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Current status and influence of operation on perianal Crohn's disease

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Abstract. Two hundred and two patients with Crohn's disease have been examined during the year 1984 to assess the frequency of perianal disease. One hundred and ten have had evidence of perianal complications (54%). In 30% of patients with perianal disease, the anal manifestations preceded any evidence of intestinal disease. Perianal disease was associated with pain in only 39%. Operations for perianal disease rarely achieved healing and were frequently associated with complications. Attempts to lay open a fistula-in-ano caused healing in only one of 12 cases and 6 developed incontinence. A high proportion of patients with Crohn's ulcers and strictures required proctectomy (87%). Proctectomy was performed in 27 patients with perianal disease of whom only 8 (30%) had primary healing of the proctectomy wound compared with complete healing in all 9 patients having a proctectomy without perianal disease ($p < 0.01$). These results imply that patients with perianal Crohn's disease should be treated conservatively and that proctectomy, particularly in patients with rectal strictures, is associated with very high incidence of persistent perineal sinus.

Perianal manifestations of Crohn's disease are common and may be the first presenting feature with evidence of intestinal disease occurring, in some cases, many years later [1, 2]. The common perianal manifestations of Crohn's disease have been classified by Hughes [3] and consist of skin tags, fissures, perianal fistula and abscess and ulceration which may heal by fibrosis causing a stricture [4–6]. Some years ago we reported on the natural history of perianal Crohn's disease and found that a high proportion of fissures and fistulae spontaneously healed [7]. In this study, the frequency and current status of perianal Crohn's disease is evaluated, the influence of anal surgery assessed, and the effect of perianal disease on the healing of proctectomy wounds examined.

Patients and methods

All patients seen by one author (MRBK) in a combined medical and surgical Crohn's disease follow-up clinic during 1984 were analysed. The patients were specifically asked if they had had any evidence of perianal disease in the past and after obtaining a history were carefully examined by the same person to determine if perianal disease was still present. Verification of the history was undertaken by reference to the notes. Examination was performed in outpatients; however, in a few cases this was impossible because of pain and if so patients were examined under an anaesthetic after informed consent. All previous operations were recorded together with the temporal relationship between perianal manifestations and intestinal Crohn's disease.

The mean age of the patients was 41 years (range 14–76 years), there were 74 men and 128 women. All except 35 patients (17%) had had some form of intestinal resection for Crohn's disease. Operations included 113 ileal resections, 115 ileocaecal resections, 21 segmental colectomies, 44 subtotal colectomies and 36 patients had had a proctectomy. Forty-eight patients had a stoma (23%). The distribution of Crohn's disease is shown in Table 1. The mean number of operations performed in the operated group was 1.88. The mean duration of follow-up after the first clinic attendance was 7.6 years (range 1–36 years).

Results

Incidence, relation to intestinal disease and symptoms

One hundred and ten patients (54%) had evidence of perineal disease at some time during their illness. In 33 (30%) there was evidence that the perianal

Table 1. Chief site of intestinal disease related to occurrence of perianal disease

Site	*n*	Perianal disease
Small bowel	19	8 (42)
Ileocolonic	122	64 (52)
Colon	56	33 (59)
Anorectum	5	5 (100)
Total	202	110 (54)

Percentages in brackets: proportion of patients with perianal disease at each site

Table 2. The types of perianal lesion and their present state on examination

	No. of patients	Proct-ectomy	Resolved	Present	
				Asymp-tomatic	Symp-tomatic
Skin tag	75	7	29	25	4
Fissure	38	3	29	5	1
Low fistula	40	10	14	13	3
High fistula	12	7	0	1	4
Rectovaginal fistula	6	4	0	2	0
Perianal abscess	32	11	21	0	0
Ischiorectal abscess	8	0	6	0	2
Intersphincteric abscess	7	2	3	0	2
Supralevator abscess	6	5	0	0	1
Stricture	19	17	0	1	1
Haemorrhoids	15	1	9	3	2
Ulcer	12	10	0	1	1
Total	110	27 (25)	36 (33)	38 (35)	9 (8)

