Although great advances have been made in surgical technics for creating an ileostomy by Brooke, Turnbull and others, there is still objection to surgical procedures which result in establishment of an artificial anus. In ileostomy cases, we are often dealing with younger patients, many of whom are on the threshold of their family and professional lives and objection to ileostomy is manifested by the patients, their parents or guardians and their medical advisers. As a result, surgery is often deferred until operative intervention becomes quite dangerous or malignant degeneration has complicated the problem.

Sporadic reports of preservation of the anal canal have appeared in medical literature in relation to the surgical management of ulcerative colitis. Most of these reports showed few promising results. The work of Stanley Aylett and Lawrence Abel was received in this country with some skepticism. However, discussions with them here and in London caused me, although reluctantly, to make the decision to attempt to preserve the rectum and anal canal in selected cases.

Aylett emphasized that there should be complete removal of the colon with attachment of the ileum to the rectum. He believes that by total colectomy one removes the vast bulk of the disease and leaves the patient in a better position to combat the residual infection in the rectum. He has shown that islands of residual rectal mucosa may survive the disease process and regenerate to produce a new lining for the rectum. His view is that, provided the patient can overcome the toxemia associated with the condition—and in the chronic as well as the acute phases, this toxemia and all its associated manifestations are severe—the disease will resolve itself. The part that surgery has to play is to help the patient overcome this toxemia. This it can well do by removing the bulk of the source of the toxemia—that is, by removal of all of the colon with the exception of the rectum. With the rapid improvement of the patient's general condition which follows such a procedure, the inflammatory changes in the rectum may be resolved so that it is able to carry on its normal function. The experience of Turnbull and our experience would tend to confirm Aylett's claims.

The superiority of end-to-end anastomosis in surgical procedures performed on the large and small intestine is well recognized. However, in making an ileorectal anastomosis, one must consider that the diseased rectum has no peritoneum posterior to it and that there is disparity between the size of the lumen, of the ileum and that of the rectum (Fig. 1a). There is general acceptance of the method of making an anastomosis in which the side of the ileum is joined to the proximal end of the rectum (Fig. 1b). However, there is a possibility of blind loop formation in the free end of the ileum. In order to obviate this difficulty, I decided to join the side of the ileum to the proximal end of the rectum and, as an added feature to anastomose the free end of the ileum to the ileum, some six to nine inches above the...
ileorectal anastomosis (Fig. 1c). This I felt would provide such advantages as additional storage space and better absorption and, at the same time, eliminate the disadvantages of the blind pouch (Fig. 2). This procedure was used in cases of multiple polyposis and the good results which I obtained in these patients along with the results which I observed in patients of Aylett and Abel, convinced me that I should give this modification of ileorectostomy a trial in cases of ulcerative colitis.

Surgical Technique, Preoperative and Postoperative Management

This loop procedure has been employed in 10 cases of ulcerative colitis and five cases of multiple polyposis. In all but two instances, colectomy and anastomosis were performed in one operation. In two patients, the ileostomy was performed first and later the colon was removed and the ileum was attached to the rectum. All of the cases of ulcerative colitis represented the most serious form of the disease and had failed to respond to intensive and prolonged medical treatment. In these patients there was rectal involvement of some degree and all had moderate to severe toxemia. Some had arthritis, iritis, skin lesions, weight loss, fever, severe diarrhea and malnutrition. One patient who had iritis had lost her sight and one had developed malignant disease in the colon. The ages ranged from 15 to 57 years. Unless an acute emergency existed, tube feeding with natural food was used to improve the patients' nutritional status. In all cases, a long small P.E. tube was passed through the upper gastrointestinal tract to the terminal portion of the ileum. This provided much better control of the small intestine and served to allow refeeding of the gastric aspirate until emptying of the stomach was adequate. The ileorectal anastomosis has been placed near the bottom of the cul-de-sac, just at or above the middle valve of Houston. By using the side of the ileum for the anastomosis, one has ample peritoneal covering for the posterior rectal area which, as I have said, lacks peritoneum. In addition, one can readily make the opening in the ileum as large as desired to match the opening into the rectal stump. As stated earlier, ileorectal anastomosis has been made about six to nine inches from the end of the ileum (Fig. 3). To complete the procedure, the end of the ileum was anastomosed to the side of the ileum, as shown in Figure 1c and Figure 4. In all cases, a soft Foley catheter was placed in the rectum through the anal opening to serve as a release for pressure that might build up in the anastomotic area. To ensure adequate drainage this catheter was used for gentle irrigation a few times every day until the anastomotic area was well healed. One case had a marked rectal stricture prior to surgery but this was gently dilated before the operation.

In both Aylett's and Turnbull's series of ileorectostomy cases and in my limited experience, there is evidence that the operation can be done with a low mortality rate. Turnbull in a recent communication confirmed Aylett's contention that the rectum and not the sigmoid should be utilized for the anastomosis and he has shown that he has obtained good results on the basis of information gleaned from a short term follow-up.