Solitary Nonspecific Ileal Ulcer

Diagnosis by Coloileoscopy in a Patient with Previously Assumed Irritable Bowel Syndrome

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We present a case of solitary nonspecific ileal ulcer found by coloileoscopy in a patient with previously assumed irritable bowel syndrome. Follow-up endoscopies two weeks after initiation of short-term prednisone therapy, and again four months later, demonstrated rapid and persistent healing. This observation raises the question of whether or not primary ileal ulcers are indeed as rare as previously assumed when only surgical and autopsy findings were taken into consideration. Also, the natural history of this clinical entity, in general, could be somewhat more benign than suggested by those ulcers in which complications make surgery necessary, since these cases may not adequately reflect the full clinical spectrum of nonspecific small-bowel ulcers. [Key words: Ulcer; Ileum; Endoscopy]

IDIOPATHIC SMALL-BOWEL ULCERS represent a rarely seen and rarely diagnosed clinical problem. Frequent presenting symptoms and signs are those of small-bowel obstruction, acute abdomen, and acute or chronic blood loss. According to the Mayo Clinic experience, diagnosis will generally not be made preoperatively unless the question of a small-bowel ulcer is specifically raised, and spontaneous healing is seldom apparent. In this paper, we report a patient with previously assumed irritable bowel syndrome, in whom a solitary ileal ulcer was found by coloileoscopy, and follow-up endoscopies ascertained rapid and persistent healing.

Report of a Case

A 46-year-old native German man had a 12-year history of frequent crampy right abdominal pain. Appendectomy because of chronic appendicitis was performed in 1976. Gastroscopy in 1980 excluded peptic ulcer disease. Histologic examinations showed mild chronic gastritis. During the same year, prostatic adenoma necessitated transurethral prostatectomy. Because of recurring crampy abdominal pain and diarrhea of two weeks' duration with five to six bowel movements per day, occasionally accompanied by traces of fresh blood, the patient was referred for hospital treatment. Previous medication included anticholinergics, cimetidine, and analgesic suppositories, consisting of paracetamol, propylphenazon, codeine, and phenobarbital. No potassium preparations were taken.

Physical examination showed an afibrile, somewhat obese (5 feet, 5 inches tall; 162 pounds) man in good general condition. Diarrhea had stopped spontaneously. There was lower abdominal tenderness. Except for a BSR of 29/62 ram, laboratory investigations gave normal results. There was no anemia. Three stool specimens were hemoccult-negative. Except for a BSR of 29/62 mm, laboratory investigations gave normal results. Escherichia coli cultures and Ziehl-Neelsen stainings did not reveal pathologic bacteria. Gruber-Widal reactions against several Salmonella species and Yersinia enterocolitica Serovar 0:2 and 0:9 remained negative. D-xylose and vitamin B12 resorption studies gave normal results. Upper gastrointestinal tract endoscopy again disproved peptic ulcer disease. Colonoscopy gave normal endoscopic findings. In addition, the terminal ileum was also visualized. A shallow, bizarrely shaped, sharply demarcated ulceration, partly covered by fibrin measuring 2 cm in diameter with little surrounding inflammation, was seen about 10 cm above the ileocecal valve (Fig. 1). Otherwise, the terminal ileum appeared normal. An ulceration with severe nonspecific inflammatory reaction was confirmed histologically (Fig. 2). Biopsies from ileal areas proximal and distal to the ulceration showed only mild cellular infiltration. No ectopic gastric mucosa was present. Peroral jejunal biopsies gave normal histologic findings. Barium studies of the small intestine confirmed an ulcer crater in the terminal ileum. Additional ulcers in the small intestine were not found.

The patient received prednisone 40 mg daily by mouth for 12 days. A second coloileoscopy two weeks after the initial endoscopic study showed complete healing of the ulcer with slight erythema at the previous ulcer site (Fig. 1). Histologic examination still showed marked nonspecific inflammation in this area. The patient was free of symptoms by that time and was discharged from the hospital. Follow-up coloileoscopy four months later gave normal endoscopic and histologic findings in the terminal ileum. The patient remained free of symptoms.

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FIG. 1. Endoscopic aspect of a shallow ulceration in the terminal ileum approximately 10 cm above the ileocecal valve (A). Follow-up endoscopy two weeks later showed complete ulcer healing with slight erythema at the previous ulcer site (B).

**Discussion**

A history of recurrent crampy abdominal pain of 12 years' duration previously suggested an irritable bowel syndrome in this patient. The additional occurrence of diarrhea and mild rectal bleeding prompted a thorough clinical investigation. This revealed a solitary ileal ulcer visualized by coloileoscopy and confirmed by histologic examination. No further ulcerations were demonstrated by an upper gastrointestinal tract endoscopy and small-bowel radiologic examination.

Known causes of ileal ulcerations such as Crohn's disease and tuberculosis, foreign bodies, celiac disease, lymphoma, and chronic nonspecific ulcerative duodeno-jejunitis, Morbus Behcet, diverticulitis, heterotopic gastric mucosa, chemical irritation especially by potassium, trauma, irradiation, and other neoplasias were excluded. Stool cultures and serologic reactions gave no indication of Salmonella or *Y. enterocolitica* infections. Therefore, a diagnosis of primary nonspecific ileal ulcer was made.

The first anatomic description of a small-bowel ulceration apparently has been given by Bailie as early as 1805. Thereafter, this rare phenomenon continued to arouse considerable clinical interest. Reviewing a recent series of 59 operated cases of small-bowel ulcerations representing the Mayo Clinic experience from 1956 to 1979, Boydstun et al. found 61 per cent of all ulcers in the terminal ileum within 100 cm of the ileocecal valve, 17 per cent in the midileum, 7 per cent in the jejunileum, and 15 per cent in the jejunum. Diagnosis was rarely made preoperatively, even though abnormalities were found roentgenographically in 66 per cent. Endoscopic techniques, allowing at least partial scrutiny of the small bowel, were not applied in that series.

Previously, small-bowel ulcerations have been demonstrated endoscopically in chronic ulcerative nongranulomatous ileojejunitis by fiberoptic colonoscopy and ileoscopy as well as by enteroscopy. This disease is characterized by the association of chronic ulcers of the small intestine with a malabsorption syndrome. We are not aware of reports on endoscopic preoperative visualizations of nonspecific solitary small-bowel ulcers.

Since nearly all cases of nonspecific small-bowel ulceration have been found during laparotomy or described in autopsy studies, experience with conservative treatment is unavailable. In intestinal ulceration and malabsorption syndromes, corticosteroid therapy has been utilized with apparent benefit in several patients. However, the danger of intestinal perforation could not be ruled out. With these facts in mind, we initiated short-term corticosteroid treatment with 40 mg prednisone by mouth for 12 days and scheduled an immediate follow-up endoscopic study. Surprisingly, complete ulcer healing with remaining erythema at the previous ulcer site was found two weeks after the initial examination. The patient became free of symptoms and remained so for the four-month follow-up period, when further coloileoscopy ascertained persistent ulcer healing. A cause-effect relationship between corticosteroid treatment and ulcer healing is far from proven in this case. However, the present observa-