Pattern of colorectal cancer at two hospitals in the western region of Saudi Arabia

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Abstract

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% of the patients. Forty-four patients (39.6%) were alive at the time of data collection, 43 (38.7%) expired 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: Compared to data from Western countries, colorectal cancer in this population is more common in younger patients. It presents more commonly in a more advanced stage and poorly differentiated type than in older patients

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Full Text

Colorectal cancer is the third most common cancer in the world. The estimated number of cases diagnosed worldwide in the year 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 identify the pattern of clinical presentation of CRC in the Western region of Saudi Arabia. Comparison of CRC in our society to other countries will highlight some important issues like age at presentation that needs awareness and hence future epidemiologic studies.

Patients and Methods

This is a retrospective study of all the patients diagnosed to have CRC at two hospitals (King Abdulaziz University Hospital and United Doctors Hospital) in the Western region of KSA over a 10-year period (1993-2002). The data collected from files included age, sex,
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 a 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 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 a 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 to be higher in males than females (53.2% vs 46.8%). These results are in accordance with the literature [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 in the 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 3.8% 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 patients 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.

References

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