Scholars Journal of Applied Medical Sciences (SJAMS) **ISSN 2320-6691 (Online)**
Sch. J. App. Med. Sci., 2016; 4(3B):736-739 **ISSN 2347-954X (Print)**

(An International Publisher for Academic and Scientific Resources)
www.saspublishers.com DOI: 10.36347/sjams.2016.v04i03.022

Original Research Article

The Epidemiological and Pathological Characteristics of Colorectal Cancer Patients in Kermanshah Province in During 9 Years

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Abstract: Based on the Iranian annual national cancer registration report, CRC is the fifth common cancer in Iranian men and the third one in woman. The aim of this study was to determine the epidemiologic and pathological features of colorectal cancer, in patients during the years 1997 to 2006 in Taleghani Hospital are admitted. I gathered medical records of 215 patients that admitted to Taleghani Hospital of Kermanshah during the years 1398 to 2006 were studied. I analyzed age, sex, stage of disease, anatomical location, histological type, location and involvement of lymph node metastasis. We used SPSS software for statistical analysis. The mean age at diagnosis was 51.57 years. One-hundred seven (63.7%) patients were male. Pathology laboratory reported 88.8% of patients were included in adenocarcinoma and 4% had mucinous adenocarcinoma. About tumor grade, 92 patients were well differentiated, 31 patients were moderate and 11 patients were poor. Incidence of metastatic sites in patients: liver (14.9%), peritoneum (3.3%), lung (1.4%), bladder (0.9%), uterus (0.9%), kidney (0.5%), chest (0.5%), pancreatic (0.5%), prostatic (0.5%). Sixty-six patients had not involvement lymph node. The most common anatomical location of the tumor was the rectum (40.5% of patients).The findings of this study indicate that the incidence of colorectal cancer is equal in both left and right of colon. We should provide screening program for early diagnosis and treatment due to the high incidence of CRC.
Keywords: CRC, Metastasis Site, Pathological Index.

INTRODUCTION

Cancer is one of the major public health problems in the world. Globally, among common cancers, colorectal cancer (CRC) is the fourth most common cancer in men and the third most common in women [1]. Based on the Iranian annual national cancer registration report, CRC is the fifth common cancer in Iranian men and the third one in woman [2]. However, there have been reports about increasing the incidence of CRC at a younger age (i.e. early-onset CRC) [3]. The highest incidence rates were registered in the USA, where 145,000 new cases are diagnosed and 55,000 patients die as a consequence every year [4]. Low incidence rates are found in Africa, Asia and some regions of South America [5]. The majority of patients are affected in their 50s to 70s, but the age at diagnosis is getting younger [6]. The outcomes of young colorectal cancer patients varied widely among different regions [7]. Nearly all reports showed that young colorectal cancer patients had specific clinicopathologic characteristics, including poor histological feature, and more mucinous tumors, signet ring cell tumors, and advanced tumors [8]. In addition, age, tumor grade and differentiation, mucinous subtype, geographic region, total lymph node harvested, and lymph node ratio were found as prognostic factors for overall survival in the patients with colorectal cancer [9]. There are some concerns regarding the adequacy of lymph node staging as well as different patterns of clinical and pathological features and outcomes of Iranian patients with colorectal cancer compared to other parts of the world [9,10]. The aim of this study was to determine the epidemiologic and pathological features of colorectal cancer, in patients during the years 1997 to 2006 in Taleghani Hospital are admitted.

MATERIALS AND METHODS

In this study, medical records of 215 patients admitted to Taleghani Hospital of Kermanshah during the years 1998 to 2006 were studied. Data included age, sex, stage of disease, anatomical location, histological type, location and involvement of lymph node metastasis. We used SPSS software for statistical analysis.

RESULTS

The mean age at diagnosis was 51.57 years. One-hundred seven (63.7%) patients were male and

78(36.3%) were female. The youngest and oldest patients had 16 and 83 years. One patients (0.5%), forty-four (20.46%), one hundred and six (49.3%), sixty (27.9%) and one (0.5%) were located in age group of 20-, 20 to 40, 41 to 60, 61 to 80 and 80+, respectively. Pathology laboratory reported 88.8% of patients were included in adenocarcinoma and 4% had mucinous adenocarcinoma and also 7.3% percent of them lost data. Of 110 patients who listed their tumor size, 9 patients were under 3 cm, 66 patients were 3 to 6 cm and 15 patients were 7 to 15 cm. In about staging results: 2 cases in stage Dukes A, 56 in stage Dukes B, 58 in stage Dukes C and 43 in stage Dukes D and 55 had incomplete information. About tumor grade, 92 patients were well differentiated, 31 patients were moderate and 11 patients were poor. Incidence of metastatic sites in our patients: liver (14.9%), peritoneum (3.3%), lung (1.4%), bladder (0.9%), uterus (0.9%), kidney (0.5%), chest (0.5%), pancreatic (0.5%), prostatic (0.5%). Sixty-six patients had not involvement lymph node. Involvement of lymph node in twenty-one patients was in less than three nodes. 61 patients had involvement of ≥ 3 nodes (**Table 1**).

