Carcinoma of the Rectum Following Ileoproctostomy and Colectomy for Ulcerative Colitis

C N Hudson FRCS (for Ian P Todd MS)

Considerable differences of opinion exist on the surgical treatment of ulcerative colitis. The occurrence of a carcinoma in the retained rectum after ileoproctostomy is a theoretical possibility. Such a case is now recorded showing many of the features of malignant change in ulcerative colitis.

Case report (reported by Corbett 1953)
Mr R D, born April 1929

History: 1943: Aged 14. Onset of diarrhœa with blood and mucus. He was also suspected of having pulmonary tuberculosis, but this diagnosis was not sustained after investigation.

1946: Aged 16. Weight 3 st 10 lb. Ten stools a day. 25.1.46: Ileostomy and appendicectomy. 23.8.46: Readmitted with acute osteomyelitis of the right radius. 12.9.46: Drainage of bone abscess. 30.11.46: Readmitted with osteomyelitis affecting all four limbs. Treated with penicillin and immobilization in plaster.

4.3.47: Readmitted; pyoderma of left leg. 25.3.47: Subtotal colectomy. The rectosigmoid stump was retained. Report (Dr C E Dukes) shows typical severe chronic ulcerative colitis. No evidence of tuberculosis (Fig 1).

25.5.49: Aged 19. Readmitted for ileoproctostomy. The rectum was discharging once a month. 3.6.49: Establishment of mid-line ileostomy. 28.6.49: Amputation of ileostomy and insertion of enterotome. 12.7.49: Extraperitoneal closure of ileostomy.

5.5.50: Bowel actions three to four times daily. Gaining weight. Very satisfied with operation, but did not keep subsequent appointments.

Since last visit the patient lost no days of work through illness until current upset. His bowel action was semi-solid, usually three times a day. He ran his own business as a decorator, married and had 3 children.

July 1960: Sudden onset of central abdominal pain followed by profuse watery diarrhœa. This subsided after one month of treatment from patient's practitioner. Constipation and considerable tenesmus. The diarrhœa returned whenever the medicine was not taken. Acute loss of weight.

30.9.60: Referred to hospital with a diagnosis of recurrent ulcerative colitis. A carcinoma of the rectum could be felt with the finger tip and biopsy showed a poorly differentiated adenocarcinoma.

18.10.60: Combined abdominoperineal excision of rectum, with terminal ileostomy (Mr Ian Todd).

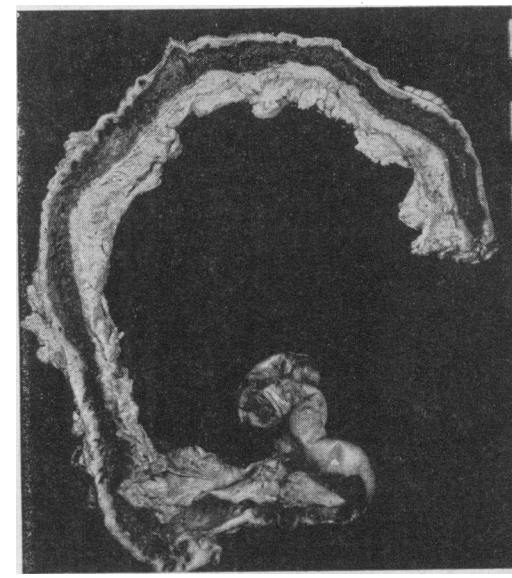

Fig 1 *1947. Colectomy Specimen. Ulcerative colitis*

28.11.60: When last seen he had put on 14 lb in weight and was back at work.

Pathology: The specimen (Fig 2) consists of about a foot of small intestine, an ileorectal anastomosis and the rectum and anal canal 8 in. in length

Two inches below the anastomosis an ulcerating growth 2 in. in diameter, almost encircles the upper third of the rectum.

The tumour is a very anaplastic carcinoma showing some areas of mucus-secreting signet-ring cells. The growth is of high grade malignancy. Sections through the rectal mucosa present the appearances of quiescent ulcerative colitis.

Spread: Local – slight invasion of perirectal fat. Lymphatic – metastases present in three of thirty hæmorrhoidal lymph nodes examined. The enlarged nodes in the mesentery of the small intestine are free from growth. Venous – invasion of the submucous and extramural veins (Fig 3).

