

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: <http://www.elsevier.com/locate/kontakt>

Original research article

Exogenous risk factors for colorectal cancer in people aged 50 years and older

Zuzana Spáčilová*, Andrea Solgajová, Gabriela Vörösová, Dana Zrubcová

Constantine the Philosopher University in Nitra, Faculty of Social Sciences and Health Care, Department of Nursing, Nitra, Slovak Republic

ARTICLE INFO

Article history:

Received 17 July 2017

Received in revised form

18 September 2017

Accepted 27 November 2017

Available online xxx

Keywords:

Colorectal cancer

Age

Risk factors

ABSTRACT

Colorectal cancer is a preventable disease caused by endogenous and external environmental factors. The study objective was to map the incidence of exogenous risk factors for colorectal cancer among the lay public in relation to age. The quantitative study was conducted by using the questionnaire "Colon Cancer", which was supplemented by self-designed items. To process the obtained data, we used several mathematical and statistical methods found in STATISTICA and MS Excel. The sample consisted of 1715 respondents (males and females) from every region of Slovakia, including 1120 younger respondents (50–59 years old) and 595 older respondents (60 years and older). They had no cancerous diseases in their medical history; and they had no healthcare education. We found a high incidence of some exogenous risk factors for colorectal cancer: 60.36% of the younger respondents and 75.12% of the older respondents were overweight and suffered from obesity; 47.32% of the younger respondents and 41.18% of the older respondents ate large amounts of red meat; 76.52% of the younger respondents and 73.61% of the older respondents did not eat the recommended daily allowance of vegetables; and 47.77% of the younger respondents and 57.65% of the older respondents did not do adequate physical activity. We found that there was a statistically significant relationship between age and BMI, red meat consumption, physical activity, and smoking ($p < 0.05$). The frequency of consumption of vegetables and alcohol did not depend on the respondents' age. There is a high incidence of exogenous risk factors for colorectal cancer in the Slovak population. We recommend implementing preventive strategies against colorectal cancer in individuals, communities, and society.

© 2017 Faculty of Health and Social Sciences of University of South Bohemia in České Budějovice. Published by Elsevier Sp. z o.o. All rights reserved.

* Author for correspondence: Constantine the Philosopher University in Nitra, Faculty of Social Sciences and Health Care, Department of Nursing, Kraskova 1, 949 74 Nitra, Slovak Republic.

E-mail address: zspacilova@ukf.sk (Z. Spáčilová).

<https://doi.org/10.1016/j.kontakt.2017.11.005>

1212-4117/© 2017 Faculty of Health and Social Sciences of University of South Bohemia in České Budějovice. Published by Elsevier Sp. z o.o. All rights reserved.

Introduction

Colorectal cancer is a multifactorial disease affecting the large intestine and rectum [1,2]. It is a malignant neoplasm that results from a malignant transformation of the cylindrical epithelium of the large intestine and rectum [3]. Nine of ten malignant colorectal tumours are preceded by a benign adenoma that is considered a precancerosis [4]. In 2015, according to the estimates of the International Agency for Research on Cancer (IARC), colorectal cancer was the third most commonly diagnosed cancer in men and the second in women worldwide [2]. According to the IARC estimates, in 2012 the Slovak Republic (SR) was among the countries with the highest incidence rates of malignant colorectal cancers worldwide [5,6]. The latest data on the incidence rates of malignant tumours in Slovakia show that malignant colorectal tumours in men are dominant. In women, the incidence of colorectal cancer comes in second place (after malignant breast tumours), but its incidence has been increasing [7].

