Arabic Abstracts

خصائص سرطان القولون والمستقيم: دراسة في مستشفيين في المنطقة الغربية من المملكة العربية السعودية

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أهداف الدراسة: التعرف على خصائص مرض سرطان القولون والمستقيم والعلاقة بين العمر والعوامل الأخرى للمرضى الذين تم علاجهم في مستشفيين في المنطقة الغربية من المملكة العربية السعودية على مدى عشر سنوات (١٩٩٣-٢٠٠٢م). **طريقة الدراسة:** تمت دراسة استرجاعية لملفات المرضى المصابين بسرطان القولون والمستقيم وتم تحليل النتائج ومقارنة العمر بالعوامل المرضية الأخرى. **النتائج:** أُستبعد عشرة مرضى من مجموع ١٢١ مريضاً بسبب نقص المعلومات المدونة. وشملت الدراسة بقية ال ١١١ مريضاً (٥٩ رجال ٥٣,٢%) و (٥٢ نساء ٤٦,٨). كان ٤٩ من المرضى سعوديين (٤٤,١%) و٦٢ من جنسيات أخرى (٥٥,٩%). ثلاثة وثلاثون مريض ≥ ٤٠ سنة و٧٨ مريضا ≤ ٤٠ سنة. وجد سرطان القولون لدى ٦٩ مريضاً (٦٢,٢%) ، سرطان المستقيم لدى ٤٢ مريضاً (٣٧,٨%). كانت مراحل المرض كالتالي: المرحلة صفر (٢,٧%) والمرحلة ١ (١١,٧%) و٢ (٢٣,٤%) و٣(٢٠,٧%) و٤(٢٢,٥%) والمراحل غير المعروفة (١٨,٩%). كان نمو الخلايا السرطانية الأكثر من الدرجة الثانية (٣٨,٧%) تليها الثالثة (٢٠,٧%) واقلها الأولى (١٩,٨%). كان ٤٤ مريضاً (٣٩,٦%) على قيد الحياة وقت جمع المعلومات وتوفي ٤٣ مريضاً (٣٨,٧%) و٢٤ مريضاً (٢١,٦%) غير معروفي النتائج. كانت مرحلة المرض للمرضى الأقل من ٤٠ سنة (P= 0.005) متأخرة ودرجة نمو الخلايا الخبيثة أسرع (P=0.024) مقارنة بالمرضى الذين تزيد أعمارهم عن ٤٠ سنة. **الاستنتاج:** ارتفاع نسبة سرطان القولون والمستقيم لدى صغار السن مقارنة بمرضى الدول المتقدمة وفي مراحل متأخرة وخلاياها الخبيثة سريعة النمو مقارنة بكبار السن. ينبغي دراسة أسباب ذلك. كما ينبغي تركيز برامج الكشف المبكر والتثقيف للفئات الأكثر عرضة للإصابة.

PATTERN OF COLORECTAL CANCER AT TWO HOSPITALS IN THE WESTERN REGION OF SAUDI ARABIA

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Aim of the study: To identify the pattern of clinical presentations of colorectal cancer (CRC) patients. **Patients and Methods:** Data of all patients with CRC treated at two hospitals in the Western region of the Kingdom of Saudi Arabia (KSA), between 1993 and 2002, were collected and analyzed. **Results:** Out of the 121 patients evaluated, ten were excluded because of incomplete data. Out of 111 patients, 59 (53.2%) were males, with a male to female ratio of 1.13: 1 and 49 (44.1%) were Saudis. Thirty-three patients (29.7%) were 40 years or less and 78 (70.3%) were more than 40 years. Colon cancer was found in 69 patients (62.2%) and rectal cancer in 42 (37.8%). Stages at presentation were: stage 0 (2.7%), stage I (11.7%), stage II (23.4%), stage III (20.7%), stage IV (22.5%) and the staging was unknown in (18.9%) of the patients. The most common tumor grade was moderately differentiated (38.7%), followed by poorly differentiated (20.7%) and well differentiated (19.8%). Forty-four patients (39.6%) were alive at the time of data collection, 43 (38.7%) dead and 24 (21.6%) were lost to follow up. Correlation between age groups revealed that young patients had more advanced stage and poorly differentiated tumors than > 40 years old (p= 0.005 and 0.024 respectively). **Conclusion:** Colorectal cancer was common in younger age group in this study population compared to Western countries. They present more with advanced stage and poorly differentiated tumors than older patients (*Saudi Journal of Gastroenterology 2005; 11 (3):*).

