

Ulcerative Colitis with Relative Sparing of the Rectum

Clinical Features, Histology, and Prognosis

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A series of 12 patients with relative sparing of the rectum in ulcerative colitis is analyzed. Half were recorded as having normal sigmoidoscopic appearance and, in every case, double-contrast barium enema showed an apparently normal rectum but an abnormal colon. Rectal biopsy showed changes compatible with ulcerative colitis in all cases, though in four, changes were slight. Thus, complete histologic sparing of the rectum was not observed. In four of six patients treated by colectomy and ileorectal anastomosis, inflammation of the retained rectum required medical or surgical treatment. [Key words: Ulcerative colitis; Proctitis; Sigmoidoscopy; Biopsy; Ileorectal anastomosis]

THERE IS CONTROVERSY as to whether or not the rectum is ever completely spared in ulcerative colitis. Morson¹ has stated that the disease virtually always involves the rectum but others record a few patients, about 3 to 4 percent of the total, in whom the rectum apparently is spared but the colon shows the typical changes of ulcerative colitis.² It also has been suggested that the rectum may be spared³ in severe acute colitis. Others believe that although the rectum may appear normal, the rectal mucosa always shows evidence of disease on histologic examination, even though the inflammation may be focal.⁴ On air-contrast barium enema, the rectum is described as normal, with typical changes of ulcerative colitis proximally in a minority of cases,⁵ though with earlier techniques rectal sparing was described in up to 20 percent of cases.

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This study sought to identify all patients with complete or relative sparing of the rectum who had attended St. Mark's Hospital without previous treatment. An apparently normal rectum on sigmoidoscopy could lead to misdiagnosis and this factor has been analyzed. The importance of rectal mucosal biopsy has been assessed, both in diagnosis and as a means of demonstrating whether rectal sparing ever occurs. Finally, follow-up has shown that the outcome after colectomy and ileorectal anastomosis is not always favorable even though the rectum is only slightly inflamed.

Ascertainment of Cases

Over the last 27 years, an attempt has been made to keep a separate record of patients diagnosed as having ulcerative colitis with predominantly right-sided disease or with relative rectal sparing defined as severe inflammation of the colon but minor changes in the rectum. Patients who had any evidence of Crohn's disease were excluded. Only 29 patients have been thus categorized. Normality of the rectum could have been due to previous treatment, especially topical corticosteroids; 17 of the patients were excluded for this reason, leaving 12 for analysis.

Results

Clinical details of the 12 patients are shown in Tables 1 and 2. There were equal numbers of men and women; in seven, the length of history was a year or less but none

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presented with severe acute colitis. All complained of bowel frequency, but rectal bleeding was absent in four. Half were recorded as having normal sigmoidoscopy, and minor abnormalities were observed in the remainder. In every case rectal biopsy showed changes compatible with ulcerative colitis, though changes were slight in four. Double-contrast barium enema showed an apparently normal rectum but an abnormal proximal colon in all 12 patients.

These patients have been followed for 2 to 27 years and in nine the period was at least ten years. Multiple sigmoidoscopies have shown that the appearance of the rectum varied with activity of the disease. In every patient it appeared normal at times, though at other times it might appear slightly or definitely inflamed. Colonoscopy in seven patients, showed an apparently normal large intestine in Patient 8, though all biopsies showed changes of colitis, but the presence of obvious colitis proximally in the other six patients was confirmed, though the distal colon and rectum appeared normal in three.

Colectomy with ileorectal anastomosis was performed in six patients and in each the diagnosis of ulcerative colitis was confirmed from examination of the operative specimen. Two of these patients needed subsequent exci-

sion of the rectum for active proctitis and two others required medical treatment for proctitis.

Discussion

This survey confirms the general impression that relative sparing of the rectum in ulcerative colitis is uncommon. Furthermore, no patient was found in whom the rectum appeared normal on histologic examination of a rectal biopsy, although radiologic abnormality was not present in any patients, and the mucosa appeared normal on sigmoidoscopy in half of them.

In this series, no patient, with an apparently normal rectum both on sigmoidoscopy and biopsy, was seen with very acute colitis of only a few weeks' duration. The absence of such patients may reflect the referral pattern of the hospital, though many patients with severe acute colitis have been treated in the period under review. District hospitals may see such patients after a particularly acute onset of disease,³ however.

