Colonic tuberculosis or Crohn's disease ? An important differential diagnosis

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Abstract

Abdominal tuberculosis can mimic any disease affecting the gastrointestinal tract such as infectious processes, tumors, periappendiceal abscess, and Crohn's disease. The differential diagnosis of Crohn's disease and intestinal tuberculosis is a dilemma to clinicians and pathologists as both are chronic granulomatous disorders with similar clinical features. Lower gastrointestinal bleeding is an infrequent presentation of both intestinal tuberculosis and Crohn's disease. Herein, we report a 56-year-old woman presenting with massive hematochezia due to isolated colon tuberculosis in whom the initial diagnostic work-up suggested Crohn's disease and review the current literature. Our report highlights the need for awareness of colonic tuberculosis in the differential diagnosis of massive hematochezia from Crohn's disease, especially before initiating treatment with immunosuppressive agents. (Acta gastroenterol. belg., **2013**, 76, **59-61**).

Key words : Crohn, tuberculosis, colon, hematochezia.

Introduction

Tuberculosis (TB) is a chronic, granulomatous, multisystem disease with an increasing incidence in the developed world partly due to immigrants and the acquired immune deficiency syndrome (1). It may involve any site of the gastrointestinal tract (2,3). The clinical manifestations are non-specific. It can mimic any of the diseases affecting the gastrointestinal tract such as infectious processes, tumors, periappendiceal abscess, and Crohn's disease (CD) (4,5).

The differential diagnosis between intestinal TB and CD is difficult because of their clinical and pathological similarities (1,2,6,7,8). It is extremely important to make an accurate differential diagnosis because the use of immunosuppressive treatment for a misdiagnosis of Crohn's disease may lead to dangerous consequences such as miliary TB in patients with TB enteritis. Although colonoscopic examination is considered to be an important method for the diagnosis of colon TB, its features are quite variable. The final diagnosis of colon TB requires histological or bacteriological confirmation (3).

Massive lower gastrointestinal bleeding is an infrequent presentation of both CD and intestinal TB (9-12). In this report, we present a case of isolated colon TB presenting with massive hematochezia in whom the initial diagnostic work-up suggested CD and received immunosuppressive treatment. Our report highlights the need for awareness of colonic tuberculosis in the differential diagnosis of CD, also in cases presenting with massive hematochezia, especially before initiating treatment with immunosuppressive agents. The differential diagnosis between the two diseases and their management are discussed.

Case report

A 56-year-old woman was admitted to another hospital because of hematochezia. On admission she had hypotension and tachycardia. Past medical history revealed a weight loss of 6 kg within the last two months and a low-grade fever (37.8°C). On laboratory analysis, she had a hemoglobin level of 9 g/dl. Biochemical parameters were normal other than a decreased serum albumin level (2.4 g/dL). Upper gastrointestinal endoscopy was normal. Colonoscopy revealed ulcers around the appendiceal orifice and in the sigmoid colon (Fig. 1). Histopathologic examination obtained from the margin of the ulcers showed mixed inflammatory infiltrate of the lamina propria and non-necrotising small, non-confluent granulomas in the mucosa and submucosa. There were no bands of epitheloid histiocytes surrounding the ulcer. Ziehl-Neelsen staining was not performed. Abdomen ultrasonography (US) revealed free fluid in the Morrison pouch, subhepatic space and around the intestinal loops. Small bowel follow- through was normal. Chest X ray was normal. PPD was not done. A diagnosis of CD was reached and the patient was put on mesalazine treatment (3 gr/day).

She was referred to our clinic for further investigation and treatment. On admission, physical examination was unremarkable. Laboratory analysis revealed a hemoglobin count of 11 g/dl and an erythrocyte sedimentation rate of 59 mm/h. Colonoscopy revealed multiple longitudinal ulcers in the transverse, descending, and sigmoid colon. Terminal ileum was normal. Histopathologic examination obtained from the margin of the ulcers revealed non-caseating granulomas. The diagnosis of Crohn's disease was confirmed and the patient was discharged with mesalazine treatment. Two months after the discharge, laboratory analysis revealed an increase in erythrocyte sedimentation rate (73 mm/hr). A repeat

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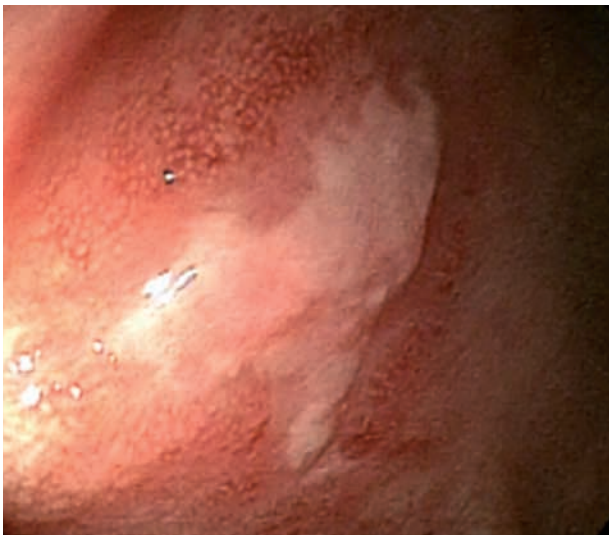

