HYPERTENSION AS RISK FACTOR IN PATIENTS WITH COLORECTAL CARCINOMA

Dimitur Chavdarov Chonov
Department of Surgery, Medical Faculty, Trakia University - Stara Zagora, Bulgaria
Corresponding author: Dimitur Chavdarov Chonov
e_mail: dimityr_chonov@abv.bg

Abstract

In recent years, the increasing attention has been paid to the incidence and risk from colorectal cancer (CRC), especially in patients with metabolic syndrome. CRC is the third most common malignant disease of the gastrointestinal tract. Hypertension and cancer are two multifactorial, severe and chronic diseases.

For this study, we investigated 49 patients with colorectal cancer operated in the Surgical Clinics of the University Hospital "Prof. Dr. S. Kirkovich" - Stara Zagora in the period 2017-2019 and were examined retrospectively. From the studied group (n = 49) the patients were between 50 and 88 years of age (median 73 years, mean 71.88 ± 9.28 years), 46.9% men (n = 23) and 53.1% women (n = 26).

From the clinical data our results showed the presence of rectorage in 18.4%, diarrhea in 4.1%, and hypertension in 77.8%. Type II diabetes was noted in only 6 of 12.24% of patients. The mean hemoglobin value in the study group of patients was 115.45 ± 19 g /l, and 55% of patients are with blood group "A".

It is extremely important for patients with CRC to timely diagnose hypertension and its adequate treatment so that they can continue with their therapy without the risk of complications.

***Keywords**: colon cancer, hypertension, blood type*

Introduction

Colorectal cancer remains the third most frequent and therefore the fourth leading explanation for cancer-associated mortality worldwide, it's known that various factors like heredity and environmental factors (eg diet, obesity, diabetes, smoking, alcohol consumption) are liable for the event of CRC [1]. Adrenergic receptor stimulation is involved within the development of hypertension and has been implicated in cancer progression and dissemination of metastases in various tumors, including carcinoma. Adrenergic antagonists like beta-blockers demonstrate inhibition of invasion and migration in carcinoma cell lines and are related to reduce mortality in colorectal cancer [2, 3]. Hypertension has been shown to be a big risk about developing cancer an outsized prospective observational study in 2011 observed that patients with elevated vital sign experienced an increased incidence of cancers, including colorectal cancer [4]. The association between hypertension and increased cancer incidence and mortality has also been described within the studies of various authors, although the causal correlation remains difficult to determine due to the chance of competing risk factors including lifestyle choices which may not be taken directly into consideration [2, 5, 6]. The researchers found that among patients with early stage disease, patients with diabetes or high pressure had a significantly greater risk of cancer recurrence and death after treatment. For instance, 47.7% of patients who did not have diabetes were still alive 5 years after diagnosis compared to only 41.3% of patients with diabetes [7]. When the researchers looked more closely, they also found that cancer recurrence rate at 5 years was approximately 8% higher in patients with diabetes or hypertension [3, 8]. Several lines of evidence had suggested a possible association between ABO blood type and risk of colorectal cancer [7, 9]. Studies have suggested a link between inherited human people antigens and also the risk of assorted cancers. Human antigens are expressed on the surface of red blood cells and other tissues, including cells

of the channel [9, 10]. These glycoconjugates may participate in modifying intercellular adhesion, membrane signaling, and immune surveillance, which could successfully influence tumorigenesis [7].

Results

We investigated 49 patients with CRC of age between 50 and 88 years (median 73 years, mean 71.88 ± 9.28 years), from them 46.9% men (n = 23) and 53.1% women (n = 26).

From the clinical data our results showed the presence of rectorage in 18.4%, diarrhea in 4.1%, and hypertension in 77.8%. Type II diabetes was noted in only 6 of 12.24% of patients. The mean hemoglobin value in the study group of patients was 115.45 ± 19 g /l. From the analysis of the blood group 55% from the patients is group "A", 27% group "B" and only 18% are group"0". (Table 1).

