Communications

Outcomes of Flexible Sigmoidoscopy in a Family Practice Residency

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Available since 1976, the fiberoptic flexible sigmoidoscope has gained increased acceptance and popularity as a diagnostic, therapeutic, and screening instrument. Numerous comparative studies with rigid sigmoidoscopy have been reported,[1-4] as well as reports of flexible sigmoidoscopy alone.[5,6] A summary of these studies supports a two- to threefold increase in diagnostic yield with the flexible fiberoptic sigmoidoscope compared with the rigid sigmoidoscope.[7]

There is controversy in the literature regarding who are the most appropriate individuals to perform flexible sigmoidoscopy.[8,9] Some feel the instrument should be in the exclusive domain of the gastroenterologist, while others have reported on the use of a shorter version of the flexible sigmoidoscope by gastrointestinal assistants.[10] This controversy centers around available adequate training, potential for morbidity, high initial cost, and the real need for such an instrument.

Reported here is the initial experience (150 procedures) with the flexible sigmoidoscope in the UCLA Family Practice Residency Training Program.

The UCLA Family Practice Residency obtained an ACMI TS-91 flexible fiberoptic sigmoidoscope (ACMI Company, Stamford, CT) in 1980. Five of the full-time faculty worked with a gastroenterologist to learn the mechanics, limitations, and cleaning procedures of the sigmoidoscope. From July 1980, the flexible fiberoptic sigmoidoscope has routinely been used for diagnostic and screening procedures on patients seen in the UCLA Family Health Center. Residents began using the flexible sigmoidoscope with the help of the five full-time faculty members. The previously described procedure for flexible sigmoidoscopy[7] was amended, and biopsies were performed of intraluminal lesions to the depth of the flexible sigmoidoscope.

Results

The indications for performing flexible sigmoidoscopy in this group of patients are shown in Table 1. Screening refers to the American Cancer Society's screening recommendations for proctosigmoidoscopy.[11] Table 2 shows that after the first 100 procedures (approximately 20 per faculty member), the flexible sigmoidoscope was inserted

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Table 1. Reason for Performing Flexible Sigmoidoscopy

Indications	Percent
Abdominal pain	23
Screening	19
Change in bowel habits	16
Rectal bleeding	11
Constipation	10
Guaiac positive stool	5
Weight loss	4
Anemia	4
Other	8

to an average depth of 49 cm, which is comparable with previous reports by endoscopists.

Table 3 shows the number and percentage of abnormal findings. Of the three cancers detected, one was 28 cm from the anus; the other two were at 12 and 15 cm. Fifty-five percent of the polyps were beyond 20 cm, out of the range normally attained with a rigid sigmoidoscope.[12]

The three patients who were found to have cancer were all symptomatic and presented with a history of rectal bleeding. Four of the 15 patients with polyps were asymptomatic. Nine of the patients had one or more biopsies performed. There were no complications in the entire group. Several patients were given a repeat enema, as their home preparation was not adequate.

Some of the patients were very easy to examine, but others required more maneuvering to pass the flexible sigmoidoscope. There was also variability in patient tolerance, as some patients felt no discomfort up to 60 cm, and others had the procedure stopped secondary to discomfort (Table 4).

Table 2. Family Health Center Flexible Sigmoidoscopy Learning Curve

Procedure Number	Average Depth of Insertion (cm)
First 50 (1-50)	34
Second 50 (51-100)	44
Last 50 (101-150)	49

Table 3. Abnormal Findings (n = 150)

	No. (%)
One or more polyps	15 (10)
Adenocarcinoma	3 (2)
Ulcerative colitis	1 (.7)
Crohn's Disease	2 (1.3)

Table 4. Reason for Stopping (n = 150)

	Percent
Unable to traverse lumen	45
Stool	12
Pain	17
Depth of instrument reached (60 cm)	25

Comment

Results indicate that flexible sigmoidoscopy can be performed effectively and safety by the family physician. In this teaching situation, residents will perform between 25 and 50 flexible sigmoidoscopies under supervision by a competent faculty member during the three years of their residency. This is an adequate experience to become competent in flexible sigmoidoscopy. The teaching attachment, which also allows two examiners to simultaneously visualize the colon, greatly facilitates the learning process.

The relatively high incidence of pathologic findings (2 percent cancers and 10 percent polyps) is possibly a result of the referral bias toward pathology, often seen at teaching centers. But few patients with gastrointestinal complaints are referred to the

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UCLA Family Health Center for consultation. The majority of the patients come because they desire continuity of comprehensive health care.

A significant increase in the compliance of physicians performing sigmoidoscopy on their patients was noted after the flexible sigmoidoscope was introduced to the practice. Some of the patients in this report might have been diagnosed earlier, and thus not counted in this study, if residents and faculty had previously been as diligent to colorectal symptomatology. (This is probably not a major factor, however, as the three patients with cancer were all new to the practice and diagnosed early.) Early diagnosis of these patients reinforces the belief that significant findings await the primary care physician who uses the flexible sigmoidoscope in routine examinations.

The role of flexible sigmoidoscopy in colorectal disease is evolving. This study validates the use of this sophisticated instrument by family physicians who have the opportunity to receive appropriate training in the use of the instrument.

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Screening One-Year-Old Infants for Iron Deficiency

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Primary care physicians should screen infants for iron deficiency anemia when they are approximately one year of age, a time when the cumulative effects of rapid growth and relatively decreased iron intake commonly result in iron deficiency.[1] Suggested screening methods from the literature have included determination of capillary or venous hematocrit, hemoglobin concentration, transferrin saturation, free erythrocyte protoporphyrin (FEP), and serum ferritin.[2-7] A survey was conducted which revealed that 84 percent of 142 prac-

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