Key words: Colon cancer, rectal cancer, Saudi Arabia.

Colorectal cancer is the third most common cancer in the world. The estimated number of cases diagnosed worldwide in 2000 was 944,717 with 64.6% in more developed countries[1]. Between January 1999 and December 2000 there were 753 cases of CRC accounting for 6.6% of all 11,330 newly diagnosed cases in the Kingdom of Saudi Arabia (KSA) according to the latest cancer incidence report from the national cancer registry[2]. The overall age standardized rate (ASR) was 4.9/100,000. The ASR was 5.0/100,000 in males and 4.7/100,000 in females. This cancer ranked fourth in both males and females with a Male: Female ratio of 107: 100. The purpose of this study was to

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Table 1: Characteristic features of the study population.

Character		Number	%
Age	= or < 40 Y	33	29.7
	> 40 Y	78	70.3
Sex	Male	59	53.2
	Female	52	46.8
Nationality	Saudi	49	44.1
	Non-Saudi	62	55.9
Diagnosis	Colon Ca	69	62.2
	Rectal Ca	42	37.8
Site	Ascending	22	19.8
	Transverse	11	9.9
	Descending	6	5.4
	Rectal cancer	40	36.0
	Hepatic flexure	5	4.5
	Sigmoid	21	18.9
	Rectosigmoid	6	5.4
Stage (TNM)	Stage 0: t (is) n0m0	3	2.7
	Stage I: t1-2 n0m0	13	11.7
	Stage II: t3-4n0m0	26	23.4
	Stage III: any (t)n1-2m0	23	20.7
	Stage IV: any (t) any (n) m1	25	22.5
	Stage: unknown	21	18.9
CEA level*	High	46	41.4
	Normal	65	58.6
Tumor grade	Well differentiated	22	19.8
	Moderately differentiated	43	38.7
	Poorly differentiated	23	20.7
	Undifferentiated	8	7.2
	Unknown	15	13.5
Status	Alive	44	39.6
	Dead	43	38.7
	Unknown	24	21.6

**Carcinoemberionic antigen*

Table 2: Details of Survival and mortality status.

Follow-up period	Alive with disease (Total = 4)		Alive without disease (Total = 40)		Dead (Total = 43)
	No.	%	No.	%	No. (%)
< 5 years	3	6.8	17	42.5	4 (9.3)
> 5 years	1	2.3	23	57.5	39 (90.7)

Table 3: Relation between age and other variables.

sssCharacter	Age = or < 40Y		Age = > 40 Y		P= value
	No.	%	No.	%	
Sex: (n= 111)					
Male	19	57.6	40	51.3	0.678
Female	14	42.4	38	48.7	
Nationality: (n= 111)					
Saudi	13	39.4	36	46.2	0.538
Non-Saudi	20	60.6	42	53.8	
Diagnosis: (n= 111)					
Colon	20	60.6	49	62.8	0.772
Rectal	49	39.4	28	35.9	
Stage: (n= 90)					
Stage 0	1	3.3	2	3.3	
Stage I	2	6.7	11	18.3	
Stage II	5	16.7	21	35.0	0.005
Stage III	15	50.0	8	13.3	
Stage IV	7	23.3	18	30.0	
Grade: (n= 96)					
Well Differentiated	3	10.7	19	27.9	
Moderately Differentiated	10	35.7	33	48.5	
Poorly Differentiated	12	42.9	11	16.2	0.024
Undifferentiated	3	10.7	5	7.4	
CEA level (n=111)*					
High	14	42.4	32	41.0	1.000
Normal	19	57.6	46	59.0	
Mortality: (n=87)					
No	10	45.5	34	52.3	0.628
Yes	12	54.5	31	47.7	