Table 1: The characteristics in the patients (n=110)

Variables	**N (%)**
Age (year**)** **51.57(Mean)**	
Age group (year)	
<20	01(0.5)
20-40	44(20.46)
41-60	106(43)
61-80	60(27.9)
>80	01(0.5)
Sex	
Male	107(63.7)
Female	78(36.3)
Type of Pathology	
Invasive Adenocarcinoma	191(88.8)
Mucinous Adenocarcinoma	9(4)
Unknown	15(7.6)
Size of Tumor (n=90)	
<3	09(10)
3-6	66(73)
7-15	15(17)
Stage	
A	02(1)
B	56(26)
C	58(27)
D	43(20)
Unknown	56(26)
Grade (134**)**	
Well	92(69)
Moderate	31(23)
Poor	11(8)
Site of metastasis	
Liver	32(14.9)
Peritoneum	07(3.3)
Lung	03(1.4)
Uterus	02(0.9)
Bladder	02(0.9)
Kidney	01(0.5)
Chest	01(0.5)
Pancreatic	01(0.5)
Prostatic	01(0.5)
Lymph Node Involvement	
Negative	66(30)
Positive	
<3	21(8)
>3	61(20)
Unknown	67(32)

The most common anatomical location of the tumor was the rectum (40.5% of patients). The incidence of cancer in the colon, descending colon (20.9%), ascending colon (20%) and transverse colon (4.2%) and 31 cases (14.4%) was incomplete (**Figure 1**).

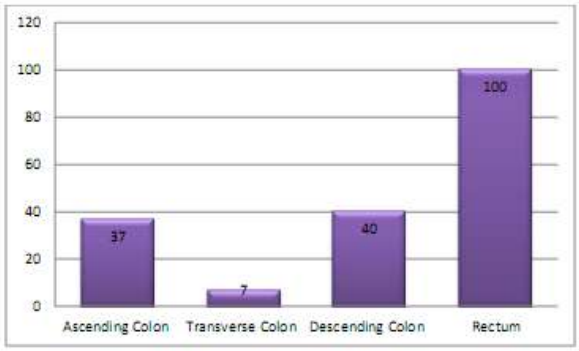

Fig. 1: Site of tumors in colorectal cancer (n= 184)

DISCUSSIONS

According to the Iranian annual national Cancer Registration Report, CRC is the third most common cancer in Iranian women and fifth in men. The incidence of CRC has increased during the last 25 years [11]. The most CRC males were in the age between 55 and 65 years, but the incidence was higher in males than females due to a higher number of female populations in the Tuzla Canton[12]. In developing countries these rates are substantially higher in males than in females [13]. One hundred seven (63.7%) patients were male and 78(36.3%) were female. The mean age of our patients was 68 years for males and 50 years for females. According to the data of the (American) National Cancer Institute, the CRC incidence in the cecum and the ascending colon has risen from 33.9% to 36.1%, and the incidence in the transversal and the descending colon from 15.8% to 17.2% [14]. In this study, site of tumors in the CRC was in rectum (54%), descending colon (22%), ascending colon (20) and transverse colon (4%). Most colorectal cancers are well or moderately differentiated tumors. In one study, among the 146574 patients with colorectal cancer, 81% of cancers were well or moderately differentiated, and 19% were poorly differentiated [15]. Approximately 50%, 10%-15%, 4%-13% and 03%-6% of CRC patients will develop liver, lung, peritoneal and brain metastasis during the course of the disease, respectively[16, 17, 18,19]. Incidence of metastatic sites in our patients: liver (14.9%), peritoneum (3.3%), lung (1.4%), bladder (0.9%), uterus (0.9%), kidney (0.5%), chest (0.5%), pancreatic (0.5%), prostatic (0.5%). In a population-based study from the Netherlands by Kelder and co-workers, the median lymph node harvest was six and in only 21% of the specimens was 12 or more nodes examined [20]. Sixty-six patients had not involvement lymph node. Involvement of lymph nodes in twenty-one patients was in less than three nodes. 61 patients had involvement of ≥ 3 nodes. Mucinous colorectal cancer was responsible for approximately 4% of all cases of colorectal adenocarcinoma. There may be a difference in this percentage between Western and Asian populations [11].

CONCLUSION

The findings of this study indicate that the incidence of colorectal cancer is equal in both left and right colon. We should provide screening program for early diagnosis and treatment due to the high incidence of CRC.

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