The most of the patients are with localization of the tumor in the rectum 46, 60% of all investigated cases (Table 2).

Discussion

The association of hypertension with incident of CRC may are confounded by including individuals taking antihypertensive medication, at high risk for CRC like colorectal polyps and inflammatory bowel disease, or with shared risk factors like obesity and diabetes [2]. Early diagnosis and effective targeted therapies supported a current knowledge of the characteristics of CRC are essential to the good treatment of CRC. It's of most importance for oncology patients to have hypertension diagnosed and treated appropriately to prevent complications. It's of great clinical relevance due to the particular proven fact that patients with early colorectal cancer with hypertension had a significantly greater risk of cancer recurrence rate and death after treatment [4, 6]. A much better understanding of the predisposing environmental and genetic factors of colorectal cancer could improve the prognoses of patients and provide therapies that are more appropriate. Like other investigators [3, 6] we are found that the more of the patients from the investigation group have high pressure.

For several decades, employment for ABO people antigens within the event of cancer has been suspected, and earlier investigations have noted a relationship between ABO people and so the chance of malignances [7, 11]. Today, there are literature data suggesting that folks with blood type A plays a task within the event of stomach, uterus, kidney, and neurological malignancies; blood group B in esophagus cancers; and folks with blod blood type in melanoma [7, 10]. In our investigation we also found that the foremost from the patients are with blood type A. A growing body of plausible mechanisms, including inflammation, immunosurveillance for malignant cells, intracellular adhesion, and membrane signalling are proposed to elucidate the relationships between ABO people and tumour metastasis and prognosis [11, 12]. The ABO blood groups are defined by carbohydrate moieties displayed on the surface of red blood cells and attached to membrane proteins and lipids. Three variant alleles (A, B, and O) determine a person's people by encoding three glycosyltransferases with different substrate specificities [11]. Alterations of ABO antigen expression on the surface of malignant cells, compared with normal epithelium, are seen for an expansion of tumour types [13]. Glycoconjugates are important mediators of intercellular adhesion and membrane signalling, two processes integral to malignant progression and spread, additionally these surface molecules are recognised by the host reaction and may have a task in facilitating immunosurveillance for malignant cells [7, 9]. Alterations within the host inflammatory

state due to ABO blood group antigens may provide an extra mechanism to elucidate the associations between people and carcinoma progression. Several studies have demonstrated a link between chronic inflammation and malignant initiation [11].

Conclusion

It is extremely important for patients with CRC to timely diagnose hypertension and its adequate treatment so that they can continue with their therapy without the risk of complications. We acknowledge the constraints of our retrospective analysis. The impact of ABO people on malignant potential and prognosis in patients with carcinoma remains a stimulating area of research, which warrants additional investigation.

