

Relationship between Lifestyle and Prevalence of Colorectal Cancer at Ocean Road Cancer Institute, Dar Es Salaam, Tanzania

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Abstract

Background: Colorectal cancer (CRC) is the third most deadly and fourth most commonly diagnosed cancer in the world with nearly 2 million new cases in 2018. Colorectal Cancer incidence has been steadily rising worldwide, especially in developing countries that are adopting the “western” way of life.

Aim of the Study: The aim of this study was to determine the prevalence of colorectal cancer in relation to lifestyle of the patients admitted in the wards at Ocean Road Cancer Institute (ORCI).

Materials and Methods: Cross sectional study, conducted at Ocean road Cancer Institute in 2016 and reviewed on 2020 among 30 admitted patients with Colorectal Cancer. Data was collected in a form of questionnaire and analyzed by Scientific Package for Social Sciences.

Results: A total of 30 patients were identified by reading their case notes, 19 (63.33%) male and 11 (36.67%) female. Diseased person was found at the age of 38 - 57 years, 14 (46.67) and 58 and above years, 16 (53.33%). From the study, risk increase as you get older. Among seven risk factors discussed in this study using alcohol and frequently taking of red meat was found in 80 % of study cases.

Conclusion: Among 30 patients investigated, majority used red meat, alcohol and low fiber diet. The incidence is high in male compare to female and also high to 58 years and above compared to other age group.

Recommendations: Prevalence of Colorectal Cancer can be reduced by leaving health life. Preventive methods are not only cheaper but are also better than cure. People should change their lifestyle to reduce the risk of developing Colorectal Cancer.

Keywords: Lifestyle; Colorectal Cancer; Ocean Road Cancer Institute

Abbreviations

CRC: Colorectal Cancer; ORCI: Ocean Road Cancer Institute; SPSS: Statistical Package for Social Sciences; WCRFGN: World Cancer Research Fund Global Network

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Introduction

Cancer is the second leading cause of death globally and is responsible for an estimated 9.6 million deaths in 2018. Globally, about 1 in 6 deaths is due to cancer. Approximately 70% of deaths from cancer occur in low- and middle-income countries. Around one third of deaths from cancer are due to the 5 leading behavioral and dietary risks: high body mass index, low fruit and vegetable intake, lack of physical activity, tobacco use and alcohol use [1-3].

Colorectal cancer (CRC) is the third most deadly and fourth most commonly diagnosed cancer in the world, with nearly 2 million new cases in 2018. CRC incidence has been steadily rising worldwide, especially in developing countries that are adopting the “western” way of life [4].

The colon and rectum are parts of large intestine. Colorectal cancer occurs when tumors form in the lining of large intestine. It is common in both men and women. The risk of developing rises after age of 50. You are also at risk when you have colorectal polyps, family history of colorectal cancer, ulcerative colitis or crohn’s disease, eat high fat diet, smoked fish or processed meat [2].

Avoiding cancer risk factors may help prevent certain cancers. Risk factors include smoking, being overweight, and not getting enough exercise. Increasing protective factors such as quitting smoking, eating a healthy diet, and exercising may also help prevent some cancers. Protective factors decrease the risk of colorectal cancer: include Physical activity, Aspirin, Combination hormone replacement therapy, Polyp removal [15]. People who have low level of vitamin D are more likely to develop CRC. There is vitamin D receptor in colon and rectal cells, and vitamin D can bind to this receptors. This can cause cells like oncogenes to die or stop growing and can stop cancer cells to spread at other parties of the body. Therefore, it is thought that vitamin D may help in protecting against colorectal cancer, by making cancer cells less likely to grow and spread [16].

Aim of the Study

The aim of the presented study was to determine the prevalence of colorectal cancer in ORCI and the association between lifestyle and the CRC.

Materials and Methods

Study was cross sectional, conducted at ORCI in 2016 and reviewed on 2020. Study population was 30 patients who were admitted with diagnosis of CRC. Questionnaire was used as the research tool for data collections and analysis was done by using SPSS.

Results and Discussion

A total of 30 patients were studied from random selection, 19 (63.33%) male and 11 (36.67%) female.

