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Female gender and other factors predictive of a limited screening flexible sigmoidoscopy examination for colorectal cancer.

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OBJECTIVE: Flexible sigmoidoscopy (FS) screening for colorectal cancer (CRC) is associated with reduced mortality from CRC. It is unknown whether FS is equally effective in men and women, but differences in anatomy and perception of pain may increase the difficulty of performing FS in women. The aim of this study was to determine factors associated with a shorter or limited screening FS. **METHODS:** Patients referred by their primary care provider were eligible for screening sigmoidoscopy if they were 50 yr or older with negative fecal occult blood tests and no first-degree relative with colorectal cancer at age 55 yr or younger. A detailed questionnaire regarding demographic characteristics and risk factors for CRC, aspirin and multivitamin use, and previous abdominal surgery was completed by the patient on a standardized form before their procedure. The histologic type (hyperplastic, adenoma, normal mucosa, or carcinoma) of each polyp was recorded. Depth of examination (in cm) was recorded based on the standardized markings on the shaft of the sigmoidoscope when it was thought to be in a straight position. Limitations to the examination (angulation, pain, and poor preparation), other mucosal findings, and complications were also noted. **RESULTS:** A total of 3980 patients (52% female) were prospectively enrolled in a screening program over a 22-month period. Women were more likely than men to report previous pelvic or abdominal surgery (OR = 2.64, 95% CI = 2.29-3.05) and were less likely to have had a previous sigmoidoscopy (OR = 0.71, 95% CI = 0.61-0.83). Females were almost twice as likely as males to have a procedure limited in some way (angulation, spasm, or pain) (OR = 1.86, 95% CI = 1.63-2.13). When defined by depth of examination, females were significantly more likely than males to have a procedure of <50 cm (OR = 1.93, 95% CI = 1.63, 2.29) and were less likely to have an adenomatous polyp or cancer detected (OR = 0.55, 95% CI = 0.42-0.71). The average endoscopy distance for women was 52.3 cm, compared with 55.2 cm in men ($p < 0.0001$), and the average number of polyps detected in women was 1.4, compared with 1.56 in men ($p = 0.003$) among patients with at least one polyp. Using multivariable analysis, females were more likely to have an examination of <50 cm compared with men, controlling for age, spasm or pain on examination, previous surgery, angulation of the colon, and type of endoscopist-MD or nonphysician endoscopist (OR = 1.67, 95% CI = 1.41-1.99). **CONCLUSIONS:** Women are more likely than men to have a shorter and more limited FS. This is partly owing to increased colonic angulation and pain during the examination. Methods aimed at reducing pain and improving maneuverability in an angulated colon during FS may improve the effectiveness of CRC screening in women.

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