Interdepartmental Training in Flexible Sigmoidoscopy for Family Medicine Residents

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In the United States colon cancer is the second leading cause of death from malignancy in men and the third leading cause in women. Because of the importance of early detection, the American Cancer Society[1] recommends that starting at the age of 50 years, asymptomatic persons should be screened using sigmoidoscopy. If both the first examination and a follow-up sigmoidoscopy one year later are normal, repeat testing is recommended every three to five years thereafter. Compared with rigid sigmoidoscopy, examination with a flexible fiberoptic instrument is better tolerated by patients, and a greater length of the colon is usually accessible. Consequently, large numbers of primary care physicians are learning to use the new flexible instruments.

Flexible sigmoidoscopy is a procedural skill that is learned most safely and effectively when the training includes supervised examinations of live patients. Hawes et al[2] found that "despite intensive baseline training [including practice with colon models] it was noted that only 19 percent of the initial 10 patient examinations were graded as competent even in persons with prior rigid sigmoidoscopy experience." The American Academy of Family Physicians and the American Society for Gastrointestinal Endoscopy jointly have created a preceptorship program for practicing family physicians.* Busy physicians, however, often have difficulty arranging time for supervised training. As a result, large numbers of physicians attend short courses (lasting one day or less) and begin performing patient examinations without the benefit of supervision.[3–5]

Residency training is an obvious time to offer supervised instruction in flexible sigmoidoscopy. Time can be reserved for intensive training, and the patients are accustomed to concurrent teaching. Two categories of training programs for primary care residents have been described previously: Family physicians supervise in their clinic the examinations performed by family practice residents,[6,7] and gastroenterologists train primary care residents in a gastroenterology endoscopy suite.[2,8] This report describes experience with a third training model that has been offered to family medicine residents at the University of Washington in Seattle—use of the gastroenterology endoscopy suite with the participation of faculty from both the Department of Family Medicine and the Division of Gastroenterology. This program has provided a number of important benefits for the faculty, residents, and patients involved.

METHODS

Third-year family medicine residents who elect to learn the procedure attend a two-hour tutorial presented by a faculty member of the Division of Gastroenterology. The tutorial covers important aspects of flexible sigmoidoscopy, including indications, patient preparation, need for antibiotic prophylaxis, informed consent, instruction in operating the instrument, and photographs of normal and abnormal colonic findings. The role of flexible sigmoidoscopy is also compared with colonoscopy, barium enema, and other diagnostic tests. After the lecture, each resident schedules an hour of practice using a flexible sigmoidoscope and a colon model.

A family medicine flexible sigmoidoscopy clinic with four appointments, each 30 minutes in length, is held once a week in the gastroenterology endoscopy suite. The sigmoidoscopy of every family medicine patient referred for this procedure (screening or diagnostic) is scheduled in this clinic. If required, antibiotic prophylaxis or assistance with the preparatory enema is provided by the nurses in the Family Medical Center prior to the patient's appointment.

Informed consent is obtained in the endoscopy suite prior to the examination. Nursing assistance is provided by specially trained, full-time endoscopy nurses. Four sigmoidoscopes, ranging in length from 50 to 65 cm, are available with matching teaching attachments.

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Submitted, revised, January 23, 1989.

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The residents divide the year into equal-length rotations, typically two months long for each of the six third-year residents. During each rotation, a single resident performs all of the flexible sigmoidoscopic consultations for the Family Medical Center. While this arrangement sacrifices continuity in patient care, it ensures that every participating resident has a period of intensive training that includes repetitive experiences. The third year is the most convenient time for residents to integrate this elective into the curriculum.

Instruction and supervision is provided by a family medicine faculty member using a teaching attachment that allows a second person to observe the image through the sigmoidoscope. During the first few examinations, the instructor advances the instrument while the resident gains experience with the controls that steer the tip, inflate the bowel with air, suction secretions, and wash the lenses. Initially, the two examiners exchange roles several times during each procedure as the difficulty of proceeding varies. Within several examinations a resident usually has acquired the skills necessary to take sole control of the instrument.

A gastroenterology fellow or faculty member is on call for immediate consultation when requested.

RESULTS

From January 1986 through November 1987, nine residents elected flexible sigmoidoscopy training. Review of the first 100 patients undergoing flexible sigmoidoscopy by family medicine residents under the supervision of family medicine faculty revealed that an average of 2.3 examinations were performed per clinic. Immediate gastroenterology consultation was obtained 21 times.

The clinical results of flexible sigmoidoscopies in residency programs have been described previously.[2,6–8] In the family medicine flexible sigmoidoscopy clinic, screening was the sole indication in 49 of the first 100 patients. The average length of the colon viewed was 41 cm. Twenty patients, including 13 who were asymptomatic, were found to have at least one polyp. One polyp found on a screening examination was a villous adenoma. Malignant polyps were found in two symptomatic patients. The gastroenterology consultants performed immediate biopsies on 19 patients. No significant complications were noted.

DISCUSSION

Experience has demonstrated that family medicine residents are eager to learn flexible sigmoidoscopy. The collaborative teaching effort has proved to be beneficial to everyone concerned.

Advantages to the Department of Family Medicine

1. The residents gain supervised experience in a relatively short time. The experience and skill of the endoscopy nurses contribute to the efficiency of patient flow and minimize troubleshooting time when equipment malfunctions. The availability of more than one sigmoidoscope allows the examiners to proceed using a second instrument while the first is being cleaned and soaked in glutaraldehyde. Also, the clinic can function as usual while one instrument is being repaired.
2. Residents have the benefit of the expertise of gastroenterology faculty and fellows, both during the tutorial and in timely personal consultations. The traditional alternative of sending patients to a specialty clinic delays feedback and makes establishing a dialogue with the consultant more difficult.
3. With the exception of one sigmoidoscope owned by the Department of Family Medicine, the Division of Gastroenterology purchases all the necessary equipment and supplies. Equipment maintenance is managed by the endoscopy nurses and is facilitated by their working relationship with equipment representatives.
4. Family Medical Center nurses do not require training for an additional procedure, and the treatment room in the clinic is available for other uses.
5. The Department of Family Medicine bills the patient for faculty attending time.

Advantages to the Division of Gastroenterology

1. Gastroenterology faculty have direct involvement and input into the quality of teaching without the requirement of continual attendance at the weekly clinic.
2. The special clinic is a regular source of referrals of instructive patients.
3. Because the gastroenterology consultants have worked closely with the family medicine attending physicians and residents, referrals occur more efficiently. Additional tests, such as a biopsy, stool culture, or barium enema, can be arranged before the patient is seen in the gastroenterology clinic.
4. The special clinic reliably increases utilization of the endoscopy suite.
5. The Division of Gastroenterology bills the patient for the use of the facility. (It is standard practice for all University of Washington clinic bills to include a facility fee and a professional fee.)

Mutual Advantages

1. The collegial relationship among the faculty members of the two departments is a realistic model of the consultation process outside the university training center.
2. Improved communication between two specialties improves the quality of patient care. For example, the gastroenterology consultant frequently can expedite the scheduling of colonoscopy because all of the relevant information is available at once.

In summary, there are several approaches to training physicians in flexible sigmoidoscopy. The model described has been successful for everyone involved. It provides one-on-one tutorial instruction for family medicine residents in an environment designed to facilitate teaching. The participation of gastroenterology fellows and faculty expedites patient care and, when appropriate, allows efficient follow-through for diagnosis and therapy by specialists. Instruction in this increasingly important diagnostic procedure is a welcome addition to the training of family medicine residents.

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