Rectal Mucosal Stripping:
A Technique for Preservation of the Rectum after Total Colectomy for Chronic Ulcerative Colitis*

JAMES M. HAMPTON, M.D.
Houston, Texas

CHRONIC ULCERATIVE COLITIS can be a devastating, fulminating and even lethal disease, about which we have limited knowledge. Since, in most cases, it is not malignant, many patients suffer through years of chronic illness and disability before accepting surgical treatment, because of an aversion to having a permanent ileostomy.

It has always been the aim of colonic surgeons to remove the diseased tissue, restore the patient to health, and restore intestinal continuity.

The purpose of this paper is to present a technique of surgical treatment for chronic ulcerative colitis that would eliminate the necessity for a permanent ileostomy and still enable complete rehabilitation of the patient.

Material and Methods

The series consisted of 12 patients who had severe debilitating chronic ulcerative colitis, medical management of which was unsuccessful. In all cases, the inflammatory process was microscopically limited to the mucosa and submucosa; in other words, no patient had transmural or granulomatous colitis. All were treated by colectomy utilizing the methods set forth below.

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Address reprint requests to Dr. Hampton: 250 Hermann Professional Building, Houston, Texas 77025.

The patient is placed in a modified dorsal lithotomy position with the lower extremities in stirrups at a 45-degree angle, allowing simultaneous access to anal and abdominal approaches. A Foley catheter is taped along the anteromedial thigh, and if the patient is male the scrotum is placed in the same position and held in position by a single stitch.

The abdomen is opened through a lower abdominal paramedian incision with an upper abdominal hockey-stick extension to the ninth rib anteriorly.

The entire colon is mobilized in the usual manner. A specimen for frozen-section examination is obtained from the distal ileum at the point of division to insure normal tissue.

The rectum is completely mobilized to the level of the levator ani muscles and the colon is excised. The point of division of the bowel is determined by the integrity of the marginal artery and the appearance of the serosa. The entire rectum and as much of the sigmoid colon as good blood supply will permit are left intact but completely mobilized. A ring forceps is introduced through the anus and the proximal end of the rectosigmoid stump is secured to the ring with a heavy suture (Fig. 1) and everted through the anus.

Using a large sharp curette, the mucosa is completely stripped down to the submucosa (Fig. 2).

The rectum and lower sigmoid colon are then replaced in the sacral cavity and the
Fig. 1 (left). Eversion ileostomy and colectomy have been performed. The rectum and lower sigmoid colon have been mobilized prior to eversion through the anus.

Fig. 2 (center). The rectal mucosa is removed with a sharp curette after eversion through the anal canal.

Fig. 3 (right). The rectum and lower sigmoid colon have been replaced in the sacral cavity and secured to the sacral promontory.

Postoperative Care

Postoperatively the rectum is irrigated with a small amount of saline solution twice daily to insure removal of any blood clots and prevent adherence of the rectal walls to each other.

In the following months, mucosal regeneration can be progressively visualized through a sigmoidoscope. The regenerated mucosa has a somewhat granular appearance, but there are no ulcerations or pseudopolyps, and with advancing regeneration increasing secretion of mucus is evident.

Technique of Second Stage

If the mucosa regenerates satisfactorily, the second stage is performed. The ileostomy is taken down and the ileum is anastomosed to the remaining colon. The anastomosis is done attaching the side of the ileum to the end of the colon and the end of the ileum to the side of the ileum, forming a reverse figure “6” (Fig. 4).

Results

To date, 12 patients who had severe debilitating chronic ulcerative colitis have undergone this procedure. Of the 12 patients, seven have been relieved of their ileostomies and anastomosis has been satisfactorily completed. All seven are now leading normal, productive lives. These patients have four to eight semisolid stools daily. They have had no rectal bleeding or tenesmus, and have maintained normal weight, blood count, and general health.