The Value of Proctosigmoidoscopic Examinations

Neil W. Swinton, Sr., M.D.
and William P. Scherer, M.D.

Proctosigmoidoscopy De-emphasized

Moertel, Hill, and Dockerty from the Mayo Clinic have recently reviewed records of approximately 1,000 patients on whom they had performed proctosigmoidoscopic examinations. This was a carefully selected series, and those patients in whom intestinal disease was suggested by histories or physical findings and those with a previous history of benign or malignant lesions of the colon or rectum were excluded.

In this group of 1,000 asymptomatic patients, the reviewers did not find any instances of frank cancer, but did find 7.5 per cent had benign polypoid neoplasms. They concluded that this finding was the principal value of these examinations but that until more information is available about the relationship of benign mucosal polyps of the colon and rectum to cancer, the true significance of this finding remains uncertain.

Another recent article by Gregor likewise de-emphasizes the routine use of the proctosigmoidoscope for the early detection of cancer and empha-

sizes the importance of the guaiac test on multiple stool specimens as the best indication for subsequent barium enema studies of the colon. This observation is undoubtedly correct, but additional laboratory work and colon X-rays could be a serious problem.

Proctosigmoidoscopy Emphasized

Seventy per cent of cancers of the large intestine are within reach of the 25 cm. proctosigmoidoscope, and it has been simpler and more practical for us to increase the number of proctosigmoidoscopic examinations rather than laboratory tests and roentgenograms.

We do not wish to minimize the use or value of a properly performed and interpreted guaiac test on the stool for the presence of gastrointestinal bleeding when the cause is obscure, but when equipment and personnel are available it has been more practical and less confusing to depend on the proctosigmoidoscope for the routine examination of patients in the early detection of cancer of the large intestine.

The theory that benign mucosal polyps of the colon and rectum are premalignant lesions is one of continuing controversy. Most of us interested in colon and rectal surgery agree that there is an intimate relationship between large bowel polyps and cancer, but the evidence to support this view is largely circumstantial and no one, to our knowledge, has been able to follow

Dr. Swinton is from the Department of Colon and Rectal Surgery, Lahey Clinic Foundation; Department of Surgery, New England Baptist and New England Deaconess Hospitals, Boston, Massachusetts.

Dr. Scherer is Staff Assistant, Department of Colon and Rectal Surgery, Lahey Clinic Foundation; Department of Surgery, New England Baptist and New England Deaconess Hospitals.

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in a given patient the progression from normal mucosa to hyperplasia, to adenoma, to invasive cancer with metastases, to death. The question thus arises as to the value of proctosigmoidoscopic examinations, particularly as an integral part of a general physical survey of the asymptomatic patient.

In this regard, the physicians in our group have become very much aware of the value of proctosigmoidoscopic examinations. A high percentage of our patients who have a complete medical survey have proctosigmoidoscopic examinations, even in the absence of symptoms or suggestive findings.

**Lahey Clinic Survey**

A series of 1,000 consecutive patients examined during 1966 at our clinic has been reviewed. One problem in our survey of these records was the difficulty in determining the truly “asymptomatic” patient. There is a wide variation among patients in their interpretation of symptoms. Some greatly exaggerate, some deliberately conceal symptoms, and some patients never look at their evacuation so that the determination of the truly asymptomatic patient can be difficult and time consuming in many instances. One cancer per 180 patients is not an insignificant figure.

The patients were not selected, as were those in the Mayo Clinic survey previously discussed. In our series, 68 per cent of patients were asymptomatic, 16 per cent had some recent change or an irregularity in bowel function, 14 per cent complained of rectal bleeding and 8 per cent had an unexplained abdominal pain.

Additional clinical diagnoses were made in 637 patients, the majority being an irritable colon, hemorrhoids, hypertrophied anal papillae, stenosis of the anal canal, anal fissure, or anal pruritus. The majority of these did not require surgical treatment but many benefited from advice concerning diet, local hygiene measures, as well as medications.

**Results**

The principal findings were benign mucosal polyps in 101 patients (10 per cent) and cancer in 6 patients.

All six patients with cancer were symptomatic. Thus our experience in this series concerning detection of early cancer by sigmoidoscopic examinations is similar to that reported from the Mayo Clinic. Our incidence of benign mucosal polyps was slightly higher, reflecting an appreciable number of patients referred to us for treatment, the diagnosis having been made previously by the local physician.

Of the six patients with large bowel or rectal cancer, one woman had infrequent, minor, painless, rectal bleeding. Sigmoidoscopic examination revealed a carcinoma in the ampulla of the rectum.

A second woman had a history of occasional lower abdominal cramps of ten years' duration. There had been no recent change in bowel function; she had not been aware of any rectal bleeding. However, blood studies revealed a hemoglobin level of 10.1 gm. per 100 ml. Proctosigmoidoscopic examination gave negative results, but a barium enema study of the colon revealed carcinoma of the cecum.

The third, a man, had a history of frequent loose stools for several months with occasional spotting of bright red blood. He had been treated by his local physician with an oral medication for six months. Proctosigmoidoscopic examination had not been performed. Our examination revealed an advanced carcinoma of the rectum.

