It is clear from recent findings in the so-called cathartic colon that degeneration of the mural plexuses may well be present in many spina bifida children and young adults whose intestinal musculature has been flogged with cascara, senna and enemas for years. It is thus vital to prevent the development of 'constipation megacolon' in the early years.

Hæmorrhoids apparently do not develop in spina bifida children. Perhaps this is in some measure due to the fact that the external sphincter rarely or never contracts. I do not remember seeing a perianal hæmatoma, nor have I treated internal hæmorrhoids. Prolapse on the other hand does occur and seems to be unrelated to the degree of straining of which an individual is capable. Repeated manual evacuation and attacks of diarrhœa, or overdosage with aperients, undoubtedly tend to cause prolapse. There is little if any musculature in the pelvic floor. Of some 900 patients with congenital paraplegia seen at various stages, 2 have required excisional surgery for the prolapse. In each case this has been done from below, amputating 6 cm double (length), and performing the anastomosis externally with interrupted sutures. There has been no recurrence of the prolapse. In 5, minor degrees have been treated by the insertion of a perianal chromic catgut stitch. One was so treated twice, and one which recurred had a soft silver wire inserted. This seems to be sufficient when the prolapse has only been present for a short time, or its appearance is associated with a bout of extreme constipation or diarrhœa.

In general management, it must be realized that spina bifida children have absolutely no ability to separate bladder function from bowel function, and if they have sufficient abdominal musculature to strain to empty the bladder, then the bowel may evacuate at the same time. Once the urinary diversion has been performed there is far less trouble with soiling.

Urinary infection with pyocyaneus becomes very common in a community of these children, and many harbour the organism in their constipated gut.

I have never seen any case in which I felt that colostomy was justified. There are exceptional individuals who suffer from intestinal hurry and in whom soiling seems to be intractable, but even with these I have not reached the point at which surgical intervention was necessary. I would concede that there may be adults, particularly heavy ones in whom toilet management is extremely difficult, who might possibly be better off with a colostomy.

Manual evacuation may be satisfactory for some and essential for a very few, but the dangers of manipulation or even enemas when the anorectal area is anæsthetic are not to be minimized. I have known one death from enema perforation, and several abscesses. Neostigmine and magnesia mixtures and Senokot are the standby laxatives. Suppositories are of use in a very few, and properly administered enemas may be required to establish routine in neglected cases. Some patients accept daily manual evacuation as most satisfactory. A ward sister experienced in the management of these children recently told me: 'If I had a child with this I would let it get constipated and extract the stool once a day.'

The following paper was also read:

Pelvic Muscle Electromyography in Paraplegia
Mr Nigel Porter (*Hove*)
and Dr J Melzak (*Tel Aviv*)

REFERENCE Melzak J & Porter N H (1963) *Paraplegia* 1, 277

Meeting April 28 1971
at St Mark's Hospital
City Road, London EC1

Papers [*Abridged*]

The Early Histological Lesion of Crohn's Disease

by B C Morson DM FRCPath
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It is important for pathologists to search for early signs of disease because they may give clues to etiology and may also be of possible interest to those concerned with treatment. Most authors have regarded œdema and lymphatic dilatation as the earliest morphological lesion of Crohn's disease (Blackburn *et al.* 1939, Hadfield 1939, Rappaport *et al.* 1951, Robb-Smith 1971).

The earliest macroscopic lesion is probably the type of ulceration described as 'aphthoid' (Brooke 1953). These tiny ulcers can be found in mucosa at a distance from more obviously diseased bowel. They vary from tiny, pinhead-sized lesions to small, clearly demarcated ulcers with white bases. They will be missed if surgical specimens are not carefully prepared and examined. They are sometimes detected close to the limit of excision of resected specimens of gut and if left behind by the surgeon may well be the pathological basis for recurrent disease. Experience suggests that these early lesions

take many years to progress to a state of sufficient structural damage to give rise to detectable clinical or radiological signs. Sigmoidoscopists occasionally observe these tiny ulcers in the rectum in patients who have classical disease of the terminal ileum, which suggests that Crohn's disease can be much more widespread than may be apparent from radiological or surgical examination.

