Hospital Topics

Sigmoidoscopy/proctoscopy service with open access to general practitioners

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Abstract

Many hospitals now offer barium enema examinations to general practitioners on an open access basis, so bypassing the traditional sequence of first carrying out a sigmoidoscopy. An open access sigmoidoscopy/proctoscopy service was therefore opened with requests for a barium enema being denied unless preceded by sigmoidoscopy. During the first three and a half years 1458 patients referred direct from their general practitioners were examined using a rigid sigmoidoscope. Patients were also examined with a proctoscope if thought appropriate. After the first year of the service a subsequent examination with a fiberoptic sigmoidoscope was also carried out if the presenting symptom was bleeding for which no cause could be found with the rigid instruments.

A total of 516 abnormalities were found to account for symptoms in 506 patients giving a diagnostic rate of 35%. The most common lesion was piles (307 cases). Other relatively common disorders included inflammatory bowel disease (107 cases), benign tumours (44), and malignant tumours (38). Of 41 patients subsequently undergoing fiberoptic sigmoidoscopy a cause for the bleeding was found in 32, the most common being a malignant tumour (16).

Most general practitioners in the district used the service and a questionnaire survey indicated that most found it very helpful. Requests from general practitioners for a barium enema fell substantially over the period.

Introduction

Performance of sigmoidoscopy before barium enema examination of the colon has long been standard advice in clinical gastroenterology. In particular, sigmoidoscopy can detect inflammatory and neoplastic conditions of the rectum more quickly and reliably than a barium enema. Many district hospitals, however, allow general practitioners open access to barium enema but not to sigmoidoscopy, so that the classical sequence may be bypassed. Furthermore, the number of barium enemas requested by general practitioners may create a long waiting list, as was the case in this hospital. A sigmoidoscopy/proctoscopy service with open access to general practitioners was therefore set up. In cooperation with the radiology department it was insisted that all patients should undergo sigmoidoscopy before barium enema. This paper reports on the first three and a half years of the service.

Methods

All general practitioners in our district were informed that an open access sigmoidoscopy/proctoscopy service was to be introduced and that before a barium enema it was essential to arrange a sigmoidoscopy. The investigations were performed during the first one and a half hours of a weekly morning colonoscopy session in the endoscopy unit. As written requests were received the patients' names were added to the next list, so avoiding long delays. A brief history was taken from the patient to clarify the reason for the request. The procedures were performed in the left lateral position without sedation. Digital examination of the anus and rectum was first carried out followed by examination with a 25 cm rigid sigmoidoscope. Proctoscopy was also performed if the patient had complained of bleeding or pain on defecation but appearances on sigmoidoscopy were normal. No routine bowel preparation was used. During the first six months an enema was not given if examination of the rectum was inadequate but a repeat examination after preparation offered should the general practitioner request this. Subsequently, however, if examination to the rectosigmoid junction was unsatisfactory an enema containing sodium citrate and sodium alkylsulphoacetate (Micalax) was given and the procedure repeated. Biopsy samples of abnormal tissue,

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apart from piles, were taken where appropriate. After the first year flexible fiberoptic sigmoidoscopy was performed at a subsequent visit on patients with a history of having passed blood if the initial rigid sigmoidoscopy and proctoscopy did not disclose a cause for this. Results of the examination including its extent and any histological report were communicated to the general practitioner in writing. Advice might be given on diagnosis and management, or early referral for surgery or barium enema suggested. Future care of the patient was sometimes offered. Further decisions, however, were always left to the general practitioner.

One year after the service had begun general practitioners were asked to express their opinion of the service as very helpful, useful, or a hindrance. A survey of barium enemas requested by the doctors was also carried out for the years before and after the introduction of the sigmoidoscopy/proctoscopy service.

Results

During the first three and a half years 1458 examinations requested by general practitioners were performed on patients aged 9-89 years. In 478 cases (33%) it was possible to examine beyond the rectosigmoid junction. This was prevented in the other cases by faeces (69%), pain or a tightly angled rectosigmoid junction (24%), or by a lesion in the rectum (7%). In 146 cases (10%) it was necessary to give an enema to visualise the rectum satisfactorily.