Percentages in brackets

disease had preceded the onset of symptomatic intestinal disease, in 52 (47%) the manifestations were concurrent and in 23 (21%) the perianal disease was recorded afterwards. The relative distribution of intestinal disease in patients with or without perianal disease is listed in Table 1. Only 43 (38%) of the patients gave a history of anal pain at the time the perianal disease was active. In 10 patients (9%) there was a history of incontinence but this only occurred after some form of surgical intervention (vide infra); by contrast, a history of urgency was recorded in 37 (34%) of the patients with perianal disease. Thirty-four patients (31%) complained that the perianal disease had been associated with difficulty in maintaining anal hygiene and in 79 patients (72%) symptoms were exacerbated by episodes of diarrhoea.

Nature of perianal disease

The type of perianal disease identified in patients is listed in Table 2 together with their present status. The most common manifestation was of skin tags (75 patients). Most of these were asymptomatic and in 29 patients they had disappeared when reviewed being present only during episodes of diarrhoea or when other perianal disease was present. There were 38 patients with documented evidence of a fissure-in-ano. Ten patients with skin tags or fissure had had a proctectomy. A low lying fistula-in-ano was present in 40 patients, 14 had resolved at the time of review, 13 were still present but caused little trouble, and 10 had had a proctectomy. There were 12 patients with a high fistula-in-ano of whom 7 (58%) had had the rectum excised and many of the remainder still had troublesome symptoms. A similar pattern was observed in the 6 patients with a rectovaginal fistula, 4 having had a proctectomy with the remaining 2 still complaining of a persistant fistula with incontinence. Perianal abscess was common, being recorded in 32 patients, and although 11 had had a proctectomy the remainder were all quiescent when reviewed. There were 8 patients with an ischiorectal abscess and 7 with an intersphincteric abscess often in association with a fissure. Only 6 patients had a supralevator abscess of whom 5 have had a rectal excision. Nineteen patients had a rectal stricture in 7 of whom there was a high fistula-in-ano. Seventeen of these 19 (89%) patients had undergone proctectomy. Haemorrhoids were an incidental finding in 15 patients and most had disappeared when examined by proctoscopy. An anal ulcer had been present in 12 patients of whom 10 (83%) had had a proctectomy.

Table 3. Perineal wound healing after proctectomy in 36 patients with and without perianal disease

	Perianal disease	No perianal disease
Healed	8	9
Persistent sinus	19	0[a]
Total	27	9

[a] $\chi^2 = 6.92, p < 0.01$

Current status

The present status of the 110 patients with perianal disease is as follows: Twenty-seven (25%) have had a proctectomy, 36 (33%) have no present evidence of

Table 4. Local surgery for perianal disease: results and complications

	No. of patients	Procedure	Healed	Not healed	Complication	
Skin tag	2	Excision	1	1	Stenosis	1
Fissure	7	Anal dilatation	4	3	Incontinence	1
Low fistula-in-ano	12	Laying open	1	11	Incontinence	6
Rectovaginal fistula	1	Repair	0	1	Incontinence	1
Abscess	15	Drainage	5	10	Fistula	4
Stricture	6	Dilatation	0	6	Incontinence	2
Haemorrhoids	2	Rubber band ligation	1	1	Stenosis	1

perianal disease, 38 (35%) have persistent but asymptomatic lesions and 9 (8%) have troublesome symptoms.

Perineal healing and perianal disease

The presence of perianal disease had a marked affect on healing of proctectomy wounds after rectal excision (Table 3). Of the 27 proctectomies performed in the patients with perianal disease, 19 were followed by a persistent perineal sinus (70%) whereas complete perineal healing occurred in all 9 patients who had had a rectal excision in the absence of perianal disease ($p < 0.01$).

