

Hematochezia in Young Patient Due to Crohn's Disease

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ABSTRACT

Crohn's disease encompasses a spectrum of clinical and pathological patterns, affecting the gastrointestinal (GI) tract with potential systemic and extraintestinal complications. The disease can affect any age group, but the onset is most common in the second and third decade. Lower GI bleeding is one of its clinical features. Surgical intervention is required in up to two-thirds of patients to treat intractable hemorrhage, perforation, obstruction or unresponsive fulminant disease.

We reported a case of Crohn's disease in young male who suffered from severe lower GI bleeding (hematochezia) as the clinical features. Lower GI endoscopy revealed ulceration at the distal ileum surrounded by fibrotic tissue as a source of bleeding and a tumor mass at mesocolon. Upper GI endoscopy was unremarkable. Histopathologic examination concluded multiple ulceration with chronic ischemic condition, appropriate to Crohn's disease. The patient underwent emergency surgical intervention (subtotal colectomy and ileostomy), and his condition was improved.

Keywords: hematochezia, young male, Crohn's disease, surgery

INTRODUCTION

Crohn's disease is one of inflammatory bowel disease (IBD) which is less frequent than ulcerative colitis. The incidence and prevalence of Crohn's disease in the United States remain similar to other western countries, estimated at 5/100,000 and 50/100,000 respectively. It's more prevalent in Jews and less common in African Americans. The disease can affect any age group, but the onset (diagnosis) is most common in the second and third decade (15 and 25 years). Genetics has a role in pathogenesis of the disease. Fifteen percent of IBD patients have first degree relatives who also have IBD. There's immune activation in Crohn's disease that can be triggered by viruses/bacteria, dietary antigen and autoantigen in intestinal epithel. Crohn's disease must be differentiated from other inflammatory bowel diseases that mimic or complicate the clinical course.^{1,2}

The heterogeneity of manifestations, a potentially insidious onset, overlapping features with other inflammatory bowel diseases, and/or presentation without GI symptoms, can make the diagnosis of Crohn's disease difficult. Characteristic symptoms of chronic or nocturnal diarrhea and abdominal pain,

weight loss, fever and rectal bleeding reflect the underlying inflammatory process. Clinical signs include pallor, cachexia, an abdominal mass/tenderness or perianal fissures, fistulae or abscess. Extraintestinal features are inflammation of the eyes, skin, or joints, primary sclerosing cholangitis and hypercoagulability.^{1,2} Although the onset is typically insidious, occasionally, Crohn's disease can present with a fulminant onset. Despite the potential heterogeneity, individual manifestations and complications, there are definable patterns according to disease location and type (inflammatory, fibrostenotic or fistulizing), which are important in determining clinical outcomes. The ileum and colon are the most commonly affected sites, usually complicated by intestinal obstruction, inflammatory mass or abscess. Gastric and duodenal manifestations include epigastric pain, nausea and vomiting or gastric outlet obstruction.^{1,2}

The diagnosis of Crohn's disease is based upon a composite of clinical pictures, endoscopic, radiographic and pathological findings.^{1,2,3} Upper or lower GI endoscopy is used to confirm the diagnosis of Crohn's disease, assess disease location or obtain tissue for pathological evaluation. Endoscopic biopsy

can establish the diagnosis, differentiate between ulcerative colitis and Crohn's disease, rule out acute self-limited colitis, or identify dysplasia or cancer. Endoscopic features of Crohn's disease are skipping areas, aphthous ulcers, cobblestone appearance, fistula, ulceration of terminal ileum with rectal sparing.^{1,2,3,4} Characteristic pathological findings of Crohn's disease are skip lesions with rectal sparing, mucin retention, focal mucosal injury, transmural involvement and the presence of granulomas.^{2,4}

Therapeutic recommendations depend upon the disease location, severity and complications. Therapeutic approaches are individualized according to the symptomatic response and tolerance to medical intervention. Therapy is sequential to treat acute disease then to maintain remission. Surgical intervention is required in up to two-thirds of patients to treat intractable hemorrhage, perforation, persistent/recurrence obstruction, abscess or unresponsive fulminant disease.^{1,2,3,4,6}

CASE REPORT

Male, 24 years old, admitted to hospital with chief complaint rectal bleeding since one day before to admission. Eight days before admission he was suffered from high grade fever. The patient was seeking medical assistant to general practitioner, and was given antipyretic and antibiotic. Two days before admission, he developed vomiting and nausea and a day later he was suffered from rectal bleeding, two times and increased in volume gradually. No history of diarrhea, abdominal pain, weight loss or abdominal mass. He had no family history from malignancy or similar history.

From physical examination, he was moderately ill, looked pale, blood pressure 80/50 mmHg, pulse 120 times/minute, respiratory rate 24 times/minute and temperature 37.5°C with good nutritional status or normal BMI. The conjunctiva looked pale, no abdominal tenderness or mass. From digital rectal examination, there was blood without palpable mass or fistula. There was evidence of active rectal bleeding.