A total of 516 abnormalities that would account for the presenting symptoms were identified in 506 patients, giving a diagnostic rate of 35% (table I). Piles were the commonest abnormality (307 cases). These are included only if the patient had been referred because of bleeding from the anus, with the typical history of bright red blood after defecation separate from the stool, and if the piles were heavily engorged, ulcerated, or bleeding at the time of the examination.

TABLE I—Abnormalities identified at sigmoidoscopy in 1458 patients

Lesion	No (%) of patients	Lesion	No (%) of patients
Piles	307 (21.1)	Solitary rectal ulcer	6 (0.4)
Inflammatory bowel disease	107 (7.3)	Anal fissure	4 (0.3)
Benign tumour	44 (3.0)	Radiation colitis	1 (0.1)
Malignant tumour	38 (2.6)	Threadworms	1 (0.1)
Angiodysplasia	8 (0.5)		
		Total	516 (35)

Inflammatory bowel disease was diagnosed in 107 patients (7.3%). A malignant tumour was identified in 38, but in three of these the tumour was infiltrating the rectum from outside. Thirty three patients with a rectal carcinoma subsequently underwent surgery, the tumours being staged by Duke's classification. Nine were stage A (27%), 8 (24%) stage B, and 16 (49%) stage C. Other abnormalities included benign tumours (44 cases), angiodysplasia (8), solitary rectal ulcer (6), anal fissure (4), radiation colitis (1), and threadworms (1).

Findings from fiberoptic sigmoidoscopy—Of 61 patients with bleeding and normal appearances on rigid sigmoidoscopy/proctoscopy, 41 underwent subsequent flexible sigmoidoscopy. In 32 cases (78%) an abnormality was seen to explain the bleeding: this included carcinoma (16), benign tumour (7), inflammatory bowel disease (7), angiodysplasia (1), and a solitary ulcer of the descending colon (1). This brought the overall diagnostic yield for bleeding per ano to 94%.

Relation of symptoms to findings—Table II shows the diagnostic yield from each indication for sigmoidoscopy. The explanation for bleeding was discovered in 88% of patients by rigid sigmoidoscopy and proctoscopy alone. In addition, blood streaking of the stool was seen in a further six patients: colonic carcinoma was discovered in five of these patients by a subsequent fiberoptic examination or barium enema. Diarrhoea was the second most common indication for sigmoidoscopy and gave a diagnostic yield of 10%. Pain with or without a disturbance of bowel habit was very rarely associated with a detectable abnormality, as was constipation. In some patients referred with acute symptoms these had resolved by the time of the examination. In none of these patients was any abnormality seen.

Questionnaire survey—Questionnaires were sent to 146 general practitioners, of whom 123 (84%) replied. Of the 92 doctors (63%) who had used the service, 59 (64%) had found it very helpful. Only one thought the service to be an impediment. After the survey more had referred patients, so that by the time of this report 89% of local general practitioners had used the service.

TABLE II—Diagnostic yield from primary indication for sigmoidoscopy

Symptom	No of cases investigated	Proportion with lesions detected	
		No	%
Bleeding alone or with other symptoms	511	450	88
Diarrhoea alone	322	33	10
Constipation alone	83	2	2
Variable bowel habit	56	4	7
Pain alone	170	4	2
Pain and diarrhoea	131	4	3
Pain and constipation	42	1	2
Pain and variable bowel habit	24	0	0
Mucus alone	16	1	6
Wind alone	2	0	0
Tenesmus	22	6	27
Pruritus ani	5	1	20
Incontinence	2	0	0
Weight loss	1	0	0
Abdominal mass	1	0	0
Anaemia	31	0	0
Melaena	5	0	0
Symptoms resolved	29	0	0
Reassurance	5	0	0

TABLE III—Diagnostic yield by barium enema during one year before and after introduction of sigmoidoscopy/proctoscopy service

