

INVESTIGATION OF RECTAL BLEEDING

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ABSTRACT

We studied a consecutive series of 115 patients presenting to one gastroenterologist with non-emergency rectal bleeding or positive faecal occult blood studies. When there is a clear history that the bleeding was perianal, 26 out of 33 patients (79%) were found to have haemorrhoids. In the absence of such a history ($n = 82$), 16 patients (20%) had colonic cancer or polyps, 20 (25%) colitis; 24 (29%) perianal disease while only 15 (18%) had no pathology demonstrated. Our experience coupled with a review of the literature on the investigation of rectal bleeding lead us to the following recommendations: (1) Total colonoscopy or flexible sigmoidoscopy plus double contrast barium enema should normally be performed; (2) when there is a clear history that the bleeding is perianal, flexible sigmoidoscopy may suffice.

Keywords: Colonic cancer, colonic polyps, haemorrhoids, faecal occult blood testing, colitis

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INTRODUCTION

Rectal bleeding is a common complaint. Its frequency varies depending on the way individuals are questioned, the type of population studied and how often the stools or the toilet paper is examined. In a survey of healthy adults in Sydney, for example, one in seven reported noticing a little blood on the paper after defaecation within the last six months⁽¹⁾. Blood in the lavatory pan or mixed with the stool is a more important symptom and occurs in only 2-3% of subjects. These figures are likely to be under-estimates since only one-third and one-fifth of subjects regularly examined their toilet paper or toilet bowls.

Rectal bleeding is an alarming symptom for the patient. Western studies indicate that few patients with rectal bleeding will have no cause identified after investigation while about 10% will have colorectal cancer⁽²⁻⁵⁾. However, disease patterns in Singapore vary from those in the west. In particular, the frequency of inflammatory bowel disease, infective colitis, diverticular disease, benign and malignant colonic polyps may be expected to be different. The aim of this retrospective study is to determine the aetiology of rectal bleeding in a consecutive series of patients presenting to the author. The relative merits of different investigative strategies will also be discussed.

PATIENTS AND METHODS

We studied all patients presenting to the author with non-emergency rectal bleeding or positive faecal occult blood studies. A detailed history was taken from each patient followed by general, abdominal and rectal examination. Patients reporting perianal bleeding separate from the stools had flexible sigmoidoscopies performed. Other patients were subjected either to colonoscopy or flexible sigmoidoscopy and double contrast barium enema. A few patients had only flexible sigmoidoscopy performed because of overwhelming concomitant illnesses or because an infective aetiology was established or thought to be likely. Stool examination for parasites, pathogens and rectal or colonic biopsies were performed as indicated.

RESULTS

Over a 22 month period (January - June 1988, June 1989 - September 1990), 114 patients presented to the author with

non-emergency rectal bleeding while 11 had positive faecal occult blood studies. Thirty-three presented with perianal bleeding. Of these, 26 (79%) had haemorrhoids while 7 (21%) had no demonstrable lesion. The cause of bleeding in the remaining 82 patients presenting with bleeding mixed with the stools or in the toilet bowl are listed in Table I. There were 6 patients (8%) with colorectal cancer (5 carcinoma, one lymphoma). Ten had colorectal polyps (12%). Twenty patients had colitis (25%). Of these, four patients had adenomatous polyps (one with carcinoma-in-situ), one juvenile polyposis, three hyperplastic polyps, one lipoma and in one case, normal histology was reported on biopsy. Twenty patients had colonic inflammation of whom 4 were thought to be ulcerative colitis, 10 infective or presumed infective colitis, while five had non-specific colitis. One patient had enteritis due to Henoch-Schonlein purpura.

Table I
Causes of rectal bleeding*

Cause	No.	(%)
Colorectal cancer	6	(8%)
Colonic polyps	10	(12%)
Colitis		
Infective	10	20 (25%)
Inflammatory bowel disease	4	
Others	6	
Telangiectasia	3	(4%)
Ulcer	2	(2%)
Diverticular disease	2	(2%)
Perianal disease	24	(29%)
No pathology found	15	(18%)
Total	82	(100%)

* Patients who gave a history of typical perianal bleeding excluded.

One patient had stercoral ulceration secondary to constipation and one a solitary ulcer of the rectum. Of the three patients with telangiectasia, two had radiation colitis. Only two patients had diverticular disease as the only abnormal finding. Twenty four patients (29%) had perianal disease (haemorrhoids 22, anal fissure 2). Only fifteen subjects (18%) had no pathology demonstrable.

Patients with colorectal cancer had a mean age of 64 years (range 54-74). They therefore tended to be older than those with polyps (mean 51, range 24-65) and colitis (mean 43, range 17-78). Patients with perianal disease and with no pathology demonstrated tended to be the youngest (mean 43, range 20-72). Of 61 patients in whom colonoscopy was attempted, the caecum or terminal ileum was reached in 58 (95%).