Classification: Anaplastic mucus-secreting signet-ring cell carcinoma of the rectum. High grade malignancy associated with quiescent ulcerative colitis. 'C.1' (Dukes).

Discussion

Malignant change is now widely accepted as a complication of ulcerative colitis. Few surgeons would regard the risk of carcinoma alone as an indication for surgery, but it is undoubtedly a factor to be entertained in deciding treatment.

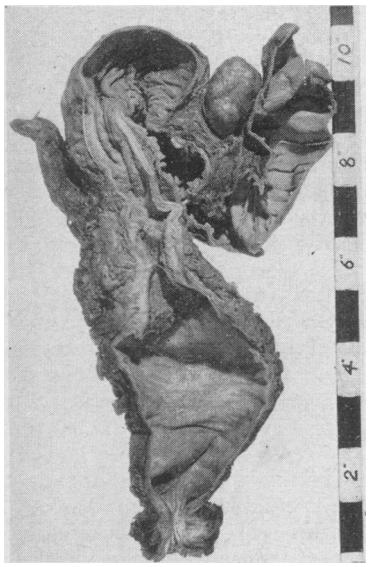

Fig 2 *1960. Carcinoma of rectum and ileorectal anastomosis. Quiescent ulcerative colitis*

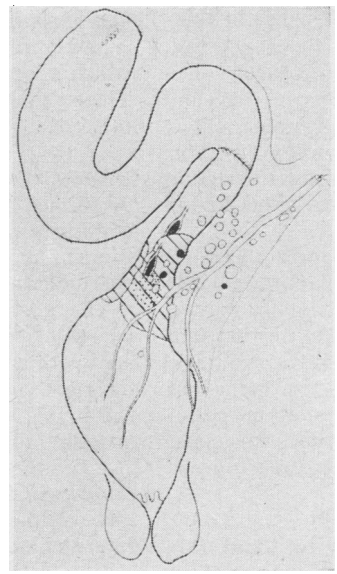

Fig 3 *Diagram of rectum and ileorectal anastomtosis showing position of growth and involvement of lymphnodes (1960)*

Colectomy is now performed more readily than heretofore. The vexed question concerns the management of the rectum. This may be retained for immediate or deferred ileoproctostomy. If continuity is not to be restored, most surgeons will perform abdominoperineal excision.

Mayo *et al.* (1956) reviewed the natural history of the rectal stump in 45 out of 241 cases of subtotal colectomy in which it was retained for more than three months. There was a high incidence of disease, including 2 cases of carcinoma in the rectal stump. Goldgraber *et al.* (1958) also report 2 cases of carcinoma in the rectal stump after subtotal colectomy.

Dawson & Pryse-Davies (1959), in reviewing carcinoma in ulcerative colitis, mention 2 cases following subtotal colectomy. One of these occurred in the rectal stump after ileorectal anastomosis. Aylett (1960) referring to this case suggested that the carcinoma may have been present, but unrecognized, at the time of operation.

Slaney & Brooke (1959) in 304 recorded cases of carcinoma in ulcerative coltis found 11 cases after subtotal colectomy. Of these, 3 patients had undergone ileoproctostomy. One of these patients (Cattell & Boehme 1947) developed carcinoma of the rectum after subtotal colectomy and ileoproctostomy for ulcerative colitis complicated by two separate primary carcinomata of the colon. The other 2 were reported by Dennis & Karlson (1952). One followed biopsies of suspicious polyps in the rectum on two previous follow-up visits; the other had failed to attend for follow-up for four years after ileorectal anastomosis. Dragstedt (1959) also reports a fatal case, but no clinical details are given.

It is possible that 3 of these cases had a neoplastic process already present at the time of ileorectal anatomosis. The case described here is not qualified in this way. Moreover it has many of the features which have come to be associated with cancer in ulcerative colitis. The cancer arose in a young man at least ten years before the age group commonly expected. It arose in a patient who suffered from ulcerative colitis for more than ten years, in whom the colitis began before the age of 16, this offering an extra risk of subsequent malignant change (Jackman *et al.* 1940). Finally it has appeared during the quiescent phase of the disease and is of high grade malignancy.

Certain other points need to be emphasized. The patient was virtually symptom free for nearly ten years. Nevertheless the rectum had not returned to normal after excision of the rest of the large bowel. The mucous membrane was healed, but not normal, and this quiescent phase seems to be the most dangerous time for malignant change (Dawson & Pryse-Davies 1959).