Lesion	No (%) of cases detected before service	No (%) of cases detected after service began
Carcinoma	8 (12.7)	5 (14.2)
Inflammatory bowel disease	7 (11.1)	1 (2.9)
Stricture	2 (3.2)	2 (5.7)
Ischaemic colitis	1 (1.6)	0
Abscess	0	1 (2.9)
Megacolon	1 (1.6)	0
Diverticular disease	44 (69.8)	26 (74.3)
Total	63 (100.0)	35 (100.0)

Requests for barium enema—In the year before inception of the sigmoidoscopy/proctoscopy service 189 barium enemas requested by general practitioners were performed, but during the next year this had fallen to 77. The yield for abnormalities other than diverticula was 19 cases (30%) before the service began and 9 (26%) in the first year of the service (table III). The pattern of abnormalities diagnosed by barium enema was broadly similar in each year, although there was less inflammatory bowel disease in the year after the service began. Of the five cases of carcinoma diagnosed by barium enema during the first year of the service, all were in the sigmoid colon and therefore could have been diagnosed by fiberoptic sigmoidoscopy. Four of these patients were referred with a history of having passed blood. Scrutiny of the sigmoidoscopy reports in these patients disclosed that in one case the carcinoma had been seen at 20 cm, in another blood streaking of the stool was seen, while in two rigid sigmoidoscopy had shown nothing abnormal. In the remaining case the sigmoidoscopy had been arranged outwith this service. Likewise no record of sigmoidoscopy could be traced for the patient diagnosed as having inflammatory bowel disease on barium enema. During the next two years 107 and 133 barium enemas were performed at the request of general practitioners.

Discussion

These results show the feasibility of offering an open access sigmoidoscopy/proctoscopy service to general practitioners and insisting on a sigmoidoscopy before a barium enema. With about 500 sigmoidoscopies a year, the service is seeing nearly three times as many patients as used to be referred for barium enema, so evidently it has proved popular with general practitioners; and this is borne out by their response to the questionnaire. It has easily fitted into a morning colonoscopy session, taking on average one and a half hours for two operators and requiring roughly six nursing hours to look after patients and prepare and clean the instruments. The service was set up in an endoscopy unit which had already offered open access oesophagogastrroduodenoscopy. Interestingly, the diagnostic yield of 35% is almost identical with the 33% from the oesophagogastrroduodenoscopy service.¹

Not surprisingly, piles were the most frequent abnormal finding. The incidence of inflammatory bowel disease was perhaps high, however, amounting to 10.2 cases/10⁵ population/year. This

compares with the estimated incidence of ulcerative colitis in Britain of 7.2/10⁵/year,² and rectal Crohn's disease of 1.0/10⁵/year.^{3,4} In addition, many other patients with inflammatory bowel disease have been referred direct for outpatient consultations. As some of the patients referred to the sigmoidoscopy/proctoscopy service were not referred back to the gastroenterology clinic it is presumed that they were mild cases and managed satisfactorily by their general practitioner.

The distribution of rectal carcinomas staged by Dukes's classification was compared with a published series⁵ (table IV).

TABLE IV—Grading of rectal carcinomas in present series and in series of Talbot *et al*⁵

Series	Dukes's stage						Total	
	A		B		C			
	No	%	No	%	No	%	No	%
Gloucester	9	27	8	24	16	49	33	100
Talbot <i>et al</i>	95	13	264	38	343	49	702	100

The figures were broadly similar, 49% of tumours in both series being stage C. Stage A, however, was diagnosed more commonly in the present series, 27% as compared with 13%. We are disappointed that offering a rapid open access service of this type has not resulted in more clear evidence for detecting rectal carcinoma at an early stage. An alternative approach has been the widespread use of occult blood testing. In patients with symptoms a yield for carcinoma of 4.6% has been reported.⁶ Unfortunately, that approach still resulted in detection of only 11% of malignant tumours in Dukes's stage A and a false negative rate for rectal carcinoma of 45.4%.⁶ Screening for presymptomatic disease by occult blood testing has been shown to increase the proportion of stage A tumours diagnosed to 75%.⁷ Hence possibly a combination of sigmoidoscopy and occult blood testing will produce the best early detection rate for colorectal carcinoma.

