Diffuse Ulcerative Colitis Treated by Total Colectomy and Ileorectal Anastomosis *

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I wish to set forth the reasons for my contention that, in the surgical treatment of diffuse ulcerative colitis, it is rarely necessary to excise the rectum in order to cure the patient, although the rectum may be grossly involved in the disease process. To support my advocacy of retaining the rectum and of restoring intestinal continuity by ileorectal anastomosis, I wish to anticipate certain questions which might be advanced by those critical of the procedure, and to answer them mainly by reference to a personal series of 50 consecutive cases in which the operation was performed from 1951 to 1957. By doing so, I hope I may be able to prove the practicability and advantages of this method of treatment. I should like to say that every patient in my series had been under skilled medical treatment, and that it was only because of their failure to respond that surgical treatment was advocated. By any standard, a considerable proportion of them would have been considered desperately ill.

Does Ulceration Persist or Abate?
The first question I wish to answer is, "After ileorectal anastomosis does the ulceration in the rectum persist or does it heal?" The answer to this question is of the utmost importance, because should the ulceration fail to resolve, anemia, toxemia and the general complications of the disease might well be expected to continue.

The return of good health to our patients, uncomplicated by anemia or the passage of blood by way of the rectum, suggests that healing does take place, and the results of repeated proctoscopic examinations in the follow-up period have confirmed this clinical impression.

Gross appearances in ulcerative colitis can be misleading, but the results of preoperative and postoperative biopsy of specimens of rectal tissues have confirmed that the ulceration does resolve. It will be noticed that the complicated glandular architecture is not restored to a completely normal pattern. Nevertheless, it will be seen that as a result of the regeneration which proceeds from residual mucosal islets that have escaped the ravages of the disease, the rectum, although somewhat contracted by scar tissue, becomes covered by a mucosa that at least resembles the original glandular lining. It is thus quite capable of resuming its usual physiologic function (Fig. 1, 2).

I am aware that other surgeons who have attempted restorative operations do not record similar findings. I can only explain this by the fact that in our cases removal of the colon has been complete and the anastomosis has not, as is so often done, been effected into the pelvic colon.

Clinical and pathologic examination has shown that, in the large majority of cases, the pelvic portion of the colon is the region

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Fig. 1. Specimen of rectal tissue from acute ulcerative colitis. The section shows destruction of the surface mucosa, crypt abscesses filling all mucus-secreting glands and heavy leukocytic infiltration of the submucosa (hematoxylin and eosin; x100).

of the bowel most heavily affected by the disease, and I believe that retention of even a part of this segment of the colon is the reason for the failure which has attended restorative operations in the past. When that segment remains, toxemia and ill health continue, and the constant pouring of pus into the damaged rectum prevents the resolution of the inflammatory changes in the latter structure.

Is the Surgical Mortality Rate Low?

The second question I wish to answer is, "Can total colectomy and ileorectal anastomosis be achieved with a low mortality rate?" To this I can reply by stating that of the 50 patients comprising my series, many of whom were gravely ill, only two have died. This produces an operative mortality rate of 4 per cent. The first death followed a burst abdomen complicated by subsequent obstruction, and the second occurred in a man 65-years-old in whom uremia, which was the result of prostatic obstruction, had developed before he was referred to my clinic with general peritonitis caused by a perforated transverse colon.

I should not like to give the impression that the postoperative course of the rest of the patients has been free from anxiety. In that period such complications as ileus, intestinal obstruction and disturbances of fluid and electrolyte balance have occurred, and in the severely toxic, desperately ill patient there is little margin between life and death. Actually, I would regard some of these patients as representing the most difficult problems in postoperative care. Opiate mixtures, codeine phosphate, Probanthine® and water absorbents (of which the best we find is isogel) are required to solidify the feces until the small intestine is ready to assume much of the function previously served by the excised colon. Nevertheless, a mortality rate can be achieved which compares favorably with that of any published series in which total