**Carcinoemberionic antigen*

Discussion

Colorectal cancer is the fourth most common malignancy in the KSA in both males and females with a mean age at diagnosis of 59 years in males and 56 years in females[2]. In this study, 29.7% of CRC patients were found below the age of 40 years. Colorectal cancer patients younger than 40 years of age constituted 20.2% in Jordanian population[3], whereas in high risk Western Communities it accounts for 2–6%[4,5]. A higher figure (35.6%) was reported in Egypt[6] and in KSA (23%) [7]. The presence of high number of young patients with CRC in low risk communities necessitates family screening and surveillance in the presence of any risk factor. However, 75% of all CRC occur in people with no known predisposing factors for the disease. This makes early detection and management an important measure in order to reduce incidence and mortality[8]. Studies from Egypt proposed that the high incidence of cancer could neither be explained on a hereditary basis nor to be

attributed to bilharziasis[9], or the widespread use of, pesticides especially organochlorine[10]. In our community, bilharziasis, farming and pesticide use are common, and further analytical studies could delineate its role together with other risk factors for CRC. Colon cancer was found in 62.2% of our patients while rectal cancer in 37.8%. Colorectal cancer was found higher in males than females (53.2% vs 46.8%). These results are in accordance with the literature regarding higher number of cases in males[11].

Regarding CRC site at presentation, a left side preponderance compared to right side (65.7% vs 24.3%) was found in this study; a finding that is consistent with data from other developing countries[9,12]. This contrast with the right side preponderance (proximal shift) reported in developed countries[13,14].

Stage II was found to be the most common stage at presentation (23.4%), while stage III was 20.7%, which differs slightly from the stage distribution of CRC, 1999-2000 National Cancer Registry report showing that stage III was the most common (38.7%)[2]. Tumor grade pattern in our study was mainly moderately differentiated (38.7%) then poorly differentiated (20.7%). The mortality status of our study population revealed that 38.7% had died, 39.6% alive and 21.6% were lost to follow up. All patients who were alive free of disease for more than five years were considered cured. Comparison of the mortality status between the two age groups (either 40 years or less versus more than 40 years) showed no significant difference after omitting the unknown number of patients during statistical analysis (P= 0.628). Advanced age is a well known poor prognostic factor in CRC patients especially because of co-morbidities[15].

Correlations between the two age groups and other variables revealed that young patients have more advanced stage and poorly differentiated tumors than the more than the 40-year olds (p= 0.005 and 0.024 respectively). Patients over 70 years of age were more likely to present in the early stages of CRC than were younger patients. Moreover, younger have more aggressive disease for a given stage of presentation[16].

In conclusion, this study revealed that almost half of the patients with CRC died from the disease. Advanced stage, which is high in our study population is one of the poor prognostic factors. The presence of a relatively high proportion of left-sided preponderance, is a clear indication for the needs for awareness, education and screening for early detection and hence cure. Future epidemiologic studies to identify causes and predisposing factors in the developing countries are important. Measures to reduce preventable risk factors like dietary habits, smoking and obesity are highly needed. Screening programs and guidelines are important for high-risk patients[17]. We recommend initial screening at age 50 years for average risk group with annual fecal occult blood testing and sigmoidoscopy every three to five years, but for high risk patients with strong family history, screening should start as early as 10 years for familial adenomatous polyposis or in early twenties for hereditary nonpolyposis colorectal cancer and colonoscopy annually after age of 35 years.

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