The exact cause of colorectal cancer is not known; however, multiple risk factors are known. Based on the known data it has been estimated that colorectal cancer develops through a complex interaction between endogenous factors and external environmental factors [1,2,8,9]. The endogenous factors include genetic factors and predisposing factors. Regarding hereditary factors, there is an increased risk for colorectal cancer in people with hereditary nonpolyposis colon cancer, people with familial adenomatous polyposis, and people with hamartomatous polyps in the small and large intestine [1,10,11]. The predisposing factors include age (the disease is significantly more common in people older than 50 years of age), gender (the incidence of colorectal cancer is higher in men; rectal cancer prevails in men, colon cancer is more common in women), positive family or personal history, non-specific inflammations of the colon (particularly ulcerous colitis, Crohn's disease), implantation of the ureters in the large intestine and rectum, radiotherapy applied in neoplastic processes in the minor pelvis, and the presence of Barrett's oesophagus [1,10–12]. Furthermore, the relationship between diabetes mellitus and an increased risk for colorectal cancer in men and women was found [13,14]. The exogenous etiologic factors of colorectal cancer include lifestyle factors, such as: food (its qualitative and quantitative composition), smoking, alcohol consumption, physical activity, and obesity [1,2,15]. The external environmental factors can have not only an aggressive or tumorigenic influence, but also a protective influence. In recent years, epidemiologic and experimental studies have proved a convincingly strong relationship between nutrition (unhealthy diet) and colorectal cancer. High fat intake (particularly animal fats), increased consumption of meat (particularly red meat and meat prepared by inappropriate technologies), higher caloric intake (often related to obesity, hyperglycaemia and hyperinsulinism), decreased dietary fibre intake and low micronutrient intake (vitamins and minerals) are considered critical factors that increase the incidence of colorectal cancer [1,2,15,16]. There is also an increased risk of colorectal cancer in smokers and alcohol consumers [1,2,8]. Furthermore, a lack of physical activity is one of the risk factors for colorectal carcinoma

[1,15,16]. The protective factors include enough dietary fibre in the diet, calcium, vitamin D, acetylsalicylic acid, non-steroid antiflogistics, and a composition of the bacterial intestinal microflora [1,2].

In the epidemiology of colorectal cancer, the age factor is manifested very strongly as a basic (endogenous) risk factor. Up to 90% of all colorectal cancers have been diagnosed in the population older than 50 years of age [8,11,12]. Considering this figure, we decided to study the presence of risk factors in the most at-risk population, i.e. respondents aged 50 years and older.

The study objective was to map the incidence of exogenous risk factors for colorectal cancer among the lay public in relation to age.

Material and methods

We used a cross-sectional quantitative design for the study conducted on the basis of a questionnaire investigation. We used a questionnaire based on the items from the free-access test “Colon Cancer” at “Your Disease Risk”, which was supplemented by self-designed items. Originally, “Your Disease Risk” was developed by the Harvard Centre for Cancer Prevention at Harvard University, as the Harvard Cancer Risk Index in 1997. It was a simple instrument used to find an estimated risk for cancer. This instrument was developed by epidemiologists, clinical oncologists and other experts from Harvard University who professionally focused on the issue of malignant tumours and their risk factors [17]. The Colon Cancer test is based on the scientific data, particularly on the proven relationships between a tumour onset and the risk factors. The questionnaire in our study consisted of 22 items from the Colon Cancer test that were divided into four areas: demographic data (categorization items: gender, education, residence, age), history (items related to personal, family and medication history), lifestyle (items related to diet, alcohol consumption, physical activity, and weight and height for calculation of the body mass index), and the history of colorectal cancer screening tests. The questionnaire was supplemented by two self-designed items related to lifestyle (items related to vegetable consumption and smoking). The questionnaires were distributed to respondents via student volunteers from the selected and addressed universities and secondary schools from each region in Slovakia. In each of the addressed schools there was a coordinator who explained the study objective and inclusion criteria to the students. Filling in the questionnaires was voluntary and anonymous. The data collection was conducted from June 2009 to March 2010.

For our study purposes, we analysed the demographic data and the data related to the studied exogenous risk factors for colorectal cancer. We analysed the questionnaire items on lifestyle, specifically the items of weight (kg) and height (cm) for calculation of the Body Mass Index (BMI), and the items related to alcohol consumption, red meat consumption, vegetable consumption, smoking, and physical activity. We used descriptive and analytical statistics to process and analyse the data. The statistical analysis was conducted with the use of the algorithms found in the applications STATISTICA and MS Excel. To verify a hypothesis, we used the Chi²-test (a Chi-Square Test of

Download English Version:

<https://daneshyari.com/en/article/7521289>

Download Persian Version:

<https://daneshyari.com/article/7521289>

[Daneshyari.com](https://daneshyari.com)