Local operations for perianal disease

The results of local operations for perianal disease are shown in Table 4. Although only a small proportion of our patients underwent surgery there was a high incidence of complications with little clinical benefit. Two patients had anal skin tags excised; one resolved whilst the other patient developed an anal stenosis. Gentle anal dilatation achieved healing in only 4 of 7 patients with a fissure and one patient was rendered temporarily incontinent of faeces afterwards. Laying open of a low-lying fistula-in-ano achieved healing in only 1 of 12 and 6 developed some impairment of continence post-operatively. None of the patients with a high fistula-in-ano was treated by local operation since the majority were advised to have a proctectomy. Although temporary control of sepsis was achieved in 5 of 15 patients having an abscess drained, 4 later developed a fistula-in-ano. Dilatation of a rectal stricture in 6 patients was unsuccessful and all have now had a rectal excision.

Discussion

This is not a total survey of all patients being followed up by us in the General Hospital, Birmingham with Crohn's disease. However, we do not believe that a note search would have provided reliable data since scrutiny of the notes in the patients personally examined in this 1-year survey frequently indicated that data relating to perianal disease was often lacking or inaccurate. Since many of our patients have to travel long distances to visit our clinic, we felt it would be more acceptable if patients were interviewed and examined at their regular follow-up appointments. We therefore elected to interview and examine all patients seen by one clinician during the whole of 1984, thereby avoiding bias by studying only those patients requiring repeated follow-up. We also felt that it was essential that all patients were properly examined by an experienced coloproctologist so that the present status of the patients could be accurately recorded. Some of the patients had a rather short history of Crohn's disease, nevertheless the mean duration of follow-up was 7.6 years.

Many patients with perianal Crohn's disease have remarkably few symptoms and in this survey only 8% currently have troublesome complications. We found, as previously reported [7], that resolution of the anal Crohn's disease had occurred in at least a third of patients. It seems that perianal Crohn's disease is a fluctuating condition with relapsing abscess, fistula, skin tags and fissure. The relapsing nature of haemorrhoids is already well recognised [8].

Some perianal lesions had a poor prognosis and commonly led to patients being advised to have a proctectomy. These included rectal stricture, cavitating anorectal ulceration, fistula-in-ano and supralevator abscess. The results of dilatation for rectal stricture were particularly disappointing despite enthusiastic reports by other groups [9, 10]. We have found that dilatation almost never achieves resolution and most patients should be counselled to undergo a rectal excision. In view of the observation that persistent perineal sinus is common in patients with a rectal stenosis, low oversewing of the rectal ampulla with a proximal stoma may be the treatment of choice for this complication [11].

The results reported here suggest that local surgical treatment for perianal Crohn's disease should be confined to drainage of pus in patients with a perianal, intersphincteric or ischiorectal

abscess. Such treatment together with antibiotic therapy should minimise the risks of a spreading anaerobic or synergistic cellulitis [12]. In this series other forms of local surgery were associated with a high incidence of complications. Incontinence of faeces was common following attempts to lay open even a low-lying fistula-in-ano or to dilate an ano-rectal stricture. Furthermore, development of a fistula was a common sequel to the drainage of pus. These results are similar to the general experience of this unit over several years. For instance, surgical repair for a rectovaginal fistula has been successful in only 16% of cases and only 17% of patients having dilatation for a rectal stricture have so far avoided a proctectomy. Healing without a persistent fistula has occurred in only 6 of 28 patients having operations for low lying fistula. In view of these poor results we tend to adopt a very conservative surgical attitude to perianal disease, since resolution is rare and there is a high risk of rendering the patient incontinent.

There was a clear correlation between perianal Crohn's disease and impaired healing of the perianal wound after proctectomy. In particular none of the 17 patients with a rectal stricture achieved perineal healing after proctectomy. We question whether proctectomy is the best operation for such patients and wonder if a low Hartmann excision may be followed by a lower morbidity.

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