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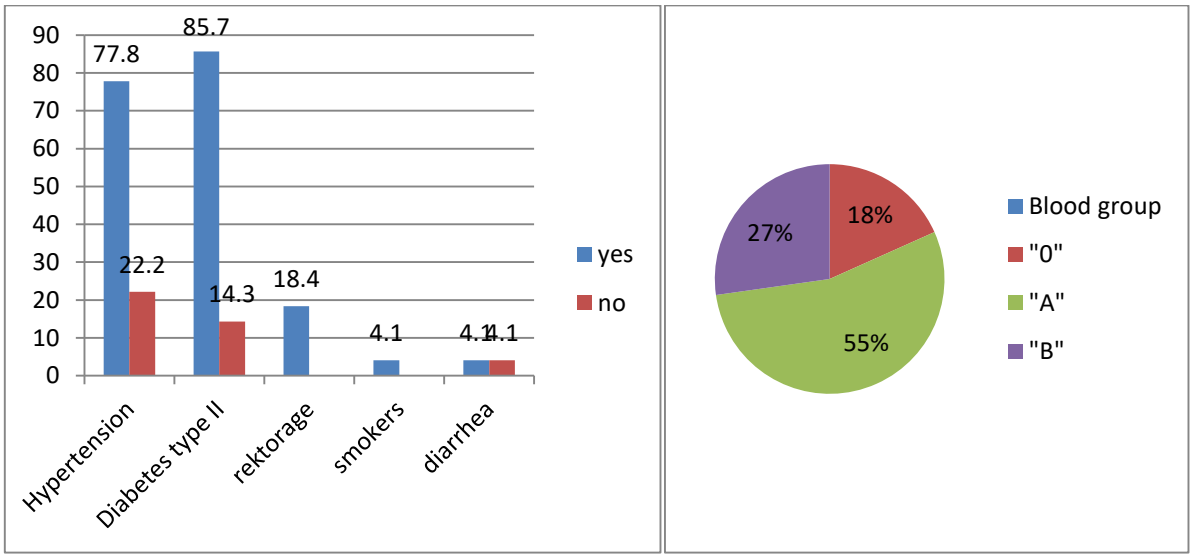
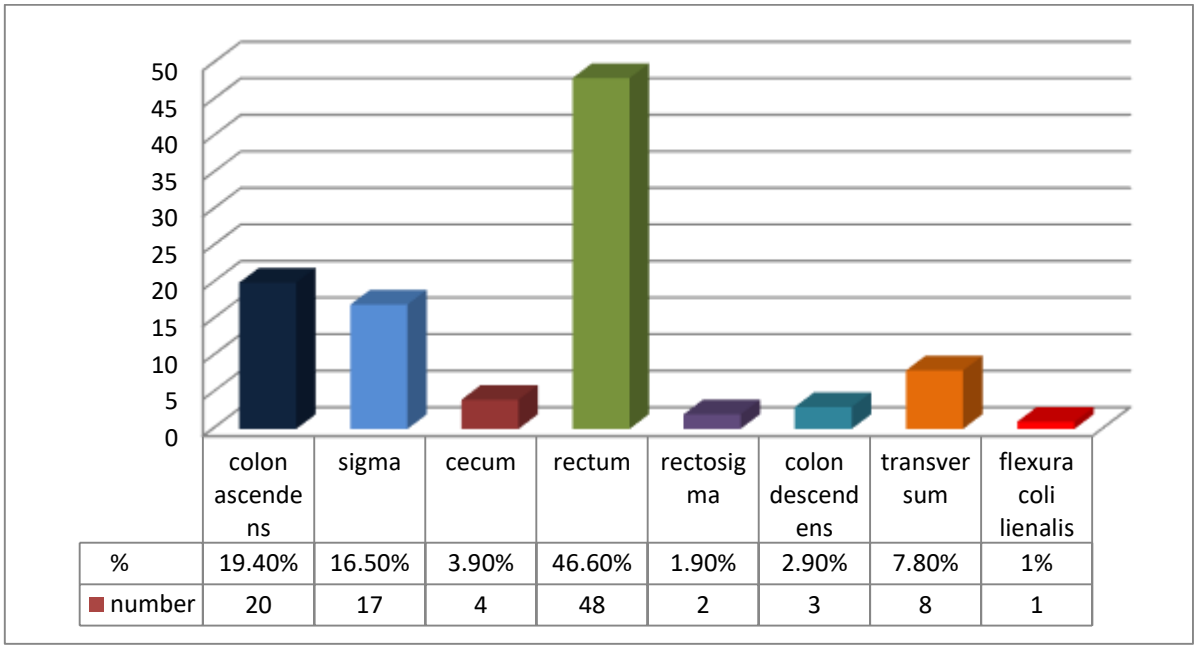


Table1.The clinical data from patients with CRC.



	colon ascendens	sigma	cecum	rectum	rectosigma	colon descendens	transversum	flexura coli lienalis
%	19.40%	16.50%	3.90%	46.60%	1.90%	2.90%	7.80%	1%
number	20	17	4	48	2	3	8	1

Table 2. Anatomic localization of the tumor in the investigated group.