The frequency with which the rigid sigmoidoscope could be used to examine beyond the rectosigmoid junction in this series (33%; 478 cases) was similar to that reported by others.^{8,9} Probably this could be increased to about 70% with the use of a routine enema before examination, but this would place extra demands on the nursing staff and cause needless discomfort to some patients. In view of the limitations of rigid sigmoidoscopy, however, it is not surprising that fiberoptic sigmoidoscopy is becoming increasingly popular. Despite this we emphasise that there are advantages to the use of the rigid instrument, particularly as a first examination. It is far quicker, can usually be carried out without bowel preparation, and much larger biopsy specimens can be obtained. Inspection of the stool without prior bowel preparation can also be of considerable value in that it may show blood streaking indicating a source of bleeding from a higher level, or have the typical appearances associated with steatorrhoea or irritable bowel syndrome.

We also emphasise that roughly half of all colorectal carcinomas are found within reach of the rigid sigmoidoscope.^{10,11} A further quarter occur below the mid-descending colon and may therefore be detected by fiberoptic sigmoidoscopy,¹¹ and this is certainly borne out by a further 16 such lesions being identified by subsequent fiberoptic sigmoidoscopy in patients who had presented with bleeding in the present series. In the first year of the service three out of four carcinomas diagnosed by barium enema after a negative rigid sigmoidoscopy might have been diagnosed by fiberoptic sigmoidoscopy had this been routinely available. Benign polyps are also detected much more frequently by fiberoptic sigmoidoscopy.¹² It has recently been shown that fiberoptic examination of the sigmoid colon is especially valuable when there is coexistent diverticular disease, since even good quality barium enema examinations frequently miss malignant lesions in this setting.¹³

The question arises whether definitive treatment should be offered by an open access sigmoidoscopy/proctoscopy service. This

was discussed in some detail with the local general practitioners before the introduction of the service, and most thought that future decisions should generally be left to them, for otherwise the concept of an open access diagnostic service would be lost. Certainly, most cases of piles or irritable bowel syndrome and perhaps the more mild cases of inflammatory bowel disease could be managed perfectly satisfactorily by the patient's own general practitioner. If severe inflammatory bowel disease was diagnosed the practitioner was usually contacted by telephone forthwith and treatment begun in order to prevent further delay. With milder cases the doctor was informed by letter when histological findings had confirmed the diagnosis, but further hospital management was offered should this be the general practitioner's wish. When malignant tumours were diagnosed the general practitioner was again usually immediately informed by telephone so that surgical management could be arranged. Benign polyps were removed by snare diathermy and appropriate endoscopic follow up arranged.

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What treatment is advised for a 40 year old man with microbiologically proved recurrent chronic prostatitis who is allergic to trimethoprim but does not have any anatomical abnormality of the urinary tract? Is hyperviscosity of the semen a contributory factor in the pathogenesis of chronic bacterial prostatitis and if so how does one treat it?

Hyperviscosity of the semen in a patient with proved chronic bacterial prostatitis almost certainly results from prostatic dysfunction owing to the inflammatory process in the prostate gland. Normally the secretions of the prostate contributed to the ejaculate possess a powerful fibrinolytic activity that allows liquefaction at room temperature in 15 to 20 minutes.¹ If liquefaction is appreciably delayed then this may indicate the existence of prostatitis. The treatment of chronic or relapsing bacterial prostatitis in an anatomically normal urinary tract relies mainly on long term suppressive antimicrobial chemotherapy. Patients with bacterial prostatitis usually have symptoms only when they have an associated significant bacteriuria. This can usually be effectively controlled by long term chemotherapy.² Most oral chemotherapeutic agents active against Gram negative organisms will prove to be effective in the management of chronic bacterial prostatitis. The patient in question should receive prophylaxis with an antimicrobial agent to which the organism is sensitive, in low dosage, and be actively encouraged to maintain a high fluid intake.—J C GINGELL, consultant urologist and lecturer in urology, Bristol.

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