Perforation of An Ileal Ulcer in A Patient with Behcet's Disease

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Abstract

Behcet's disease with digestive tract involvement is uncommon in Taiwan. We describe a case of ileal perforation with abscess in a 44-year-old female with Behcet's disease. She presented with abdominal pain off and on for several months. Fever was noted on admission, and abdominal compute-rized tomography revealed a right lower abdominal abscess. At laparotomy, an indurated mass in the ileocecal area was noted, and an ileocolectomy with end-to-end anastomosis was performed. Histopathology of the surgical specimen revealed terminal ileal perforation with abscess formation. Post-operatively, she had a high fever and persistent drainage from the wound, so she was operated again. Leakage of the ileocolic anastomosis was seen, and Hartmann's procedure was performed. The post-operative course was uneventful and she had no evidence of recurrence after discharge. The ileostomy was closed after 6 months. Although uncommon, perforation of an intestinal ulcer should be included in the differential diagnosis of intra-abdominal sepsis in patients with underlying vasculitis.
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Key Words：Ulcer perforation, Abscess, Behcet's disease

Introduction

Behcet's disease (BD) of the digestive tract is a particular type of BD which may lead to perforation and hematochezia. There is no specific treatment for digestive tract BD. In the acute stage, treatment mainly includes conservative management such as bed rest, fasting, central venous nutrition, and blood transfusion. For seriously ill patients, immunosuppression with hormones and steroids may be used 1-3,11. When perforation occurs or when it is difficult to stop the bleeding, surgery is required 11. We present a case of BD with ileal perforation.

Case Report

A 44-year-old female had history of BD for se-veral years. She had had recurrent oral ulcers since childhood and vulvar ulcers in 1988 and 1989. A skin lesion appeared in June 1999. No ocular manifestations had been noted.

She had a 5-month history of intermittent, colicky pain beginning in the epigastrium and spreading to involve the entire abdomen. The pain was not associated with nausea or vomiting, nor was it relieved by food or a change in posture. It occurred about one to two times a week and remitted spontaneously over one to two days. No specific findings were noted when she consulted a local hospital for the pain.

On October 8, 2001, she presented to our hospital with a high fever and severe abdominal pain. Upper GI endoscopy revealed superficial gastritis. An abdominal echo and Tc99 inflammation scan were unrevealing. Because of persistent symptoms in spite of conservative treatment, 500 mg cyclophosphamide was given intravenously on the 14th hospital day with dramatic relief of the pain. The patient was discharged the following day. She remained well for one month, but the pain recurred on November 23, 2001. She was given another injection of cyclophosphamide as an outpatient. However, fever, chills, and severe abdominal pain were noted on December 1, 2001, and she was readmitted.

On physical examination, her blood pressure was 127/56 mmHg, pulse 126 /min, respiratory rate 20/min, and temperature 39.6℃. On abdominal examination, epigastric tenderness was noted but no rebound pain. The bowel sounds were normal. Oral ulcers were present but no genital ulcers were noted.

Her hemoglobin was 11.4 gm/dL, WBC 12890/μl, blood urea nitrogen 6 mg/dL, creatinine 0.6mg/dL, amylase 40U/L, AST 14 U/L, and ALT 18 U/L. The urinalysis was normal and there were no growth on blood cultures.

The chest X-ray was within normal limits, and a plain abdominal showed gas and fecal retention. An abdominal echo and small bowel series were within normal limits. There was superficial gastritis on upper GI endoscopy. On abdominal computerized tomography (CT), an irregular lesion with mixed density containing air bubbles was seen in the right lo-wer abdomen just medial to the cecum with focal thickening of bowel loops, consistent with an abscess (Figure 1). At laparotomy, an indurated mass in the ileocecal area was found and an ileocolectomy with end-to-end anastomosis was performed. Histopathology of the surgical specimen revealed an ulcer in the terminal ileum with perforation and abscess formation. Denuded mucosa, granulation tissue, acute and chronic leukocytes and perceptible fibrosis are characteristic of long-standing ulcer (Figure 2). Blood vessels in tissue not involved by the abscess showed vasculitis, which is characterized by infiltration of venular and capillary wall as well as perivascular space by lymphocytes and plasma cells (Figure 3). PAS

(Periodic Acid Schiff) stain revealed absence of microorganisms. Abscess culture revealed no growth. Post-operatively, she had persistent fever and drainage from the wound, so a repeat operation was performed. There was leakage from the ileocolic anastomosis, and Hartmann 掇 procedure was done. There was no evidence of recurrence on follow-up. The ileostomy was closed on June 25,2002 and the patient had an uneventful post-operative course.