The fourth, a woman, presented a history of repeated gallbladder attacks with occasional spotting of blood. Sigmoidoscopic examination revealed a 1 cm. polyp in the rectosigmoid area. The rectal polyp was removed locally and,
although microscopically invasive cancer was found, this excision was considered adequate because of the polyp size. The gallbladder was removed because it contained stones. The patient returned six months later at which time advanced adenocarcinoma was found at the site of the previously excised polyp.

Another woman, the fifth in the series, had had moderately severe rectal bleeding for six months and had been treated with suppositories by her local physician. Sigmoidoscopic and roentgenologic studies had not been performed. Proctosigmoidoscopic examination revealed rectal cancer.

A sixth patient, a man, had one year of rectal bleeding. A rectal tumor was palpated and was suggestive of cancer because of its induration and firmness. The first biopsies were reported as showing only a benign mucosal polyp. Further biopsies were taken because of the induration of the tumor, and a diagnosis of adenocarcinoma was established. After resection and the establishment of a colostomy stoma, this patient never obtained normal bowel function. The diarrhea persisted, and 18 months later proctosigmoidoscopic examination, performed through the colostomy stoma, showed a totally new cancer of the descending colon.

Priorities in Cancer Detection and Management

The study of these six cancer patients reinforces the following points: (1) the necessity for sigmoidoscopic examinations in patients with rectal bleeding regardless of how minimal; (2) the necessity for these examinations in patients with unexplained abdominal pain; (3) the importance of complete colonic and rectal studies on patients with unexplained anemia; (4) the importance of adequate surgery in those patients with polypoid lesions showing invasive cancer, even though they are small; and (5) the importance of adequate histologic study of polypoid tumors before invasive cancer is ruled out.

Need for Education

Two of the six patients with cancer were not submitted to operation at an early date because they were not adequately examined by their physician, although they had symptoms suggestive of cancer. This particularly disturbs us. We have long maintained, as may be seen in our reviews of this subject, that more patients are delayed in coming to surgical treatment by the failure of their physicians to adequately examine them than by the patients' failure to report early signs and symptoms of cancer to the physicians.

It seems that in any evaluation of proctosigmoidoscopic examinations, emphasis should not only be given to the continued education of patients on the necessity of reporting rectal bleeding, an irregularity or alteration in bowel function, unexplained abdominal pain, anemia, or palpable abdominal tumor—but also to the continued education of examining physicians to examine adequately patients when such signs and symptoms are presented.

We continue to be impressed by the many patients who request proctosigmoidoscopic examinations even when asymptomatic. This request is frequently made by patients with a friend or relative who has had cancer in the bowel. They dread the thought of a colostomy and the agony and suffering of terminal cancer problems. A great deal of comfort and reassurance can be given these patients in the knowledge that they have had a complete medical survey.

Added Benefits of Proctosigmoidoscopy

Although in this small series of asymptomatic patients the results of proctosigmoidoscopic examination for
early detection of cancer agree with the experience of the Mayo Clinic, we believe this is only part of the value of proctosigmoidoscopic examination. We have recently reported a series of 334 patients with cancer of the rectum or sigmoid. A careful review of the records of this group shows that 15 patients (4.5 per cent) were asymptomatic at the time our examination was made and the diagnosis established. A large number of proctosigmoidoscopic examinations were being performed during the period when cancer of the rectum was discovered in these patients. Yet, in these particular 15 patients, the proctosigmoidoscopic examination was a most important part of the general physical survey. A large series of asymptomatic patients would undoubtedly reveal some with early cancer.

In addition, we found a large number of patients examined had minor anorectal disease which was not serious in the majority and they benefited from conservative treatment.

The true significance of the fact that 10 per cent of our patients had benign mucosal polyps of the colon or rectum is not entirely established; yet, all of us with long experience in this field and with our present knowledge of the relation of polyps and cancer hesitate to treat polyps without destruction or removal in all but poor-risk patients.

**Conclusions**

1. The value and practicability of sigmoidoscopy in the total medical survey of patients have been emphasized.

2. Attention is directed to the sometimes failure on the part of physicians to treat minor anorectal problems of the patient, once cancer is ruled out.

3. While the subject of benign polyps as premalignant lesions remains controversial, the authors believe that all polyps should be removed when first detected in good-risk patients.

**References**

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**UNDESIRABLE TENANT**

The President[*] after the examination with no apparent concern inquired, "What do you think it is doctor?" To which I [**] replied, "It is a bad looking tenant. Were it in my mouth, I would have it removed at once. However, we will submit a portion of it to an unquestioned authority in these matters for microscopical examination before a final decision is made."

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*Grover Cleveland, June 21, 1893.

**Dr. Joseph Decatur Bryant, physician who operated on President Cleveland to remove a tumor of the maxilla, July 1, 1893, aboard the yacht "Onedia" while steaming up the East River from New York City.

—Charles L. Morreels, Jr., M.D., "New Historical Information on the Cleveland Operations." Surgery 62: 542-551, 1967; page 543.