Case Reports

Crohn's disease presenting as life-threatening ileal bleeding

Curt Tysk, MD, PhD, Jan De Keersmaecker, MD, Hussam Al-Been, MD, Talal M. Ahmad, MD.

ABSTRACT

We report a case of Crohn's disease in a 32-year old Saudi male. The disease presented with severe, life-threatening ileal bleeding necessitating an urgent laparotomy and 100 cm of ileum and ascending colon was resected. The bleeding source was several ulcers in an inflamed ileum and histopathologic examination revealed typical findings of Crohn's disease with a chronic, transmural inflammation, non-caseating granuloma and the Ziehl-Neelsen stain was negative. The postoperative course was uneventful. On follow-up he is doing well on medical treatment with mesalamine and substitution therapy with vitamin B12.

Keywords: Crohn's disease, intestinal bleeding, surgery.

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Crohn's disease is uncommon in Saudi-Arabia in contrast to Europe and North America. There are some reports from the Kingdom,[1-5] but epidemiological data is not available. Crohn's disease generally presents in 20-40 year old individuals with diarrhea, abdominal pain, fever, and weight loss. Intestinal bleeding is a frequent symptom of Crohn's disease and ulcerative colitis. Severe intestinal bleeding, however, is less frequent and has generally been associated with ulcerative colitis although recent studies reported a similar frequency in Crohn's disease.[6,7] Acute severe intestinal hemorrhage was reported in 1-6% of patients with Crohn's disease and occasionally severe bleeding may be the presenting symptom of the bowel disease.[6-8] Major bleeding can occur both in clinically active disease and in inactive disease and has generally been attributed to deep mucosal ulcerations eroding submucosal vessels.[6] We report a case of Crohn's disease presenting with severe, life-threatening ileal bleeding.

Case Report. The patient is a 32-year old, Saudi male with a previous history of peptic ulcer disease. He presented in the emergency room with severe rectal bleeding and diffuse abdominal pain. Shortly after admission he was in shock; blood pressure was 70/40, pulse rate 140 and he was slightly tender diffusely in the abdomen. Rectal examination revealed dark-red blood with clots, but no anorectal bleeding source was found. After stabilization with intravenous fluids and blood transfusions, an emergency gastroscopy was carried out which was normal. Eight hours after admission his bleeding recurred and his condition deteriorated with recurrent hypovolemic shock. As his condition allowed no further preoperative investigations, an emergency laparotomy was carried out. At laparotomy both the colon and distal half of the small bowel were distended and filled with blood. There were no Meckel's diverticulum or signs of diverticular or vascular disease. Multiple lesions consistent with

From the Department of Medicine (Tysk, Al-Been) and Department of Surgery (Keersmaecker, Ahmad), Al-Hammadi Hospital, Riyadh, Kingdom of Saudi Arabia, and the Department of Gastroenterology (Tysk), Orebro Medical Center Hospital, Orebro, Sweden.

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Address correspondence and reprint request to: Dr. Curt Tysk, Department of Gastroenterology, Orebro Medical Center Hospital, S-701 85 Orebro, Sweden. Tel. +46 (19) 6021000. Fax. +46 (19) 6021774. E-mail: curt.tysk@orebroll.se.

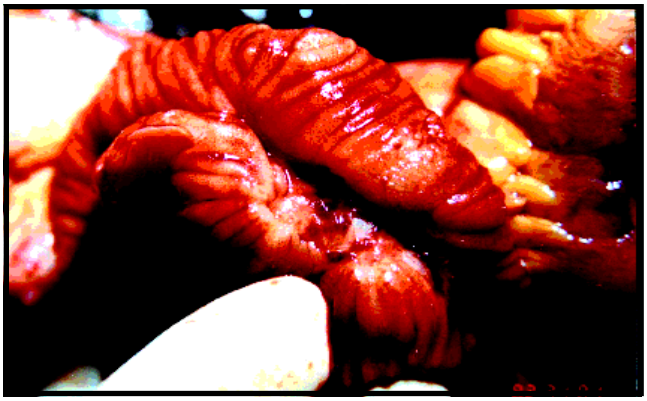

Figure 1 - Photograph showing deep ulcerations in the small bowel mucosa.