Microscopic examination shows that the 'aphthoid' ulcers are either ulcerating lymphoid follicles or a focal accumulation of lymphocytes in the basal part of the mucous membrane (McGovern & Goulston 1968). They may contain granulomas.

If these small ulcers are the earliest histological lesion of Crohn's disease, then the appearance suggests that the condition could be caused by the passage of particulate matter from the bowel lumen into the lymphoid tissue of the mucosa and thence into the lymphatic system of the gut (Morson 1971). Thus the cause of Crohn's disease may be first demonstrated in the contents of the intestine rather than within the wall of the bowel.

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Rappaport H, Burgoyne F H & Smetana H F (1951) *Milit. Surg.* **109**, 463
Robb-Smith A H T (1971) *Proc. roy. Soc. Med.* **64**, 157

Primary Malignant Lymphoma of the Rectum (22 Cases)

by P M Perry FRCS, R M Cross CBE FRCPath and B C Morson DM FRCPath
(St Mark's Hospital and St Bartholomew's Hospital, London EC1)

The preliminary results of an investigation into the clinical features, pathology and prognosis of 22 patients with primary malignant lymphoma of the rectum are reported. With the exception of 3 cases with extrapelvic lymphadenopathy, these patients all presented with lesions confined to the gut and regional lymph nodes.

Primary malignant lymphoma of the rectum is a rare disease. During a 20-year period (1948–67) there have been 2,940 patients treated for carcinoma of the rectum at St Mark's Hospital, but only 7 with malignant lymphoma. Our series of 22 patients was mainly taken from St Mark's Hospital and St Bartholomew's Hospital. Patients were also included because of referral on histological grounds and subsequent clinical follow-up reports.

There were 11 men and 11 women. Their ages ranged from 21 to 78 years with a mean of 54 years. Twelve patients presented with bleeding usually associated with diarrhœa, 4 with tenesmus, 3 with diarrhœa only, and 3 patients as an incidental finding at follow-up examination for unrelated disease. Five patients had lost at least one stone (6·3 kg) in weight prior to diagnosis. The lesion presented as an indurated mass in 13 patients, an ulcer in 8 patients, and as a polyp in 1 patient. The tumours present in the rectum were classified as stem cell lymphoma (2 patients), Hodgkin's disease (2 patients), plasma cell (3 patients), reticulum cell (4 patients) and lymphocytic (11 patients). Only 4 of these patients were considered to have well-differentiated tumours and these have been found to have a better prognosis.

Twelve of the 22 patients (55%) have died and 9 (75%) of these were dead within two years of diagnosis. Of the remaining 3 cases alive for more than two years, 1 died after seven years with a well-differentiated tumour, but the other 2 patients had poorly differentiated tumours and died after four years. Ten patients are still alive and their follow up has ranged from ten months to ten years. Three of these patients had well differentiated tumours and 7 had poorly differentiated ones.

With regard to treatment, 2 patients had none, 3 were given cytotoxic drugs alone and 5 were given radiotherapy alone. Eight out of these 10 patients are dead with poor survival times. Three patients had radiotherapy following left iliac fossa colostomy and 2 of these have had their colostomies closed and are alive and well. Nine patients had surgery, 8 by abdomino-perineal resection and 1 by intrapelvic resection. In addition to surgery, 2 patients had preoperative radiotherapy and 1 of these also had preoperative 5-fluorouracil infusion. Five of these patients are still alive and it would appear that surgery, with or without radiotherapy, is the treatment of choice in the operable case.

Ten patients had a similar histology of diffuse, poorly differentiated lymphocytic lymphoma. In this group of patients the conclusion was that surgery, with the possible addition of radiotherapy, was the treatment of choice.

In summary, primary malignant lymphoma of the rectum presents in a similar way to carcinoma and the treatment of choice appears to rest between surgical excision and radiotherapy following left iliac fossa colostomy.