SURGICAL TREATMENT OF ULCERATIVE COLITIS
IN CHILDHOOD*

BY

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In this paper we shall discuss the three questions: why, when and how surgery should be performed in the treatment of ulcerative colitis in childhood. The practical importance of these questions is stressed by a remarkable increase in the incidence of the disease among children in the Stockholm area, as shown by the numbers of newly-admitted cases from the four children's hospitals in this area.

The answer to the first question is easy. The long-term results of medical treatment were assessed by Lagercrantz from the medical department in a series of 137 cases which had been followed for from two to 26 years after the onset of the disease. The results were found to be unsatisfactory. The mortality rate in this series was 14%, the most common cause of death being cancer of the colon; 54% of the cases were more or less disabled for shorter or longer periods of time and the remaining 32% stated that they had been free from symptoms for two years or more, but upon examination many of these patients still showed clinical or radiological evidence of the disease. The cancer incidence was 10% after 10 years of disease and increased rapidly after that time.

It seemed obvious that a more active approach should be tried primarily in cases with a history of prolonged disability and repeated periods in hospital. A further reason for this was provided by the specimens removed at our first few operations. The destructive changes within the bowel wall were so advanced that no kind of conservative treatment could possibly have restored the bowel to normal.

From 1952 to September 1960, 23 cases of ulcerative colitis were selected for surgical treatment. This corresponds to 17% of the cases admitted during the same period of time. Our indications for surgical treatment are summarized as follows:

Absolute indications:
(1) Perforation or risk of perforation, stricture, profuse haemorrhage, cancer.

(2) Fulminating, life-threatening disease not promptly improved by medical treatment.

Relative indications:
(3) Total disablement for more than one year, despite medical treatment.
(4) Partial disablement for more than five years, despite medical treatment; retarded development; risk of cancer.

The vital indications for surgery are more or less generally adopted and need no further discussion. The relative indications are not easy to lay down strictly. Each individual case constitutes a different problem which requires its own individual solution. It is our firm belief that the relative indications for surgical treatment should be more liberal when dealing with children than with adults. The growing organism suffers more from chronic disease than the adult one, and signs of physical and emotional retardation were common in our series. In addition, the risk of malignancy is higher when the disease has started in childhood.

In our series, seven cases were operated on in an acute stage in order to save life and 16 cases belong to the group of chronic disease.

The question of how to operate on these patients is a little more complicated. A temporary ileostomy alone would not solve our problems. According to most reports, mortality is high and the number of cures is small; the cancer risk is not obviated by ileostomy and all the evidence points towards the necessity for more radical procedures.

Ideally, radical excision of the entire diseased bowel should be combined with restoration of bowel continuity. This is, unfortunately, only possible on rare occasions. In the majority of cases the entire colon and rectum are affected. We are faced with a choice between radical removal with permanent ileostomy and incomplete removal with restoration of bowel continuity. In adult practice, most surgical authorities condemn every kind of compromise and advocate radical measures. A few surgeons, especially Aylett (1961), insist upon restoration of

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bowel continuity by ileo-rectal anastomosis, even in the presence of severe proctitis. Aylett (1961) has reported excellent results in a personal series of 135 cases. The mortality rate was 5.4%, and full rehabilitation was achieved in 90% of the cases. Regression and healing of rectal changes were common in this series. When dealing with children, the desire to preserve bowel continuity is naturally more urgent than in adult practice. Most parents have a strong prejudice against permanent ileostomy and this has not failed to influence our approach to this problem. Our choice of surgical procedure has been a compromise between radical excision and preservation of bowel continuity, and it has been based upon the degree of rectal involvement as assessed by proctoscopy, radiological examination and operative findings. Three different procedures have been used: Colectomy with ileo-rectal anastomosis in 10 cases with slight proctitis. Colectomy and ileostomy, with closure and preservation of the rectum in eight cases with moderate proctitis. Pancoloproctectomy with ileostomy in five cases with severe proctitis. We prefer to perform these operations as one-stage procedures. Only the second group should be classified as a staged procedure for we are strongly opposed to leaving the closed rectum behind permanently: after a suitable period of time it should be decided whether to remove the rectum or to anastomose it to the ileum. So far, a secondary proctectomy has been performed in two of these cases and in one of the anastomosed cases, because of progressive proctitis. None of the isolated rectums has healed and the whole of this group will probably end up with secondary proctectomies.

The results of surgical treatment have been satisfactory. There were no deaths in this series. Post-operative complications and especially intestinal obstructions have been common, but transitory after surgical correction. All the patients have been closely followed for from one to nine years after operation. The improvement in their general condition has been striking: weight gain during the first six months after operation was considerable and did, as a rule, correspond to earlier losses. Anaemia and extracolonic manifestations disappeared. The stools as a rule became semi-solid soon after operation. Patients with ileo-rectal anastomosis generally have two to five bowel motions daily and only rarely in the night. None of them had problems of incontinence. The ileostomy patients showed surprisingly smooth adjustment to life. The child psychiatrist found no difference in behaviour between the two groups.

It is to be hoped that the day will come when better understanding of the aetiology of ulcerative colitis will enable us to prevent the destructive effects of the disease by medical treatment. Until then, we strongly believe in the rough but efficient practice of radical surgery.

REFERENCE

Note: For further references the reader is referred to a more detailed publication of this paper (Ehrenpreis, Ericsson, Billing, Lagercrantz and Rudhe, 1960).
Surgical Treatment of Ulcerative Colitis in Childhood

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