

Public Awareness of Risk Factors, Screening and Prevention of Colorectal Cancer

Hassan Bukhari, Mohammed Mirza , Fahad Ghazi Almatrafi, Ebtisam Fahad Alqhtani, Ahmad Khalid Yamani, Fatemah Mohammed Sabiani, Muteb Hassan Almarwani, Ahmad E. Algamdi, Riyadh G. Alzhrani , Bilal H. Felmban, Osama S. Alamry, Wurud Abraham Z. Alwabsh, Riyadh Jamaan A. Alzahrani, Eiman Mohammed Falatah

Faculty of Medicine, Umm Al-Qura University, Makkah, Saudi Arabia

Abstract

Background/Aims: Cancer screening is a national health priority, especially for colorectal cancer. Colorectal cancer (CRC) is the second most common malignancy in the Saudi population, with an increasing incidence over the past 20 years ^[1]. The aim of this study was to assess public awareness of risk factors, screening and prevention of colorectal cancer among the general population in Makkah city in order to identify groups of people that need more education and a screening program.

Setting and Design: The research will be a part of a cross-sectional study conducted a survey by using a questionnaire.

Patients and Methods: Random, healthy individuals from Makkah city Saudi Arabia, were approached to participate in a multiple choice survey about CRC. Data were analyzed by demographic criteria, including age, gender, marital status, level of education, and occupation to determine if members of these groups displayed differential knowledge.

Statistical Analysis: Differences in responses by demographic data were analyzed using descriptive statistics relationship between two variables using crosstab.

Results: In total, 371 participants completed the survey. Most respondents do not hear about early screening of colorectal cancer (52%), and 86% have not been screened for colorectal cancer. 60% do not know where the place of colorectal cancer screening is. They assess subjectively their level of knowledge about colorectal cancer 53% poor, 37% good and 10% excellent. Highest percentage for education level about public awareness for colorectal cancer universal by 45% and lowest unlettered by 4% which varied significantly according to level of education. About 6 from 11 diagnosed with colorectal cancer and have a family history of colorectal cancer.

Conclusions: Most of people consider their information poor about screening of colorectal cancer although those with higher education tended to answer questions correctly more often, there were some misconceptions regarding universally accepted screening protocols, symptoms, and general understanding of CRC in Saudi Arabia. A national education/screening program in Saudi Arabia is recommended to improve CRC knowledge.

Key words: Cancer - Colorectal Cancer - Malignancy - Health

INTRODUCTION

“Cancer is considered as a mainreason of fatalities worldwide”^[2]. Colorectal cancer (CRC) is the third most popular cancer in men and the second in women^[3]. The population of Saudi national for year 2010 was 18,707,576. There were 1033 cases of colorectal cancer accounting for 10.4% of all recentlydiscovered cases in year 2010. This cancer ranked first among male population and third among female population. It affected 541 (52.4%) males and 492 (47.6 %) females.^[3]. Thus, in this study, the researchers aim to evaluate public awareness of risk factors, screening and prevention of colorectal cancer in Makkah city population. Hence, screening for colorectal cancer evidence leads to earlier exposure and amended survival is now indisputable and has led to a unanimity that colorectal cancer examining will minimize mortality.

MATERIALS AND METHODS

The research was a part of a cross-sectional study. The sample size included in the study was 371 adult males and females chosen randomly from different areas within Makkah Region involved a self-administered questionnaire that would be able to assess the public awareness of colorectal cancer. The data was analyzed by the SPSS program. The used questionnaire includes social and demographic data as well as questions about colorectal cancer related factors, screening methods, and preventive measures. Section 1: Risk factors Subjects have to choose between 3 propositions for each factor: Risk factor/Protective factor/Don't Know. Section 2: Screening methods. Section 3: Preventive measures.

The knowledge score is calculated by summing the number of correct answers in each section. The scores are 1 for correct or 0 for incorrect and if the participant chose 'don't know'. The maximum knowledge score will be 2. The Multivariate linear regression model will be used to evaluate the determinants of knowledge score.[4]

RESULTS

Table 1. Basic demographics of the study

Demographics		Count	%
Inclusion	Excluded	79	17.56
	Included	371	82.44
	Total	450	100
Gender	Male	241	65
	Female	130	35
	Total	371	100

Education	Universal	164	45
	Secondary	102	28
	Elementary	29	8
	Intermediate	29	8
	Postgraduate	24	7
	Unlettered	14	4
	Total	371	100
Nationality	Saudi	246	66
	Non-Saudi	125	34
	Total	371	100

Four hundred and fifteen questionnaires were distributed to people at community. Due to missing information at some of questionnaires, only 371 samples (a response of 82.44%) were considered as having complete responses that addressed. The objectives of the study, and were admissible for analysis (Table 1).

Among the group of respondents who had complete their questionnaires, we looked for their knowledge about Colorectal cancer, 285 (77%) heard about CRC and 198 (53%) of the all participant rate their level of knowledge about CRC as poor. Among all participants, 11 (3%) diagnosed with Colorectal Cancer and 6 of them have family history of CRC. 41 (11%) of the all participants have family history of CRC. 110 (30%) think Colorectal cancer is not common in Saudi Arabia & 135 (36%) don't know if CRC common or not. 151 (41%) think CRC is related to age and 85 (23%) don't know, while 135 (36%) don't think there is a relation between age & CRC.