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In three other patients, the presence of obstructing colonic tumours prevented total colonoscopy. There were no complications in this series of patients.

DISCUSSION

History and physical examination with rigid sigmoidoscopy may suggest the diagnosis in most patients with rectal bleeding. However, further investigation is always warranted since, even when an obvious cause of bleeding is initially found, another lesion may be present more proximally⁽⁶⁾. In one series, 11 of 63 patients (17%) thought by general practitioners to have an anal source of bleeding were ultimately found to have a colorectal lesion. The corresponding figure for gastroenterologists was 5 of 97 (5%)⁽²⁾. Rectal bleeding is an important symptom to investigate because a structural cause can be found in most instances. In several series, only 2-22% did not have a lesion identified after investigation⁽²⁻⁴⁾. Indeed, 5-14% of such subjects had colorectal cancer and further 7-10% had colonic polyps. Other common findings include inflammatory bowel disease (2-33%), and angiodysplasia (1-8%). While 17-77% of patients were found to have a perianal source for the bleeding, many of these subjects also have more proximal lesions.

Traditionally, the initial investigation for rectal bleeding is rigid sigmoidoscopy plus a single contrast barium enema but this is now known to be inadequate. When patients in whom these studies were negative were subjected to colonoscopy, approximately 40% were found to have significant lesions including 10% with carcinoma^(7,8). Double-contrast barium enemas have greater sensitivity in the detection of mucosal lesions. This should be combined with flexible sigmoidoscopy. Total colonoscopy is the other alternative.

Several studies have compared the diagnostic accuracy of the double contrast barium enema with that of colonoscopy. Colonoscopy is more sensitive for detecting cancers and polyps⁽³⁾ while angiodysplasias cannot be diagnosed by barium enema. Radiology is more sensitive for the diagnosis of diverticular disease⁽³⁾ but the significance of this finding is doubtful in the context of rectal bleeding. The barium enema is least accurate for assessing the sigmoid colon and the caecum, usually because of overlying loops or poor bowel preparation⁽⁶⁾. Other advantages of colonoscopy include the possibility of biopsy and polypectomy being performed at the same sitting while radiation is not involved.

Colonoscopy, even in expert hands, occasionally misses large tumours⁽⁹⁾. Moreover, the whole colon is not always able to be examined. While the best colonoscopists should reach the caecum in more than 90% of cases, the proportion of complete examinations can be as low as 55%⁽¹⁰⁾. Colonoscopy may be associated with complications especially with less skilled operators. It is also more costly. In Singapore, most colonoscopists sedate their patients so the time spent in hospital is greater than with barium studies. X-ray films are available for subsequent review in contrast to the routine endoscopy report based on the opinion of one person.

The accuracy of each investigation is ultimately dependent on the skill of the operator. The investigation chosen is also determined by availability of services, cost, and doctor and patient preference. However, where bleeding persists despite negative findings with one investigation the alternative is warranted.

The flexible sigmoidoscope is able to visualise the whole sigmoid colon in 62% of cases and up to the mid sigmoid in another 32%⁽¹¹⁾. Patients can often be examined up to the splenic flexure under optimal circumstances⁽¹¹⁾. Is this investigation adequate by itself? In one series 11% of benign polyps and 19% of cancers would have been missed if only flexible

sigmoidoscopy were used⁽¹¹⁾. A large local survey of colonic cancer showed that 160 of 521 (31%) were situated proximal to the sigmoid colon⁽¹²⁾. Most would therefore advocate routine examination of the whole colon by colonoscopy or flexible sigmoidoscopy and double-contrast barium enema^(2,6,13). Because of its greater sensitivity, colonoscopy would be the preferred examination in the presence of risk factors for colonic neoplasia eg. elderly patient, family history, weight loss. Colonoscopy is also indicated when bleeding persists despite a negative flexible sigmoidoscopy and double contrast barium enema.

Compared to Western series, fewer of our patients suffer from colorectal neoplasm and more from infective colitis. It is possible that these results based on patients presenting to a medical gastroenterological clinic may be biased in terms of patients selection. Patients presenting to a surgical clinic, for example, may be more likely to be suffering from cancers and polyps and less likely to have idiopathic or infective colitis. However, our results concur with western studies in that (a) the majority of patients presenting with rectal bleeding have demonstrable pathology, (b) a significant proportion of these patients suffer from colorectal cancer or polyps, and (c) where there is a clear history of blood noticed on the toilet paper and not mixed with the stools, perianal pathology is usually responsible.

In conclusion, all patients presenting with rectal bleeding or positive faecal occult blood studies should be investigated. If there is a definite history that the bleeding is perianal flexible sigmoidoscopy alone may be adequate. Otherwise, either colonoscopy or flexible sigmoidoscopy plus a double-contrast barium enema is indicated.

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