Colonic Obstruction as a Complication of Ulcerative Colitis

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Colonic obstruction requiring specific treatment as a complication of ulcerative colitis occurred in four of 644 patients with ulcerative colitis seen from 1969 through 1979. Four other cases have been reported by others. These obstructions were caused by strictures or pseudopolyps. Although the treatment is nonoperative in some cases, surgery is indicated if carcinoma cannot be ruled out or if obstruction persists. [Key words: Carcinoma; Colon; Colitis; Obstruction(s)]

Although ulcerative colitis is usually and correctly regarded as a diffuse disease with evidence of activity often extending from the anal canal to the cecum, benign strictures and localized inflammatory pseudopolyposis are found in 6 to 11 percent of patients. Nonetheless, colonic obstruction that is clinically symptomatic as a result of these narrow regions is rarely seen. Finby, Fitterer, Forde, and their associates reported a total of four patients with ulcerative colitis in whom colonic obstruction developed because of pseudopolyposis or strictures. Two of these patients underwent operations because of suspicion of cancer, but the other two did well with medical treatment.

Report of Four Cases

Prompted by two cases of colonic obstruction related to ulcerative colitis seen from 1960 to 1969 (not included in this review) and another two cases seen recently, we decided to review the clinical courses of all patients with ulcerative colitis seen during from 1969 to 1979 at the Massachusetts General Hospital. In this period, 644 patients were discharged from the hospital with diagnoses of ulcerative colitis. Only four patients had sigmoid or rectal obstruction that was clinically symptomatic.

Patient 1: A 41-year-old man had a 15-year history of ulcerative colitis. He had had several polypectomies, either transabdominally or endoscopically. Increasing left lower quadrant pain developed, which was occasionally exacerbating and was somewhat relieved by bowel movements of small caliber. A sigmoid stricture was diagnosed by barium enema examination (Fig. 1). Sigmoidoscopic examination showed narrowing 20 cm from the anal verge. Because medical treatment did not relieve the stricture and since cancer could not be ruled out, a total proctocolectomy with ileostomy was performed. The specimen was a normal colon down to the distal 16 cm, where signs of chronic ulcerative colitis were present. The rectal mucosa was normal.

Patient 2: A 31-year-old mentally retarded man was well until several weeks before admission to another hospital, when he developed crampy abdominal pain and diarrhea. Barium enema examination was normal. He was treated with low-residue diet and antispasmodics, but abdominal pain and distention developed. Sigmoidoscopy revealed an almost complete obstruction of the sigmoid by a tumor 13 cm from the anal verge; biopsy results showed nonspecific colitis. When complete sigmoid obstruction occurred during the next several hours, laparotomy was performed. Dilated loops of large and small bowel were present, but no mass could be felt. A transverse colostomy was performed. His postoperative course was complicated by persistent high colostomy output.

At this hospital, results of sigmoidoscopy, biopsy, and barium enema examinations were consistent with a diagnosis of ulcerative colitis. After a course of high-dose prednisolone treatment and total parenteral nutrition, he improved. Subsequently, he had two more admissions to his local hospital for vomiting, diarrhea, and dehydration. After apparently improving, he sustained cardiopulmonary arrest and died. No autopsy examination was performed.

Patient 3: A 52-year-old woman with a 21-year history of ulcerative colitis developed tenesmus and severe constipation. Rectal examination and proctoscopy disclosed a stricture 6 cm from the anal verge, with a lumen only 1 cm in diameter. After digital dilation of the stricture, a sigmoidoscope could be passed, revealing four polyps in the upper rectum and sigmoid colon. Subsequently, barium enema examination above the stricture showed distention of the colon, other findings being compatible with ulcerative colitis involving the sigmoid and distal left colon. No strictures could be seen. The patient was relieved of her symptoms by dilation alone.

Patient 4: A 49-year-old woman with a 10-year history of ulcerative colitis was doing well until one month before admission, when she complained of rectal urgency and watery diarrhea containing mucous. Sigmoidoscopy revealed active ulcerative colitis, but the instrument could not be passed beyond 15 cm from the anal verge. Subsequently, constipation and increasing left lower quadrant pain developed.

Upon admission here, she had abdominal distention and left lower quadrant tenderness. Marked distention of the colon was present. Barium enema examination revealed inflammatory bowel disease confined to the sigmoid colon and rectum; in the proximal sigmoid colon there was a stricture that was considered more likely to be benign than malignant (Fig. 2).

Because the clinical picture of partial large-bowel obstruction persisted after several days of treatment, with bleeding developing,
Fig. 1. Barium enema study (patient 1) showing area of stricture starting approximately 20 cm from anus.

Fig. 2. Barium enema study (patient 4) demonstrating marked irregularity of the mucosa and narrowing in the proximal sigmoid colon.

Laparotomy was performed. Localized perforation of the sigmoid colon was found, along with a severe stricture and diffuse inflammatory bowel disease consistent on external examination with ulcerative colitis. An abdominoperineal resection was performed. The specimen showed severe ulcerative colitis extending from the anus to the proximal line of sigmoid resection.

Discussion

In the rare instances of colonic obstruction as the first presentation of ulcerative colitis or as a later complication, consideration must always be given to the possibilities of carcinoma or of stricture due to Crohn's disease. In fact, the presence of colonic obstruction with inflammatory bowel disease means, most of the time, that the patient has Crohn's disease rather than ulcerative colitis. Sigmoidoscopic and multiple biopsy examinations, barium enema studies, and colonoscopy may fail to resolve the possibility of malignancy being present. If doubt persists or if the stricture is functionally important, a resection is warranted.

Segmental ulcerative colitis, present in only 3.4 percent of the cases in the series reported by de Dombal and associates, does not seem to be associated with a higher incidence of colonic obstruction than diffuse ulcerative colitis. Only one of four patients reported earlier had segmental colitis. Likewise, one of our four patients had documented segmental colitis concomitant with colonic obstruction; the others had diffuse ulcerative colitis.

The time of appearance of colonic obstruction does not seem to be related to the time of onset of ulcerative colitis, as one of our patients (patient 2) and the patient described by Morris and associates were the only ones with colonic obstruction as the first manifestation of ulcerative colitis. In the rest of our patients, and in those reported previously, the time of presentation of the complication and the time of onset of the disease varied from six months to 15 years.

Three of our four patients required surgery for obstruction due to strictures or pseudopolyps. Carcinoma was not found. According to Goligher, the stricture in ulcerative colitis is usually not firm, but can be easily dilated. Subsequently, a sigmoidoscopic or colonoscopic examination of the bowel mucosa can be obtained. Pseudopolyps in ulcerative colitis are inflammatory or nonadenomatous, and although some controversy exists, development of carcinoma in a