Three months delay occurred before the patient returned to hospital, because both he and his medical attendant attributed his symptoms to a recurrence of colitis. This delay in diagnosis is not uncommon in ulcerative colitis cases, because the clinical picture is so confusing. It is well known that similar difficulty occurs in radiological diagnosis of lesions higher up the colon, but such difficulty may also arise in making an early diagnosis of cancer in the rectum through a sigmoidoscope. One of the features of cancer, complicating ulcerative colitis, is that it may arise and spread in the submucous plane long before ulceration and typical appearances occur.

The patient described was lost to follow-up for ten years, and it is becoming increasingly obvious that all cases of ulcerative colitis of long standing in which any portion of the diseased bowel is retained must be closely followed up. The question is also raised whether routine mucosal biopsies at regular intervals should be obtained from the

retained rectum in view of the difficulty of spotting early malignant change by the naked eye. Indeed, histological evidence of persistent colitis has been found in patients without symptoms and with normal sigmoidoscopic appearances (Dick & Grayson 1961). Exfoliative cytology is liable to be confusing because the cells from the rectum in ulcerative colitis tend to be bizarre (Boddington & Truelove 1956).

Ulcerative colitis in childhood and adolescence has such a sinister reputation (Watkinson 1961) that colectomy may have to be advised. It may be that proctocolectomy will prove to be the right operation for these cases with a special risk. The rectum is the commonest site for malignant change in ulcerative colitis, and subtotal colectomy has been shown to be no protection against this complication. Moreover proctocolectomy is the only certain cure of the colitis.

Acknowledgments: I would like to thank Mr Rupert Corbett and Mr Ian Todd for permission to report this case and Dr Cuthbert Dukes, Dr R J Cureton and Dr B C Morson for the pathological reports. The Photographic Departments of St Bartholomew's Hospital and St Mark's Hospital produced the illustrations.

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Right Hepatic Lobectomy for a Solitary Metastasis

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(for H E Lockhart-Mummery MCh FRCS)

W P, female, aged 61

History: In July 1958 a transverse colostomy was performed to relieve acute large bowel obstruction. In August 1958 a carcinoma of the sigmoid colon was resected by Mr W B Gabriel. This appeared to be a radical operation although there was a small nodule felt in the liver and a diagnosis of metastasis could not be excluded. The neoplasm was of low-grade malignancy, a 'B' case. There was permeation of a vein in the muscle wall of the bowel by carcinoma. The patient was well and symptom free for two years and five months.

On examination (November 1960): Routine examination revealed a large lump in the liver which appeared to be confined to the right lobe. There was no clinical or radiological evidence of other distant metastases.

Operation (November 1960): Laparotomy was performed and a solitary hepatic metastasis was confirmed. The incision was converted to a right thoraco-abdominal and right hepatic lobectomy was undertaken.

The post-operative recovery was delayed by persistent collapse of the right lung base associated with a small pleural effusion. An abscess in the right subphrenic space discharged along the abdominal drain wound until the patient left hospital four weeks after operation.

Pathology: The solitary metastasis in the right lobe of the liver measured 3 in. in diameter. Microscopically, this was an adenocarcinoma similar in histological structure to the primary tumour of the colon removed previously. Examination of two lymph nodes related to the neck of the gall-bladder showed similar metastatic adenocarcinoma in one. There was permeation of veins in the connective tissue around the gall-bladder.

Comment: This patient, with an isolated hepatic metastasis from a tumour of low-grade malignancy, appeared to be an ideal case for hepatectomy. The unusual spread around the gall-bladder, detected on histological examination of the hepatectomy specimen, must seriously affect the prognosis.

Chronic Ulcerative Colitis not Involving the Rectum. Carcinoma of Lower Third of Rectum. Rectovaginal Fistula

P T Savage FRCS

Mrs M R, aged 66.

History: One year ago, blood-stained vaginal discharge. Two months ago she had attacks of colicky abdominal pain, and passed fæces *per vaginam*. No previous history to suggest ulcerative colitis.

On examination: Thin, pale, wasted woman of 66. Tongue clean. C.V.S. and R.S. normal. Abdomen: No tenderness, no mass palpable, liver not enlarged. *Per rectum:* A hard non-tender mass occupied the lower third of the rectum. A finger could be passed through a large rectovaginal fistula. *Per vaginam:* Fistula was easily palpable. The growth involved only the posterior vaginal wall and the adjacent part of the cervix.