Discussion

BD was first described in 1937 by the Turkish dermatologist, Hulus Behcet. Although seen worldwide, the highest prevalence is in Japan, the Middle East, and the Mediterranean region. It is uncommon in northern Europe and USA 1-3.The prevalence in Japan is 1 per 1000, in the Middle and Far East, 7 to 8 per 100,000, but 4 per 1,000,000 in the United States. The age at onset is usually between 20 and 30 years with a mean of 27 years, and men are more commonly affected, with 66%of case seen in males 1-4.

The etiology and pathogenesis are unknown, but theories include genetic factors, infection, disorders of immune regulation and inflammatory mediators. BD appears to be associated with certain histocompatibility antigens, including HLA-B5, HLA-B27,and HLA-B51. By contrast, HLA DR 1 and HLA DQW 1 may confer resistance to the disease. Although no organism is detectable, antistreptococcal antibodies have been found in some patients, and may be a more frequent history of streptococcal tonsillitis. Increased numbers of circulating immune complexes and elevated serum levels of tumor necrosis factor receptor, interferon gamma, and cytokines such as interleukin 1, interleukin 8, and antigens such as CD 8 and CD56 may be involved in the pathogenesis 1-2.

The diagnosis is made clinically. The Interna-tional Study Group for Behcet's Disease proposed a standardized set of criteria in 1990, including recurrent oral ulceration and at least two other criteria: recurrent genital lesions, characteristic eye lesions, characteristic skin lesions, or a positive pathergy test. Patients who have only two of these criteria are considered to have an incomplete form of BD. Herpes simplex infection must be ruled out in patients with recurrent oral or genital ulcers. Referral to an ophthalmologist to identify ocular involvement is necessary, and cutaneous lesions should be biopsied 1-2,5.

BD is considered a relapsing and remitting vasculitis of the small-to-medium sized vessels 4-5. Erythema nodosum-like lesions of BD are characte-rized by panniculitis, usually with a lobular or mixed septal pattern, with variable numbers of neutrophils, lymphocytes, and histiocytes as well as variable numbers of necrotic adipocytes. Vasculitis is noted in most erythema nodosum-like lesions in BD 6.

Central nervous system manifestations include meningoencephalitis, cerebellar ataxia, benign intracranial hypertension, seizures, cerebrovascular thrombosis, and vasculitis. Pulmonary arterial aneurysms, pulmonary hypertension, pulmonary embolism, pericarditis and myocardial infarction are infrequent. Some authors have reported intestinal BD to be associated with generalized myositis. A Medline search (1980-95) of published reports in English yielded 8 cases of BD associated with myositis. Four patients had generalized myositis and the other 4 had localized muscle involvement. The diagnosis was confirmed histologically all cases 7.

The main digestive tract symptoms are abdominal pain, fever, hematochezia, and diarrhea. Lesions may occur in any part of the digestive tract but are especially prominent in the ileocecal region. However, multiple esophageal and gastroduodenal ulcers may also be seen. The ulcers are discrete and relatively oval in shape rather than longitudinal; no cobblestone features are seen 1-2,8-9. The appearance of central ringlike collections of barium superimposed on large nodular lesions in the terminal ileum has been reported to be a specific manifestation of intestinal BD 10. Histopathology shows a neutrophilic vascular reaction or a leukocytoclastic vasculitis. An exacerbation often results in serious complications such as perforation, bleeding etc. Therefore early diagnosis is of particular importance 9,11.

For mucocutaneous lesions, steroids, colchicine and dapsone can be used. For more severe mucocutaneous disease or systemic lesions, other immunosuppressants or interferon alfa can be added. There has also been a report of treating ileocecal ulceration using hyperbaric oxygen therapy in patient who was unresponsive to steroid therapy. The authors suggested that improved oxygenation and circulation to the mucosa may enhance fibroblast proliferation and lead to accelerated healing of the ulcer 12.

Kariv et al 13 reviewed 83 cases of systemic vasculitis presenting as a tumor-like lesion. The locations varied considerably and they found that surgery was sometimes performed unnecessarily because the diagnosis of vasculitis had not been considered. In our patient, the diagnosis of BD was already known, and she had had several months of abdominal pain prior to her presentation with an abdominal abscess. We can only speculate as to whether more intensive treatment might have prevented the ileocecal perforation.

In conclusion, in a patient with BD with enteric involvement, there is risk of ulcer perforation. This possibility should be included in the differential diagnosis of abdominal pain in such patient.