Fig. 1. — Longitudinal ulcer in the sigmoid colon surrounded by hyperemic mucosa.

colonoscopy revealed the same endoscopic findings with the same histopathology. Azathioprine (1.5 mg/kg/day) was added to mesalazine treatment. Four months later the patient complained of abdominal pain and weight loss. Laboratory analysis revealed an increase in the erythrocyte sedimentation rate (83 mm/h). Abdomen US showed hypoechoic nodules in the the antrum and corpus of the gastric wall. Endoscopy revealed outer compression at the junction of the fundus and corpus. CT of the abdomen revealed multiple nodular collections in the abdominal wall, intramural gastric abscess, and an abscess in the left upper quadrant compressing the stomach. Chest X ray was found normal. Surgical exploration revealed multiple abscesses and nodular lesions on the peritoneal surfaces, liver, mesenterium and stomach. Histopathologic examination of the biopsy specimens obtained during surgery revealed caseification necrosis. Culture of the biopsy specimens was positive for Mycobacterium tuberculosis. The patient received anti tuberculous treatment for 9 months. Physical examination, laboratory analysis and control colonoscopy were all normal at the end of the treatment

Discussion

Herein, we reported a patient presenting with massive hematochezia due to isolated colon tuberculosis in whom the initial diagnostic work-up suggested Crohn's disease. Unfortunately the correct diagnosis could be reached after the development of intrabdominal abscess associated with the start of immunosuppressive treatment.

The diagnosis of colonic tuberculosis may be quite difficult because there are no specific clinical symptoms. Unfortunately the correct diagnosis can be made only in 50% of the cases (13). Barium enema examination has been the traditional method for evaluation of abdominal tuberculosis and most often reveal a high-riding cecum with or without a string-like lesion of the terminal ileum (5,14). US gives valuable information regarding the presence and type of ascitic fluid, lymphadenopathy and bowel wall thickening (15). Extensive infiltration of the peritoneum, omentum and mesentery - in the form of peritoneal folds thickening - and the coexistence of high density peritoneal fluid are CT findings favoring the diagnosis of intestinal TB involvement. Asymmetrical colonic wall thickening and enlarged necrotic lymph nodes with hypodense centers suggest the diagnosis of colonic TB (5,16).

The characteristic colonoscopic findings of colonic TB include segments of ulcers, nodules, areas of stricture, mucosal nodules with or without pseudopolypoid folds, fibrous bands, fistula and deformed ileocecal valve (17). TB ulcers tend to be circumferential and are usually surrounded by inflamed mucosa. Aphthous ulcers with normal surrounding mucosa and cobblestone appearance favor the diagnosis of CD. However, colonoscopic differentiation between colonic tuberculosis and other diseases is sometimes very difficult. Deep endoscopic biopsies should be taken from the ulcer margins and bed because TB granulomas are often submucosal (5,18). It has been reported that endoscopic biopsy specimens enabled a histological diagnosis of colonic tuberculosis in only 40% of the patients (3,5). Granulomas with or without caseation are usually seen in less than 50% of patients (2,3,5). In the biopsy specimen, the presence of caseation, the number and size of granulomas, the distribution of the granulomatous response, deep ulceration, architectural alteration, significant inflammation and the presence of inflammatory changes targeting crypts help distinguish ileocolonic TB from CD in mucosal biopsies (18). TB granulomas tend to be large and confluent, submucosal and often with caseation necrosis. Apart from routine histology, appropriately stained slides with Ziehl-Neelsen should be prepared to look for acid-fast rods and biopsies should also be sent for culture (5). Only 35-60% of cases can be rapidly diagnosed by the finding of acid-fast rods (5). Culture of the biopsy material may increase the diagnostic yield (5).

Radiological, colonoscopic and histopathological differentiation between TB and Crohn's colitis may be difficult, especially in those presenting with atypical manifestations. In colonic TB and CD, massive hematochezia is extremely uncommon and only a few cases have been reported (9-12). Findings of our case first suggested CD but not TB. Finally, we were able to set the correct diagnosis by demonstrating caseating granulomas and the culture of the surgical biopsy specimens.

In conclusion, the differentiation of CD and intestinal TB is a dilemma. Diagnosis of colonic TB requires a high index of suspicion. Administering immunosuppressive agents to patients with colonic tuberculosis may have disastrous results. Therefore every effort should be spent in order to rule out TB in patients whom immunosuppressive treatment for CD is planned to be initiated.

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