Age (years)	Gender		Total	
	Male	Female	%	
Below 18	00	00	00	00
18 - 37	00	00	00	00
38 - 57	06	08	14	46.67
58 and above	13	03	16	53.33
Total	19 (63.33%)	11 (36.67%)	30	100

Table 1: Age and gender distribution of the patients.

The age and gender distribution in table 1 above demonstrate that; the occurrence of CRC is not common at the age below 37. Diseased person was found at the age of 38 - 57 years, 14 (46.67) and 58 and above years, 16 (53.33%).

Lifestyle	Gender		Total	
	Male	Female	%	
Not doing physical exercise	03	04	07	23.33%
Overweight	03	04	07	23.33%
Using of Alcohol	19	05	24	80.00%
Cigarette smoking	10	01	11	36.67%
Not taking fruits and vegetables	00	00	00	00.00%
Frequently using red meat	15	09	24	80.00%
Frequently taking high glycemic food	14	06	20	66.67%

Table 2: Lifestyles related to colorectal cancer.

Table 2 above show some lifestyles in relation to CRC, among 80% of our cases have positive history of using red meat and alcohol, his is the highest percentage compared to all other risk factors.

Each risk factor above was studied independently and results were analyzed

Regular time table of doing physical exercise: Only 2 (6.67%) have got regular time table of doing physical exercise, 21 (70%) they were doing for sometimes and 7 (23.33%) were not doing exercise at all.

Physical activity, either in intensity, duration, or frequency, can reduce their risk of developing CRC by 30 to 40 percent relative to those who are sedentary regardless of body mass index with the greatest risk reduction seen among those who are most active [5-14].

Overweight: About 7 patients (23.3%) were diagnosed with overweight before developing CRC and remaining 23 (76.7%) has no history of overweight.

Excess body weight, defined body mass index, may increase the risk of colorectal cancer. Associations were stronger in men than in women for colon and rectal cancer [6].

Using of alcohol: 80% of study population took alcohol, about 8 patients (26.7%) took alcohol almost every day, 16 patients (53.3%) drunk alcohol for some times and 6 patients (20%) never took alcohol at all.

Most of the studies from western populations: North America, Europe and from Asia. The pooled estimate indicated individuals who were categorized as the “heavy drinkers” the risk of colorectal cancer was approximately 60% greater compared to those individuals classified as light/nondrinkers.

Cigarette smoking: 40% (12 patients) were smoking cigarette and among those 6 patients (20.0%) took more than two packets per day, 5 patients (16.7%) took 1 - 2 packets per day and 1 patient (3.3%) took less than 1 packet per day. The remaining 60% (18 patients) had not smoke cigarette at all. From analyzed data, larger percent of those who were chain smokers have high risk of developing CRC compared to those who took less than one packet per day.

Routine taking of vegetables and fruits: There is no patient who did not take vegetables and fruits at all, 9 patients (30%) took every day and 21 patients (70%) took rarely. This indicates that; there is low number of CRC patients to those who took vegetables daily compared to others.

Diet high with red meat: 80% (24) of the patients with CRC have the history of taking red meat in their diet. About 18 patients (60%) took almost daily, 6 patients (20%) took 2 - 3 times a week, 4 (13.3%) for sometimes and 2 patients (6.7%) did not take red meat at all.

Diet with high glycemic food: 20 (66.7%) of the patients who develop CRC took high glycemic food index like white bread in their diet while remaining 10 (33.33%) took for some days, no one among those patients who did not take high glycemic food index at all. Result show that there is high link of taking those food in relation to development of CRC.

Conclusion

Among 30 patients investigated, majority used red meat, alcohol and low fiber diet. The incidence is high in male compare to female and also high to 58 years and above compared to other age group.

Recommendations

Prevalence of CRC can be reduced by leaving health life, preventive method are not only cheaper but are also better than cure. People should change their lifestyle to reduce the risk of developing CRC.

Living a healthy lifestyle can help reduce your risk of CRC. But regular screening is also important. Testing can often find colon cancer early, when it's most treatable, or sometimes even prevent it altogether:

1. Enough education on risk factors for CRC related to lifestyle should be provided to the community so that we can reduce the prevalence of this cancer
2. People should learn and adopt on how to live health life.
3. Regular screening programs for CRC should be introduced to our setting for early detection and treatment.

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