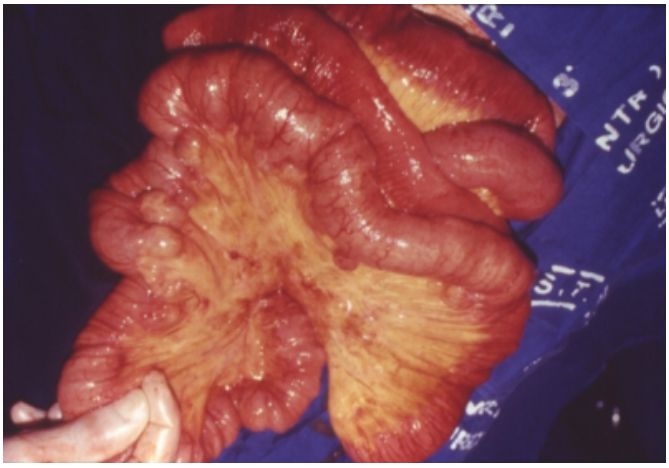
CASE REPORT

A 52-year-old male, with no previous medical record, had sought the Emergency Department of Antônio Pedro University Hospital presenting with severe lower gastrointestinal bleeding. Physical examination revealed hemodynamic instability (systolic BP 60 mmHg). Blood tests revealed Hb 8 g/dl.

Despite of aggressive fluid resuscitation, he could not reach hemodynamic stability, he was sent to operating room. Since he has undergone a nondiagnostic upper endoscopy, a surgical procedure was indicated. Laparotomy revealed many diverticula with different sizes were identified in the first 30 cm of proximal jejunum, associated with active bleeding. (Figure 1)

Figure 1

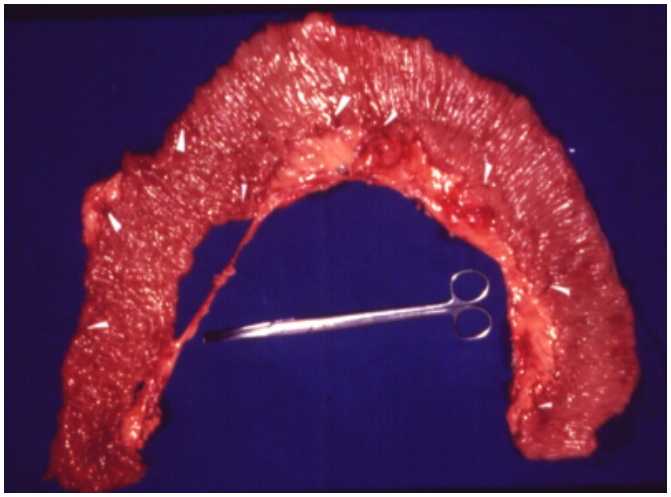
Figure 1: Laparotomy showing multiple jejunal diverticula



Partial enterectomy of proximal jejunum (Figure 2) with primary end-to-end anastomosis was performed. He made an uneventful recovery and was discharged in the third day after surgery.

Figure 2

Figure 2: Partial enterectomy of jejunum showing multiple diverticula, some with signs of bleeding.



DISCUSSION

Chomel was the first to report duodenal diverticulum in 1710, but jejunal diverticula were only described a hundred years later by Astley Cooper. In 1906, Gordinier and Sampson performed the first resection of jejunal diverticulum due to bowel obstruction in a patient with diverticulitis. [3]

Small bowel diverticulum is an uncommon disease, with reported incidence of 0.02 to 7.1%. This is two times more common in males, occurring mainly in the sixth or seventh decades of life. [3]