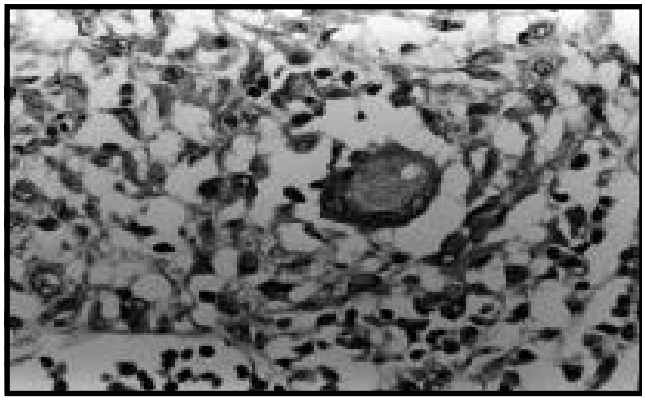

Figure 3 - A small granuloma containing a central giant cell with surrounding histiocytes and plasma cells. (Hematoxylin and eosin stain, x 400).

Crohn's disease were seen in the wall of the distal 3rd of the small bowel: wall thickening, advancement of mesenteric fat over the surface of the small bowel toward the anti-mesenteric border, thickening of the mesentery and mesenteric lymphadenitis. An intraoperative enterotomy through one of the affected areas showed deep mucosal linear ulcerations, pseudopolyps and inflammatory lesions. All macroscopically affected small bowel (approximately 100 cm) was resected in continuity with the right hemicolon. A stapled side-to-side ileotransverse anastomosis was carried out in a standard fashion. The remaining small bowel measured approximately 170 cm. The postoperative course was uneventful. He was discharged after 8 days and during his hospital stay he received a total of 13 units of blood. The macroscopic examination of the resected bowel revealed several round and longitudinal ulcers in an inflamed ileum, whereas the colon was normal (Figure 1). On microscopic examination a chronic, transmural inflammation with fissures and non-caseating granuloma was seen in the ileum consistent with Crohn's disease (Figures 2 & 3). The Ziehl-Neelsen stain was negative. He has been followed as an outpatient for 6 months and is doing very well without diarrhea. After an initial course of corticosteroids, his therapy at present is mesalamine and substitution with vitamin B12. During the follow-up period a barium follow-through was normal.

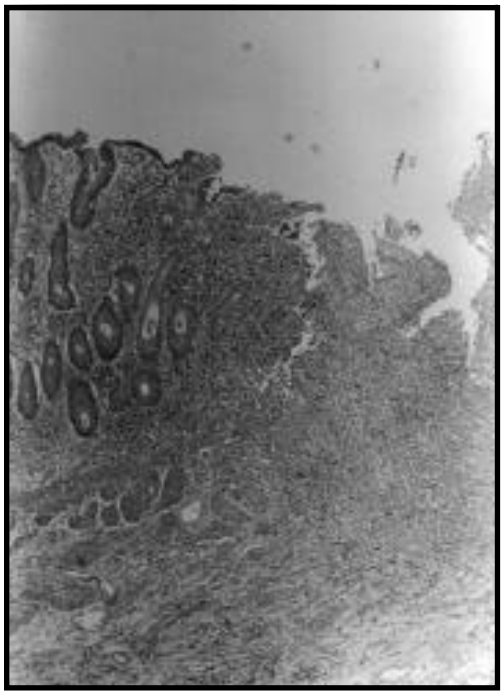

Figure 2 - Microscopic features of Crohn's disease with deep fissural ulcer and transmural inflammation. (Hematoxylin and eosin stain x 100).

