Re: Participation in Colorectal Cancer Screening: a Review

Vernon (1) has reviewed the published literature on adherence to screening for colorectal cancer. The present correspondence relates to our experience with colorectal cancer screening, which was not mentioned in Vernon’s review. In a rural area of the Province of Florence, Italy, a population-based screening by fecal occult blood testing (FOBT) has been carried out since 1982. All residents of that area who are aged 40–70 years (about 70,000 inhabitants) have been invited every other year to undergo a screening protocol (2).

The non-rehydrated guaiac test (Hemoccult II, SmithKline Diagnostics, Palo Alto, CA) was used until 1992, after which the rehydrated test (Hemoccult II) was used until 1995 and, more recently, immunologic tests (Hemeselect, SmithKline Diagnostics; Immudia Hem SP, Fujirebio Inc. Tokyo, Japan) have been adopted.

In the framework of a case–control study on the effectiveness of FOBT (3), a questionnaire was mailed to 1030 control subjects who were randomly selected from municipality residence archives. Control subjects were matched to the case subjects by sex, age, and place of residence. In the questionnaire, detailed information was requested about marital status, educational level, current and usual occupation, cigarette smoking habits, and number of first-degree relatives dead from any cause and from colorectal cancer. Furthermore, detailed information was requested about body mass index, dietary habits, and previous endoscopic examinations (FOBT, x ray, and endoscopy) performed outside the screening program. Among the control subjects, 378 (36.7%) had had at least one screening during their lifetime and 301 (29.2%) had screening within the past 3 years. Answers to the questionnaire indicated no differences among participants in the screening and nonparticipants with regard to the following factors: age, place of birth, educational level, body mass index, food and wine consumption per day, cigarette smoking habits, and number of relatives dead from any cause. Participants were more likely to be females (in the first round, FOBT screening was combined with mammographic screening); consequently, the percentage of housewives was greater among participants. Furthermore, compared with nonparticipants, participants were slightly more likely to report some diagnostic intestinal examinations performed outside the program (12.4% for participants versus 9.2% for nonparticipants; $P = .18$). The major difference among participants and nonparticipants was that a larger proportion of participants had at least one relative dead from colorectal cancer (10.6% versus 3.7%; $P < .01$). Thus, as Vernon (1) remarked, adherence was highest in relatives of colorectal cancer case subjects, and no other statistically significant determinants of compliance emerged from our survey.

In conclusion, in one of the few experiences of colorectal cancer screening in southern Europe, the goal of Healthy People 2000 (4), which is that at least 50% of the population will have had FOBT within the past 2 years, is far from reaching its mark. The use of a 1-day immunologic test in our program may increase the compliance (to approximately 40%) (5) because there are no dietary restrictions imposed by the protocol, and a shorter period is required for collection of feces.

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References


Notes

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Re: Fecal Occult Blood Screening in the Minnesota Study

In a recent issue of the Journal, Church et al. (1) reanalyzed data from the Minnesota study to estimate the sensitivity of the screening test (fecal occult blood test composed of six slides) and the sensitivity of the screening program. Developed approaches agreed with the crude estimate of test and program sensitivities of about 90%. We agree with Church et al. with regard to the great importance of distinguishing screening test and screening program sensitivity. However, we believe that the study by Church et al. has some limitations with regard to the methodologies proposed and the public health implications.

Methodological limitations. As the investigators (1) suggested, the proportion of cancers detected by a particular test among all cancers diagnosed in complying people within 1 year of their screen in the Minnesota study provides a proper estimate for program sensitivity but not for screening test sensitivity, since it would suppose that all cancers existing at a screen emerge within 1 year after the screen and that all cancers emerging 1 year after the screen existed...