When the rectum does appear normal in otherwise typical ulcerative colitis, it may be due to treatment with topical corticosteroids, causing local improvement where the preparation has come into contact with the mucosa. Suppositories, foam, or an enema often do not penetrate

TABLE 1. *Clinical Details at Diagnosis*

Patient	Sex and Age of Onset	Length of History	Bowel Frequency	Bleeding	Sigmoidoscopy	Biopsy	Barium Enema	
							Normal	Abnormal
1	F, 46	1 month	6	Yes	Erythema edema	Active ulcerative colitis	R	S + A
2	F, 24	3 years	3-4	Yes	Granular	Active ulcerative colitis	R	S + D + T + A
3	F, 21	10 months	5-6	Yes	Hyperemic	Mildly active ulcerative colitis	R	S + D + T + A
4	F, 25	3 years	8-10	No	Hyperemic	Active ulcerative colitis	R + S + D	T + A + C
5	M, 32	6 months	3-4	No	No vascular pattern	Active ulcerative colitis	R + S	T + A + C
6	M, 26	1 year	4-5	No	Normal	Mild inflammation	R + S	D + T + A
7	F, 35	1 year	3-4	Yes	Normal	Active ulcerative colitis	R + S	D + T + A + C
8	M, 22	1 year	3	Yes	Normal	Ulcerative colitis in remission	R + S	D + T + A
9	M, 19	4 years	5-6	No	Normal	Mild active ulcerative colitis	R + S	D + T + A
10	F, 31	15 years	3-6	Yes	Normal	Ulcerative colitis in remission	R + S	D + T + A + C
11	M, 44	2 years	3-4	Yes	Normal	Mild inflammation	R + S + D	T + A + C
12	M, 27	5 months	2-3	Yes	Erythema edema	Mild inflammation	R	S + D + T + A

R = Rectum; S = Sigmoid; D = Descending; T = Transverse; A = Ascending, C = Cecum.

TABLE 2. *Subsequent Course*

Length of follow-up (years)	Sigmoidoscopic Appearance	Colonoscopy	Operation	Appearance of Specimen	Comment
14	Minor changes or normal	R + A + C normal T + D + S abnormal	-		Relapsing course
14	Minor changes or normal	Inactive colitis	-		Relapsing course
10	Ulcerative colitis or normal	Mildly active	-		Relapsing course
27	Minor changes or normal	-	IRA	C + A + T diseased D + S normal	-
15	Ulcerative colitis or normal	-	IRA	D + A + T + D diseased	Active proctitis; Excision of rectum
2	Normal	R + S normal A + T + D abnormal	IRA	?	Active proctitis; Excision of rectum
18	Minor changes or normal	-	IRA	C + A + T + D + S diseased	Proctitis
10	Normal	Normal Biopsies UC	-	-	-
2	Normal	C + A + T + D abnormal	-		
3	Minor changes or normal	R + S normal C + A + T + D abnormal	IRA	A + T + D diseased S equivocal	Proctitis
11	Minor changes or normal	-			Died from unrelated cause
11	Minor changes or normal	-	IRA	C + A + T + D diseased	Short follow-up

IRA = Ileorectal anastomosis; ISA = Ileosigmoid anastomosis; S = Sigmoid; D = Descending; T = Transverse; A = Ascending; C = Cecum.

the proximal colon. Such cases were excluded from the present series. It has been shown endoscopically that the changes of acute ulcerative colitis are usually more severe in the sigmoid and descending colon than the rectum, but even in such cases the rectum is usually obviously inflamed.⁶ Crohn's colitis is well known for sparing the rectum in some patients, and a normal rectum with proximal inflammation suggests the diagnosis. Some earlier reports found difficulty in distinguishing ulcerative colitis from Crohn's disease because the latter had not been described fully.⁷ In the present series, there was no evidence of Crohn's disease in any patient on endoscopy, biopsy, barium enema, or on examination of a colectomy specimen.

In these patients no misdiagnosis was made because of the normal, or slightly abnormal, appearances on sigmoidoscopy because in all of them air-contrast barium enema showed definite evidence of colitis proximally, confirmed by rectal biopsy. In the absence of these investigations a mistake could have been made. All patients suffered from frequent loose stools, however, which suggested possible colonic disease, and barium enema examination was appropriate.

Despite the slight inflammation of the rectum preop-

eratively, colectomy with ileorectal anastomosis was unsuccessful in two of six patients who later required an ileostomy because of postoperative proctitis. Two other patients needed medical treatment for rectal inflammation after this operation. A good result from an ileorectal anastomosis cannot be assured, therefore, even though the rectum is almost normal before operation, though it is clearly reasonable in such cases to undertake the procedure.

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