Laboratory examination findings were hemoglobin 9.2 g/dL, white blood cell count 9,200/mm³, platelet count 92,000/mm³, blood urea level 36 mg/dl, creatinin level 1.2 mg/dl, AST (aspartame aminotransferase), 152 IU/ml, ALT (alanin aminotransferase) 225 IU/ml, total bilirubin 0.6 mg/dl, direct bilirubin 0.3 mg/dl, indirect bilirubin 0.3 mg/dl, serum sodium 140 meq/l, potassium 3.2 meq/l and chloride 102 meq/l.

Homeostatic profile prothrombin time 13 second (control 13 s), activated partial thromboplastin time (APTT) 51 second (control 40 s), fibrinogen 187, D-Dimer < 50, APTT mix 37 second (control 40 s) and chest X-ray was unremarkable.

The patient was given adequate O₂ and fluid resuscitation with crystalloid infusion, Packed Red Cell and Fresh Frozen Plasma transfusion. Nasogastric tube was inserted but no blood was dry out. Antibiotic, proton pump inhibitor, and tranecsamid acid was administered but during follow-up the rectal bleeding was worsen.

Endoscopy (lower and upper GI tract) was performed immediately in operation room to found the site of bleeding. Upper GI endoscopy showing mild erosive gastritis in corpus without active source bleeding. Lower GI endoscopy showing an ulceration at the distal ileum surrounded by fibrotic tissue as a source of bleeding and a tumor mass at mesocolon. The patient underwent subtotal colectomy and ileostomy.

Histopathological finding revealed multiple ulceration in intestine mucosa with submucosa fibrosis and granuloma in the centre of follicle. Mesocolon and large bowel also revealed granuloma. After surgery, bleeding was stop and general condition was improved.

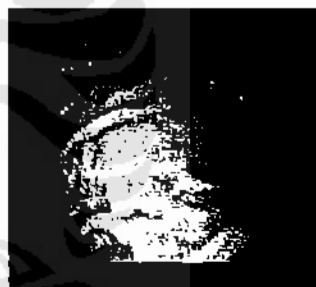


Figure 1. Upper GI endoscopy showing mild erosive gastritis in corpus without active bleeding



Figure 2. Lower GI endoscopy showing active bleeding from proximal ascenden colon with ulcer in ileum

DISCUSSION

Crohn's disease is one of inflammatory bowel disease, which is less common than ulcerative colitis. Similar incidence in men and women with the peak of onset is between 15 and 25 years. There is a genetic predisposition of Crohn's disease, which is 15% of IBD patients have first-degree relatives who also have IBD. There's evidence of immune activation in Crohn's

disease. Various viruses and bacteria have been proposed as triggers. Predominant symptoms in Crohn's disease include diarrhea, abdominal pain and weight loss that may exist for months to years before a diagnosis is made. Fatigue, malaise, fever and chills are constitutional symptoms that contribute to the morbidity of Crohn's disease. Crohn's disease is relapsing and remitting disease. Sixty percent of patients require surgery within 10 years of diagnosis. Diagnosis of Crohn's disease is made by clinical presentation, endoscopy and histopathological findings.^{1,2,3,4}

In this case, the patient had neither history of chronic intestinal or extra intestinal symptoms. Nevertheless, Crohn's disease can present with acute fulminant onset. The trigger of activation of Crohn's disease in this patient is assumed due to viral infection. Intestinal presenting symptoms are only rectal bleeding without any extraintestinal manifestation. The diagnosis of Crohn's disease in this patient then strengthened by the endoscopy findings, that not only to established the diagnosis but also to define the extent of the disease. Endoscopy that revealed ulceration in the distal ileum as a source of bleeding is the most frequent disease distribution. Crohn's disease involvement of the ileum and cecum is 40% of patients. Histopathological evaluation is very important in this case. It may distinguish Crohn's disease from ulcerative colitis and acute colitis. The presence of granulomas provided the best histological distinction between Crohn's disease and ulcerative colitis. Granuloma was found in 60% of Crohn's disease patients, versus 6% of patients with ulcerative colitis. Asymmetric and transmural are also characteristic findings.^{1,2,3}

Patients with active colonic or ileocolonic Crohn's disease exhibiting deep and extensive ulceration at endoscopy have an aggressive clinical course and are at a greatly increased relative risk (5 fold) to undergo colectomy relative to patients free of such lesions. Smoking has been recognized as a risk factor for surgery and post surgical recurrence.⁵ The indication to perform surgical resection in this matter is severe active Crohn's disease with life threatening intractable GI bleeding.^{1,2,3,4,5,6} After subtotal colectomy and ileostomy, the bleeding was stop and general condition was improved. Medical management is not less important than surgical in this case, to achieve remission and prevent disease recurrence. The prognosis of this patient is poor. Fifty percent of patients with Crohn's disease require surgery within 10 years of diagnosis, and need to have another surgical intervention within 10 years. Even in those who do not require surgery, disease recurrences are > 70% postoperatively.²

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