Among the participants, 86% think smoking & alcohol to be risk factors for CRC, 73% overweight, 69% dietary habits (e.g. high fat, low-fiber diets), 66% emotional stress and Inactivity, 60% genetics and some drugs, 35% occupation and 24% environment (e.g. cold weather).

Table 2. Risk factors of colorectal cancer

		Total	Ratio
Risk factors	there is risk	222	60%
	no-risk	77	21%
	I don't Know	72	19%
Total		371	100%

72% consider blood in the stool as a symptom of Colorectal cancer , 70% loss of appetite, 66% weakness and fatigability ,65% weight loss , 64 % alternating bowel habits , 56% tinnitus , 51% Iron-Deficiency anemia and 45% decreased amount and size of stool (Table 3)* .

Table 3. Symptom of Colorectal cancer:

		Total	Ratio
Symptoms	Yes	226	61%
	No	47	13%
	I don't Know	98	26%
Total		371	100%

We asked all participants about polyps and it's relation with CRC. 256 (69%) have no knowledge about polyps, 128 (35%) think Polyps related to Colorectal Cancer and 47 (13%) have been diagnosed with inflammatory bowel disease.

Table 4. Factors reducing the incidence of colorectal cancer

		Total	Ratio
Factors reducing CRC	Reduce the risk	276	74%
	Doesn't reduce the risk	42	12%
	I don't know	53	14%

Total	371	100%
--------------	------------	-------------

84% think that Early check up and healthy diet reducing the incidence of Colorectal cancer ,83% exercise,73% handling emotional stress, 67% using prescribed drugs and 66% using natural remedies (Table 4)*.192 (52%) did not hear about early screening of CRC and 320 (86%) did not had screening of CRC. 224 (60%) didn't know where they can screen for CRC.Finally, 56% think the internet as the main source of their knowledge about CRC ,45% friends, 47% the awareness campaigns by MOH or Hospitals, 44% newspaper and 40% doctor*. *(The largest number of number of respondents to the possibility of choosing more than one for the person).

DISCUSSION AND CONCLUSION

In an effort to elucidate the public awareness of risk factors, screening and prevention of colorectal cancer, we performed a cross-sectional study conducted a survey (by using a questionnaire) targeted at Makah general population.

Some of research questionnaire was not filled completely, so we focused on 371 completed questionnaire and we found 23% of targeted population not hear about Colorectal cancer, 53% consider their knowledge of Colorectal cancer is poor, so this is a big disaster and their awareness was negative.

Other finding as following:

Most respondents didn't hear about early screening of Colorectal 52%, 60 % didn't know where the place of colorectal cancer screening is. 69% have no knowledge about polyps, 65% think Polyps not related to Colorectal Cancer. 11 diagnosed with Colorectal Cancer and 6 of them have a family history of Colorectal Cancer. 44% not Know that cancers is common in Saudi Arabia, 66% not know that colorectal cancer is common in Saudi Arabia.

In general, 60% know about risk factor, 61% know about symptoms, 74% know about factors reducing the incidence of colorectal cancer. Highest percentage for education level about public awareness for colorectal cancer universal by 45% and lowest unlettered by 4% which varied significantly according to level of education.

In summary, the research suggests that, the Most of people consider their information poor about screening of colorectal cancer and there is a deficiency of understanding the general information about CRC in Saudi Arabia, although it's the second most common malignancy in the Saudi population, with an increasing incidence over the past 20 years. Depending on research result; we suggest increasing of knowledge of CRC itself, by educate the public about symptom, risk factors, screening and prevention of colorectal cancer.

REFERENCES

- [1] Saudi Cancer Registry (SCR) MOH, KSA. **Cancer Incidence Report**, Saudi Arabia 2010. <http://www.scr.org.sa/files/file/2010.pdf>
- [2] WHO, "Cancer Fact sheet," 2012, <http://www.who.int/mediacentre/factsheets/fs297/en>.
- [3] GOLOBOCAN, "GOLOBOCAN 2012," 2012, http://globocan.iarc.fr/Pages/fact_sheets_cancer.aspx, **Saudi Cancer Registry (SCR) MOH, KSA. Cancer Incidence Report**, Saudi Arabia 2010. <http://www.scr.org.sa/files/file/2010.pdf>.
- [4] <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4197369/http://www.ncbi.nlm.nih.gov/pubmed/2524>
- [5] World Health Report. Geneva: WHO; 1999. World Health Organization
- [6] .Last J. Social and behavioral determinants of health and human etiology. 2nd ed. Stanford,

- Connecticut: Appleton and Lange; 1998.
- [7] Novotny TE, Giovino GA. use. In: Brownson RC, Remington PL, Davis JR, editors. Chronic disease epidemiology and control. Washington DC: American Public Health Association; 1998. pp. 117–48.
- [8] .Bassiony M. in Saudi Arabia. Saudi Med J. 2009;30:876– 81. [[PubMed](#)]
- [9] https://en.wikipedia.org/wiki/Colorectal_cancer
- [10] <http://www.wcrf.org/int/research-we-fund/continuous-update-project-findings-reports/colorectal-bowel-cancer>