

The Case of the Missing Polyp

The Primary Care Physician's Dilemma

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Described in this brief report is a clinical encounter illustrating colonic polyps detected during screening by flexible sigmoidoscopy and by barium enema but missed during colonoscopy. The resulting dilemma is discussed, together with options for future management of a situation similar to the case presented.

CASE REPORT

A 51-year-old woman was seen for a routine physical examination. She had a 35-pack-per-year history of tobacco use, no family history of cancer, and no symptoms of illness. She gave a history of cholecystectomy 17 years previously, with subsequent development of a large midline, upper abdominal incisional hernia. Screening measures for the early detection of disease were discussed with the patient, and she agreed to have a Papanicolaou smear, mammography, and flexible sigmoidoscopy.

The latter procedure was performed with a Welch-Allyn videosigmoidoscope, Model 80060, with an apparent penetration up to 60 cm. Three small sessile polypoid lesions, approximately 5 to 6 mm in size, were identified at a distance of 50, 40, and 30 cm. The videotape was reviewed with the patient, and the implications of colon polyps and the possible complications were discussed. A colonoscopy was suggested to the patient to allow visualization of the entire colon and subsequent polypectomy as indicated. The patient had a colonoscopy a few days later, at which time only one sessile, broad-based polyp, approximately 6 mm in size, was detected at 35 cm and removed. The polyp, on

pathologic examination, was reported to be a tubular adenoma with mild dysplasia. The depth of penetration of the colonoscope was up to the midascending colon; further progress was prevented by a loop formation around the ventral hernia. The bowel preparation was reported to be good.

This situation created a two-fold dilemma for the primary care physician. First, two of the three polyps seen on flexible sigmoidoscopy were not found on colonoscopy. Second, the colonoscopy was unsuccessful in examining the full extent of the colon. After deliberation and review of the records, an air-contrast barium enema was obtained to visualize the entire extent of the colon. This study revealed the presence of four filling defects distal to the splenic flexure, and three of these corresponded to the findings at flexible sigmoidoscopy. The defects were reported to be either small polyps or adherent fecal waste. The findings were discussed with the patient, and a repeat colonoscopy was suggested. The patient agreed to a repeat colonoscopy after 6 months. Considering the small size of the reported polyps and degree of stress already experienced by the patient, her physician agreed with her decision.

DISCUSSION

Findings such as those described in this report necessitate a more careful follow-up strategy, particularly in view of recent reports that even small polyps, less than 5 to 6 mm in size, could be cancerous.¹⁻³ The phenomenon of colon polyps as potential precursors of cancer has been universally accepted.⁴

In the wake of this knowledge a greater emphasis should be placed on the early detection of colon polyps⁵ by the application of currently available methods of detection, which include tests for occult blood in the stool, flexible fiberoptic sigmoidoscopy, colonoscopy, and barium enema.

As an increasing number of primary care physicians acquire the skills of performing flexible sigmoidoscopy in the office setting, certain shortcomings of these various

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methods need to be recognized and kept in mind in the ongoing care of patients undergoing screening procedures.

Colonoscopy is said to fail to detect polypoid lesions in 3% to 22% of patients, with a mean of 12%.⁶⁻⁸ It has also been found that this screening method has failed to detect colon cancer.⁶⁻⁸ One major advantage of lower endoscopy (colonoscopy or flexible sigmoidoscopy) is that the false-positive rate is almost nil.⁶

When the entire colon is not examined, for whatever reasons, there remains the possibility of missing significant lesions. The combined sensitivity of radiological examination and lower endoscopy therefore should be emphasized.^{6,8,9}

A recent study¹⁰ indicates that the sensitivity of a suitably performed single-contrast barium enema may be similar to that of a double-contrast barium enema in the detection of colonic polyps even in elderly patients. Speed and economy are two reasons for the predominant use of the single-contrast barium enema in radiological practice.^{4,6} Also, the high degree of patient tolerance and comfort this method affords is an important consideration, particularly with an elderly patient.^{4,10}

Despite these positive features of the single-contrast barium enema, the double-contrast barium enema is considered superior to the single-contrast barium enema in the detection of lesions smaller than 1 cm.^{4,6} The double-contrast barium enema is also said to be comparable to lower endoscopy in many aspects and even better than the latter in detecting lesions in the right colon.^{4,6}

Further, just as examiner competence in the radiographic detection of colonic polyps is essential, similarly examiner competence and experience in lower endoscopy may need to be kept in focus.^{6,11} Published reports indicate that it is not uncommon to miss lesions in the rectosigmoid area.^{8,9}

When the findings on colonoscopy differ significantly with the findings on flexible sigmoidoscopy in terms of number of lesions and location, a dilemma is created (as in this case). Three options would be available to the physician in such a patient:

1. Repeat barium enema to confirm the finding of the previously reported lesions
2. Repeat flexible sigmoidoscopy to detect and biopsy the other lesions
3. Repeat colonoscopy to identify the missed lesions, to remove them, and also to attempt to reach the cecum

The decision on which option to select would depend largely on the size of the lesions, the pathologic findings of the lesion initially removed, family history, and patient preference. The relative safety of waiting for months to repeat the procedure also depends on the above-mentioned factors.

In this light, a retrospective study by Stryker et al¹² conducted to determine the incidence of colonic carcinoma in a group of patients having colon polyps greater than 10 mm followed radiographically for many years revealed the risk of cancer in these polyps at 5, 10, and 20 years to be 2.5%, 8%, and 24%, respectively.

Miller and Lehman¹³ in 1978 made a point to emphasize the complementary nature of lower endoscopy and radiography. Synchronous lesions are found in 4% to 7% of patients, and fixation, constriction, obstruction, and redundancy of the colon can render adequate visualization of the entire colon difficult. Certain blind spots occur that prevent full view during these endoscopic procedures including areas of angulation, fixation, and constriction.^{13,14}

There is further evidence^{4,6} suggesting that the ease of visualization of the colonic lumen has spawned competition between lower endoscopic procedures and radiography. The case reported here emphasizes the need for each of these methods to complement the other. Bolin et al¹⁵ have concluded that both methods have shortcomings and hence both should be considered to be complementary in selected patients and situations such as found in the case report.

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