Discussion. Major lower intestinal bleeding, i.e. originating distally to the ligament of Treitz, represents a diagnostic and therapeutic challenge. The cause and precise site of bleeding may be difficult to assess, as the small intestine is not readily visualized endoscopically. Crohn's disease as a cause of major intestinal bleeding is rare. Other more common causes include arteriovenous malformations, Meckel's diverticulum, diverticulosis, other colitis or neoplasm.[9] The available diagnostic procedures involve endoscopic investigations, angiography, or scintigraphy. If these fail a laparotomy and intraoperative enteroscopy may be the ultimate diagnostic procedure. In 2 recent studies the bleeding source was localized by colonoscopy in 60-78% of the patients.[6,7] In an older report the bleeding source was, however, not identified in 19 out of 21 patients.[10] In the present patient a gastroscopy was performed to rule out an

upper gastrointestinal bleeding source. No other diagnostic procedures could be performed preoperatively as he had a severe bleeding and his condition was very unstable. In previous series of Crohn's disease with major bleeding, the bleeding was the presenting symptom in 23-27% of the patients.[6,8] A thorough interview of our patient revealed that he had very subtle, non-specific abdominal symptoms during the last years but not severe enough to seek medical care. His severe bleeding was thus the first presentation of his bowel disease.

The optimal therapy for severe bleeding in Crohn's disease is not stated. In their review of 4 cases and 34 earlier published cases, Cirocco et al found that 91% of the patients required surgery with a mortality of 3%.[8] The most frequently performed procedure was an ileocolectomy. The long-term prognosis after surgery was very good and only 3.5% of the patients required further operation and only 7% needed medical treatment for a later relapse of the disease. However, a recent study of 34 bleeding Crohn's disease patients showed that surgical treatment was necessary in only 20% of the cases.[6] In the remaining 80%, the bleeding was arrested either endoscopically or after anti-inflammatory therapy such as corticosteroids or cyclosporine. There was no mortality. A recurrence of bleeding was seen in 35% of medically treated patients but in no operated patients. Similarly, in the report by Pardi et al,[7] 39% of bleeding Crohn's disease patients required early surgery. Recurrent bleeding occurred in 7 out of 27 medically treated patients and 4 of them required surgery with a lethal outcome in one case.[7] They concluded that patients with recurrent major hemorrhage represent a high-risk group and surgery should be recommended in these cases.

In summary, our case-report highlights that in severe lower intestinal bleeding Crohn's disease must be considered.

References

1. Isbister WH, Hubler M. Inflammatory bowel disease in Saudi Arabia: presentation and initial management. J Gastroenterol Hepatol 1998; 13: 1119-1124.
2. Toonisi TS. Crohn's disease in children from the western region of Saudi Arabia. J Gastroenterol Hepatol 1993; 8: 462-464.
3. Al-Gindan YM, Satti MB, Al-Quorain AA, Al-Hamdan A. Crohn's disease in Saudi Arabia: a clinicopathological study of 12 cases. Saudi Journal of Gastroenterology 1996; 2: 150-155.
4. Hossain J, Al-Mofleh IA, Laajam MA, Al-Rashed RS, Al-Faleh FZ. Crohn's disease in Arabs. Annals of Saudi Medicine 1991; 11: 40-46.
5. Mokhtar A, Khan MA. Crohn's disease in Saudi Arabia. Saudi Medical Journal 1982; 3: 207-208.
6. Belaiche J, Louis E, D'Haens G, Cabooter M, Naegels S, DeVos M et al. Acute lower gastrointestinal bleeding in Crohn's disease: characteristics of a unique series of 34 patients. Am J Gastroenterol 1999; 94: 2177-2181.
7. Pardi D, Loftus EV, Tremaine WJ, Sandborn WJ, Alexander GL, Balm RK et al. Acute major gastrointestinal hemorrhage in inflammatory bowel disease. Gastrointest Endosc 1999; 49: 153-157.
8. Cirocco WC, Reilly JC, Rusin LC. Life-threatening hemorrhage and exsanguination from Crohn's disease. Report of 4 cases. Dis Colon Rectum 1995; 38: 85-95.
9. Vernava AM, Moore BA, Longo WE, Johnson FE. Lower gastrointestinal bleeding. Dis Colon Rectum 1997; 40: 846-858.
10. Robert JR, Sachar DB, Greenstein AJ. Severe gastrointestinal hemorrhage in Crohn's disease. Ann Surg 1991; 213: 207-211.