Original Article

Evaluation of Knowledge and Attitude Towards Risk Factors and Screening Methods of Colon Cancer Among the First-Degree Relatives of Cancer Patients Referred to Oncology Clinics: Shariati Hospital, Tehran

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Abstract

Background: Colorectal cancer (CRC) is the third most common cancer and the fourth leading cause of death in the world, . Primary prevention of CRC is important, However even in people involved with cancer, there is insufficient knowledge of cancer screening.

Methods: in a comparative method two groups of people over 40 years of age who had been referred to the oncology clinics of Shariati Hospital were studied. Group 1: First-degree relatives of people with CRC. Group 2: First-degree relatives of people with other cancers. The subjects were selected via random sampling.

Results: 300 people were included in this study. None of the subjects who had a family history of non-CRC (control group) have never been screened for this cancer, but 15 (10%) of those who had a history of CRC in the first-degree relatives underwent screening in the past.

Conclusion: People with a family history of colorectal cancer have more been more aware of necessity for CRC screening than those without a family history, however this knowledge has not led to partake in any screening method.

Keywords: Attitudes, Colorectal Cancer, Knowledge, Practice, Screening

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Introduction

Colorectal cancer (CRC) is the third most common cancer and the fourth leading cause of cancer death in the world[1]. Although the disease is more common in people over the age of 50 years, it is also a threat to young people in Iran[2]. Prevention of this cancer is of great importance due to its high incidence followed by death.

The survival of CRC is inversely related to its clinicopathological stage. About 25% of patients are diagnosed with metastasis, who suffer from poorer prognosis. Most patients with metastatic CRC (stage IV) are not curable and their 5-year survival rate is less than 10 %[3]. Consequently, well planned screening assessment can remarkably reduce morbidity and mortality in people who are at risk of developing CRC[4]. Awareness of early detection, effective treatment in early stages of CRC and effective screening play a significant role in community health. The target population for an effective CRC screening is healthy men and women aged between 50 and 74 years as well as the relatives of CRC patients, although in 75% of cases there is no evidence of inheritance pattern[5]. The screening test commonly recommended by the American Cancer Society is Annual Flotation Test (FOBT), Sigmoidoscopy every 5 years, Barium Enema every 5 years and colonoscopy every 10 years[6,7]. A review study on CRC screening showed that the physician's recommendation on screening test is an important encouragement for patients to partake a cancer screening programs and the main reason that clinicians do not recommend CRC screening is patient's low acceptance[8].

The aim of this study was to determine the level of knowledge and attitude of the CRC patient's first-degree relatives about the screening programs in comparison with the control group.

Materials and Methods

This cross-sectional study has been carried out from December 2015 to May 2016 on two groups of people aged over 40 years who were referred to an oncology outpatient clinic in a teaching Hospital of Tehran University of Medical Sciences.

Target group includes first-degree relatives of people with CRC and the second group consists of first-degree relatives of patiets with other types of cancer. The subjects were selected through sequential sampling method.

Inclusion criteria was: (1) subjects willingly participate in the research project, (2) An age of 40 years and above who were physically and mentally capable of answering the questions, (3) Family history of CRC disease or other malignancies.

Information was collected through face-to-face interviews by two questioners And two questionnaires were used to gather information. The first was about demographic information of individuals and was designed to include effective variables such as age, gender, marital status, education level and family history of CRC or polyp disease. The second questionnaire consisted of 10 questions that were used in 2003 in 21 European countries to determine the level of knowledge about CRC and screening tests[9].The validity and reliability of this questionnaire were evaluated by Moattari *et al* in 2009[10] and it was proven to be used formeasuring the level of individuals' knowledge,. In this questionnaire, the correct answer is devoted a score of +1, the wrong answer a-1, and "I do not know the answer" scores zero. The score of each individual's knowledge is calculated by counting the negative score (wrong answer). Finally, the study two groups were compared based on the scores.

Results

A total of 300 patients were enrolled in this study and their knowledge about the risk factors, symptoms, and methods of screening for CRC was evaluated. The mean age of the participants was 48.48±10.11 years and 231 (77%) and 69 (23%) were male and female respectively. 171 (57%) of participants had secondary school diploma, 123 (41%) had an undergraduate/ bachelor degree, and 6 (2%) had a master degree or higher. 150 participants had a family history of CRC in their first degree relatives and others had family history of non-CRC.

Screening history

None of the subjects with a family history of non-colorectal cancer (control group) had yet been screened for CRC, however 15 (10%) of those with a history of CRC in the first-degree relatives had undergone screening in the past. Based on

Fisher's exact test, the difference was statistically significant between two groups (p<0.001).

Knowledge of risk factors

Participants in the project were asked if they previously had information about CRC risk factors. In control group, 76 (50.7%) were not aware of any risk factor, while 47.1% of the other group were unaware and the difference between two groups was statistically significant (p=0.001).

74 persons in the control group who were familiar with the risk factors of CRC, 22 (29.7%) knew one risk factor, 35 (47.3%) two risk factors, 12 (16.2%) 3 risk factors, 4 people (5.4%) 4 risk factors and 5 (1.4%) knew 5 risk factors. The average number of known risk factors by this group was 2.01.

Of 103 individuals with a family history of CRC, 24 (23.3%) at least knew one risk factor, 40 (38.8%) two risk factors, 26 (25.2%) 3 risk factors, 10 (9.7%) 4 risk factors, 2 (1.9%) knew 5 risk factors and 1 (1%) person was familiar with 6 risk factors. The average number of risk factors known by this group was 2.31. Using Mann-Whitney U test, the cumulative amounts of risk factors that the participants were familiar were compared between the two groups, and it was statistically significant (p<0.001).

Screening methods

A total of 77 controls (51.3%) and 112 (74.7%) from the group with a family history of CRC were screened for CRC. This difference was statistically significant (p<0.001), however in both groups, the only screening method that the participants were familiar with was colonoscopy.

Colorectal cancer symptom and screening questionnaire

Participants were asked about signs and screening of colorectal cancer through 11 questions. The mean score obtained for the control group was 0.86±3.73, while it was 4.29±0.89 for the group with a family history of CRC. This difference was statistically significant (p<0.001) too.

Discussion

Half of 300 participants in this study, had a family history of CRC in their first degree family that consisted the case group, and the other half did not that were classified as controls. People in the case group had more information about risk factors and screening methods than the control group. Also, in a survey at the end of the study we found that they answered more correctly to the questions than the control group. In a study by McCaffery *et al*, on 1637 people in the UK[11], 58% of participants did not even have known a risk factor, while in our study, 50.7% of the control group had knowledge of risk factors. This shows that our education is low in the importance of identifying common cancers.

In a study by Janz *et al*[12], 335 Michigan residents were questioned about CRC screening and less than 30% of respondents knew about or used screening methods. In our study, 51.3% of the controls were familiar with screening methods, but none have ever been screened to indicate that although knowledge of individuals has improved in the area of cancer detection, this awareness don't encourages people to perform screening and they have not been diagnosed with disease faster.

In a study by Salimzadeh *et al* on 200 people living in Tehran they found that one of the most commonly reported reasons for not being aware of CRC screening methods is "a lack of doctors' advice"[13]. In the current study the most common reason for not being aware of -CRC screening methods was similar in case group, but in the control group, the most common reason was participants never thinking of doing the tests".

Conclusion

We can conclude that individuals with a family history of colorectal cancer have more information about the risk factors and screening methods than those without a family history. We believe that screening rate is higher among individuals with family history. Considering the higher risk of malignancy in people with family history of the disese, it is necessary to develop a program to improve the awareness within families with a familial background of CRC in the community.

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