Diverticula probably result from neuromuscular disorders of intestinal muscle, causing uncoordinated and spastic waves that lead to luminal pressure increase and consequently to herniation of mucosa. These outpouchings emerge on the mesenteric border of gut, because this is the site where mesenteric vessels penetrate the small bowel. Most of diverticula are acquired and their wall include only mucosa and submucosa. While true diverticula are composed of all layers of intestinal wall and are generally congenital. They vary in number and size, becoming smaller as they approach ileum. There is a predominance of small bowel diverticula in the jejunum (80%), followed by ileum (15%). [1]They are related to colonic diverticula in 30 to 60 percent of cases and to duodenal diverticula in 22 percent of cases.[2]

Most of patients are asymptomatic, and only 30 percent of patients present with complaints of abdominal discomfort, bloating, distention, diarrhea and flatulence. Complications occur in 10 percent of cases and include diverticulitis, bleeding, malabsortion or bowel obstruction.[5] A bleeding caused by small bowel diverticula occur in less than 5% of patients, most of the times presenting as a massive blood loss.

The diagnosis is generally casual by means of radiologic contrast studies or during surgeries performed for other purposes.[4] The diagnosis is hardly obtained, considering that access to small bowel through diagnostic methods is restrict. These blind areas to endoscopic methods can be disclosed by enteroscopy or capsule endoscopy. During a gastrointestinal bleeding, after unrevealing upper endoscopy and colonoscopy, the investigation should be expanded to the small intestine with enteroscopy, scintigraphy scan or arteriography. Lesions actively bleeding at the time of investigation can be identified either by Tc-99 red blood cell scan or by arteriography. Mesenteric angiography is less sensitive, but more specific than technetium-99 radionuclide scan for localization of bleeding site. [6]

The next step in investigation would be enteroscopy, including double-balloon enteroscopy, capsule endoscopy or laparotomy, depending on the resources available in the institution and on the clinical condition of the patient. [5] The diagnosis of SID is also possible by radiologic contrast studies using barium, e.g. enteroclysis or barium swallow. [2] Time-consuming diagnostic studies are not indicated when the clinical setting is critical.

Asymptomatic diverticula do not require any treatment. Surgery is indicated in most of the cases of bleeding related to small bowel diverticula, because the rebleeding rates are quite high (around 80%). The suggested approach is partial enterectomy with primary end-to-end anastomosis. [5]

CONCLUSION

Small bowel diverticular disease is an uncommon cause of intestinal bleeding, however this diagnosis should be considered if initial upper endoscopy and colonoscopy are unrevealing. The diagnosis depends on several imaging studies and surgery is the treatment of choice.

CORRESPONDENCE TO

R. Silveira Martins, 40/307 Flamengo _ Rio de Janeiro – RJ – BRAZILCEP:22221-000EMAIL : guspignaton@gmail.com

References

1. Cuadrado EP, Perez EM, Saez LR. Jejunal diverticulum. Gastrointestinal Endoscopy 2000; 51 (4): 463.
2. Borges AA, Freitas GAP, Lukashok HP. Low

gastrointestinal hemorrhage as a complication of smal bowel diverticular disease - Case report. GED 2005; 24(2):77-79.
3. Harris LM, Volpe CM, Doerr RJ. Small Bowel Obstruction Secondary to Enterolith Impaction Complicating Jejunal Diverticulitis. American Journal of Gastroenterology 1997; 92 (9): 1538-1542.
4. Lewis BS. Small intestinal bleeding. Gastroenterology Clinics 2000; 29 (1),67-95.
5. Longo WE; Vernava AM. Clinical Implications of Jejunoileal Diverticular Disease. Dis colon rectum 1992; 35 (4): 381 - 387.
6. Rockey DC. Occult Gastrointestinal Bleeding. In: Friedman SL, McQuaid KR, Grendell JH. Current Diagnosis & Treatment in Gastroenterology. McGraw Hill 2003; p.83-95.

Author Information

Gustavo Pignaton de Freitas
Antonio Pedro University Hospital, Department of Surgery, Federal University

Haberlandh Lima
Antonio Pedro University Hospital, Department of Surgery, Federal University

Adriana de Almeida Borges
Antonio Pedro University Hospital, Department of Surgery, Federal University