

SHORT REPORT

Does age influence screening for colorectal cancer?

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Abstract

Objective: to evaluate whether patients' age influenced colorectal cancer screening by internal medicine resident physicians in an ambulatory care clinic.

Methods: a retrospective chart review of 200 patients aged >50 years to assess the performance of rectal examinations, faecal occult blood testing and flexible sigmoidoscopy.

Results: physicians performed rectal examinations in 21 patients (10.5%), faecal occult blood testing in 85 (42.5%) and flexible sigmoidoscopies in 95 (47.5%). Significantly more rectal examinations were performed in patients aged 50–60 years than in patients aged 61–70 years ($P < 0.005$) or ≥ 71 years ($P < 0.00002$). There was significantly more faecal occult blood testing in patients aged 50–60 years than in those aged ≥ 71 years ($P < 0.02$). In women, there were more rectal examinations in those aged 50–60 years than in those aged 61–70 years ($P < 0.05$) or ≥ 71 years ($P < 0.008$). Men aged 61–70 years had more rectal examinations than men aged ≥ 71 years ($P < 0.04$).

Conclusions: colorectal cancer screening is performed less often in older patients attending a hospital for health maintenance evaluation. Chronological age alone should not determine whether physicians screen for colorectal cancer.

Keywords: age, colorectal cancer screening, sex

Introduction

Colorectal cancer causes appreciable morbidity. It is the second most common cause of cancer death from malignancy in the USA [1, 2]. Intervention in those with localized disease results in better survival than intervention in individuals with more advanced disease [3]. US guidelines recommend annual rectal examinations (beginning at age 40), annual faecal occult blood (FOB) testing (beginning at age 50) and a flexible sigmoidoscopy every 3–5 years (beginning at age 50) [1, 4, 5].

There are few recommendations for colorectal cancer screening in older people, although the American College of Physicians has suggested that there may be little benefit in continuing flexible sigmoidoscopy beyond 70 years in patients who have been screened up to that point [1].

A study of elderly nursing home residents suggests that quality of life and life expectancy, rather than chronological age, should influence whether screening should take place [6].

This study evaluates whether patient age influences

the use of screening methods by internal medicine resident physicians in an ambulatory care clinic.

Materials and methods

Setting

The George Washington University Medical Center has a 3-year internal medicine programme in which resident physicians undergo primarily hospital-based internal medicine and subspecialty training. In addition, there is a weekly internal medicine ambulatory care (outpatient) clinic. A preventive care educational programme includes education about cancer screening with verbal and written information for resident physicians. Cancer screening guidelines are reinforced during these weekly clinics.

Colorectal cancer screening

The screening guidelines include annual rectal examinations, annual FOB and flexible sigmoidoscopy every

3–5 years. The results of these screening tests should be recorded in the medical records.

Data collection

The records of all patients who attended the resident physicians' clinic between 1989 and 1994 were reviewed retrospectively. Patients included in the study were seen for a health maintenance evaluation and were judged to be at average risk for colorectal cancer. All patients were ≥ 50 years of age and required to undergo colorectal cancer screening as part of the clinical assessment.

If cancer screening was not done, the reasons for not adhering to the recommendations were to be documented. If cancer screening had been conducted by another physician or at another institution, this information was to be verified and documented.

Exclusion criteria included patients seen only for a specific problem, those at increased risk for colorectal cancer and those who were cared for primarily by an attending physician. Patients with symptoms suggestive of gastrointestinal disorder were also excluded.

This study was approved by The George Washington University Medical Center's institutional review board.

Data analysis

The Epi Info Program (version 6) was used to develop a database and for analysis. Statistical significance was determined by using contingency tables, which generated χ^2 and *P*-values [7]. Statistical significance was confirmed using the Instat program, which employs Fisher's exact test and two-tailed analysis to generate *P*-values [8, 9]. Statistical significance was set at $P < 0.05$.

Results

There were 94 patients aged 50–60 years (54 women), 55 aged 61–70 years (26 women, 29 men) and 51 aged ≥ 71 years (30 women). Frequencies of rectal examinations, FOB testing and flexible sigmoidoscopies were determined for each age category and for men and women in each category.

Examination of the case notes of the 200 patients revealed that resident physicians performed 85 (42.5%) rectal examinations, 95 (47.5%) FOB tests and 21 (10.5%) flexible sigmoidoscopies. Of the 110 women studied, 41 (37.3%) had rectal examinations, 43 (39.1%) had FOB tests and 13 (11.8%) had flexible sigmoidoscopies. Of the 90 men studied, 44 (48.9%) had rectal examinations, 52 (57.8%) had FOB tests and eight (8.9%) had flexible sigmoidoscopies.

Significantly more rectal examinations were performed in patients aged 50–60 years than in those aged 61–70 years ($P < 0.005$) and ≥ 71 years ($P < 0.00002$). Patients who were aged 61–70 years had more rectal examinations than those aged ≥ 71 years ($P < 0.08$).

There was significantly more FOB testing in patients aged 50–60 than in those aged ≥ 71 years ($P < 0.02$). There was no difference in the performance of flexible sigmoidoscopies with age category.

Men aged 50–60 years more frequently had rectal examinations than women in the same age group ($P < 0.001$). There was a statistically significant difference in the performance of FOB between men and women ($P < 0.008$).

More women aged 50–60 years had rectal examinations than women aged 61–70 years ($P < 0.05$) or ≥ 71 years ($P < 0.008$). Women who were aged ≥ 71 years frequently underwent less FOB testing than women aged 50–60 years ($P < 0.002$). Men aged 50–60 years had more rectal examinations than men aged 61–70 years ($P < 0.001$) or ≥ 71 years ($P < 0.00001$). Men aged 61–70 years had more rectal examinations than men aged ≥ 71 years ($P < 0.04$).

There were no significant difference in the co-morbidities in the different age categories.

Discussion

All patients evaluated by the resident physicians were independent, community dwellers seen in the ambulatory care clinic. None was from a nursing home. All were seen for health evaluation and maintenance.

The resident physicians did not adhere to colorectal cancer screening guidelines in patients in all age categories. Younger patients were statistically more likely to have rectal examinations than those who were older. This applied to both sexes, but men (in all age groups) were more likely to have screening tests than women.

The incidence of colorectal cancer rises in a linear fashion with increasing age. The role of screening for this disease in older people has not yet been firmly established. However, current US guidelines recommend annual rectal examinations and FOB tests in middle-aged and older people. In this survey, screening procedures (other than endoscopy) were performed less often in older subjects and in women. The differences could not be explained by co-morbidity and suggest screening bias in internal medicine residents.

Key messages

- In an survey of screening for colorectal cancer in those attending a clinic for health maintenance evaluation, the frequency of rectal examinations declined significantly with age.
- Patients over 70 were less likely to have occult blood testing than those in their fifties.
- Men were more likely to have rectal examinations than women and, in the over-70 group, men were more likely than women to have stools tested for occult blood.

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