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貝賽特病 (Behcet's disease)：一病例報告及文獻回顧

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摘　　要

貝賽特病 (Behcet's disease) 在消化道的病變在台灣很少見。這個病例是一個中年患有貝賽特病的女性，病人出現陣發性腹痛好幾個月，本次因爲發燒來住院。腹部電腦斷層顯示出右下腹膿瘍，手術中見到右下腹迴盲的硬塊，並且做了迴盲的硬塊切除和腸吻合術，病理報告表現末端迴腸穿孔。術後高燒及引流管滲液不斷，再次開刀發現迴盲吻合不良，於是做了 Harmann 掇 手術，之後病況改善出院。迴腸吻合術在六個月後施行。腸潰瘍穿孔在血管炎的病人身上發生並不常見。我們也常忘記它在消化道造成潰瘍及造成腹腔感染的角色。

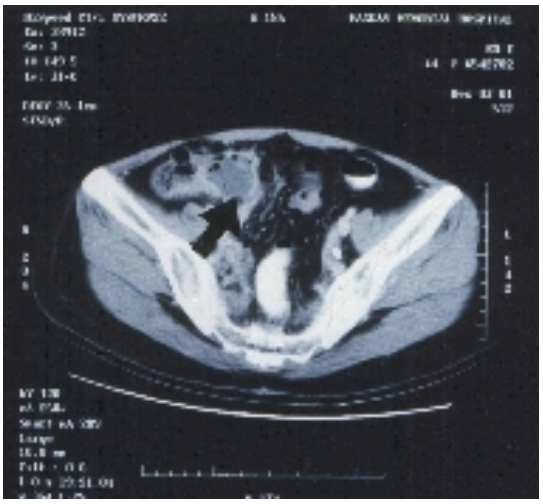

Fig.1. Abdominal CT scan reveals an irregular lesion of mixed density with inhomogeneous contrast enhancement (arrow) just medial to the cecum. There is irregular focal thickening of bowel loops in the pelvic cavity.

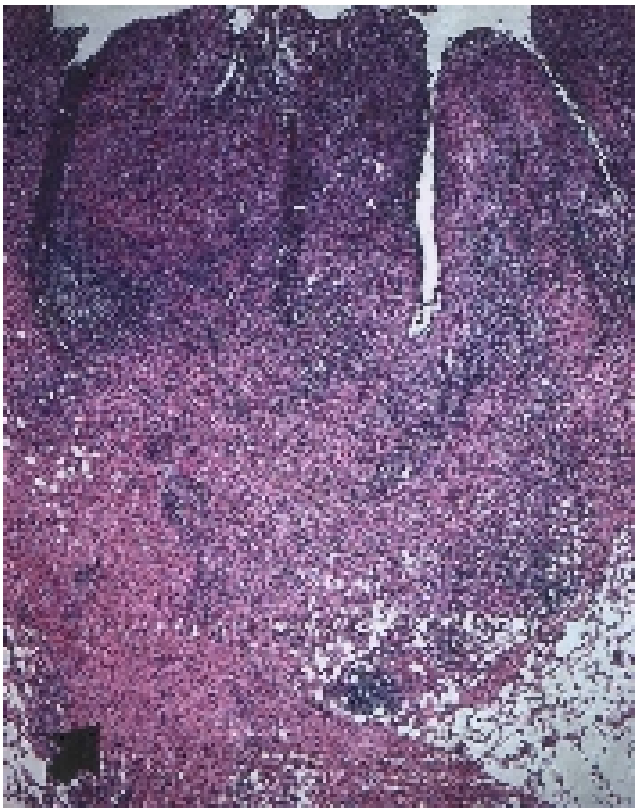

Fig.2. Denuded mucosa, granulation tissue, acute and chronic leukocytes and perceptible fibrosis (arrow) are characteristic of this long-standing ulcer. (H&E, 20X)

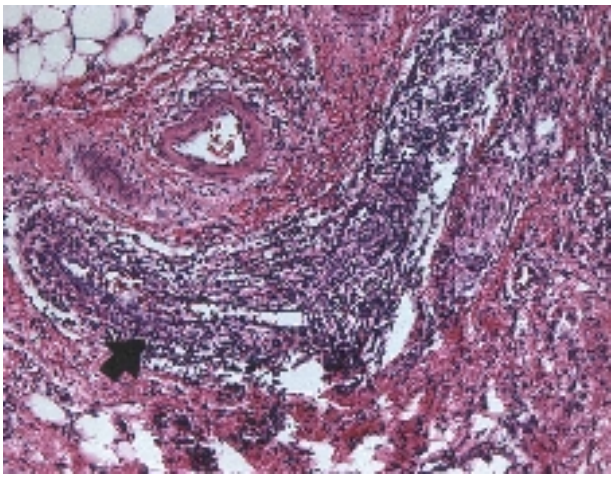

Fig.3. Dense inflammatory infiltration of venule (arrow) in the submucosal layer of ileum distant to the perforation site correlating with Behcet's disease clinically. (H&E, 200X)