Colorectal Carcinoma at Al-Gamhouria Teaching Hospital, Aden, Yemen

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Abstract

Objective:

Colorectal cancer is the first common cause of cancer in men and the fourth cause after breast, NHL and ovary in women in Aden. This study aims to retrospectively analyze the pattern of patients with colorectal cancer seen in Oncology Unit, at Al-Gamhouria Teaching Hospital from January to December 2008.

Material and Methods:

All cases of colorectal cancer presented at oncology unit, Al-Gamhouria Teaching Hospital in Aden Yemen between January and December 2008 were reviewed and the data was analyzed to determine age, gender, residency, clinical presentation, histological types and staging of disease and treatment.

Results:

A total of 50 cases were included in the study, 34 (68%) male and 16 (34%) were female. (M:F 2.1:1). The mean age at presentation was 48.8 years for females and 56.4 for males. Abdominal pain (70%) and bleeding per rectum (50%) were the main presenting complaints. The most common sites are rectum (34%), caecum and ascending colon (30%) and sigmoid in 18% of cases. 82% of tumors of colorectal region were adenocarcinomas, the majority of which (66%) were well to moderately differentiated adenocarcinoma. Stages at presentation were: stage I (12%), stage II (18%), stage III (52%) and stage IV (18%).

Conclusion:

There is an increased incidence of colorectal carcinoma. Bad outcome directly related to late detection of cancer and >70 % of cases in stages III and IV. There is need to increase awareness through public education about this malignancy and its management. Any adult with complaints of vague abdominal pain, blood or mucus in the stool or features of haemorrhoids which may herald the onset of colorectal cancer should be adequately investigated with digital rectal examination (DRE) and proctosigmoidoscopy and barium enema where appropriate.

Keywords

Carcinoma Colon, Rectum, Adenocarcinoma

Introduction

Colorectal cancer is one of the most common cancers in southeastern governorates of Yemen¹. It ranks as the second commonest tumor in females and third commonest cancer in males in North Europe and North America. Asia and Africa are considered low incidence regions when compared with Western countries².

Colorectal cancer is the most frequent abdominal visceral malignancy and the second leading cause of death in the USA. The incidence is higher in men than women³. Between January 2001 and December 2004 there were 88 cases of CRC accounting for 30.4% of all 289 newly diagnosed primary gastrointestinal cancers registered at Al-Gamhouria Teaching Hospital in Aden, southeastern of Yemen⁴.

Colorectal carcinoma may produce early symptoms but due to their banal nature, they are generally ignored by the patients and insufficiently investigated by the patient⁵. This tendency is more evident in developing countries like Yemen where illiteracy and poverty are common and patients generally refer to private clinics fairly late. Moreover due to low index of suspicion they fail to diagnose some of these
cases at an early stage. The Asia-Pacific working Group on colorectal cancer recently published a consensus statement on CRC screening for the Asia-Pacific region\(^6\). Before implementing any screening programme, it is important to know the underlying epidemiology of CRC in the respective local setting.

The purpose of this study is to identify the frequency and pattern of clinical presentation of CRC in the Aden region and compare the data with other studies.

**Materials and methods**

A total of 50 subjects aged 18 years and above in a prospective study at oncology unit Al-Gamhouria Teaching Hospital (GTH), Aden, Yemen was studied over a period of 12 months period (January to Dec 2008). Republic of Yemen has a population of approximately 22 million people. GTH is one of the largest public hospitals in Yemen with 500 beds and it provides services to over 60,000 hospitalized patients and to over 600,000 outpatients annually.

Clinical data was collected from patients during the admission in the unit. The parameters recorded were age, sex, presenting symptoms and signs, location of tumor and histopathology and type of operation. All patients were confirmed histopathologically.

**Results**

Out of the fifty patients included in this study, 34 patients were males and 16 patients were females. Age varied from 16 years to 75 years. M:F was 2.1:1

The predominant age group affected by the disease was 50-59 years. Male predominance for colorectal carcinoma was seen in the present study with male to female ratio of 2.1:1.

The common presenting complaint was pain in 35 cases (70%) followed by rectal bleeding in 25 cases (50%). 11 cases (22%) presented with intestinal obstruction

The most common site of cancer was rectum in 34% followed by cecum and ascending 30% and sigmoid colon in 18%.

On histological examination, adenocarcinoma was the commonest type in the present study and the well-differentiated adenocarcinoma lesions were the commonest grade in 34% followed by moderately differentiated adenocarcinoma in 32%, Anaplastic in 16% and mucinous in 12%. According to TNM staging, six patients (12%) were in stage I, nine patients (18%) were in stage II, twenty six patients (52%) were in stage III, and nine patients (18%) were in stage IV.

The surgical resection and anastomosis was done in 30 patients (60%), abdominoperineal resection in 9 patients (18%) and colostomy in 5 patients (10%) but surgery was not possible in 6 patients (12%)

<table>
<thead>
<tr>
<th>% Age</th>
<th>No. of patients</th>
<th>Complaints</th>
</tr>
</thead>
<tbody>
<tr>
<td>70</td>
<td>35</td>
<td>Abdominal pain</td>
</tr>
<tr>
<td>50</td>
<td>25</td>
<td>Rectal bleeding</td>
</tr>
<tr>
<td>48</td>
<td>22</td>
<td>Loss of weight</td>
</tr>
<tr>
<td>30</td>
<td>15</td>
<td>Altered bowel habits</td>
</tr>
<tr>
<td>26</td>
<td>14</td>
<td>Abdominal mass</td>
</tr>
<tr>
<td>22</td>
<td>11</td>
<td>Intestinal obstruction</td>
</tr>
<tr>
<td>12</td>
<td>6</td>
<td>Tenesmus</td>
</tr>
</tbody>
</table>

Table 2: Most common presentations

<table>
<thead>
<tr>
<th>% Age</th>
<th>No. of patients</th>
<th>Part of bowel</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>15</td>
<td>Caecum and Ascending colon</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>Transverse colon</td>
</tr>
<tr>
<td>12</td>
<td>6</td>
<td>Descending colon</td>
</tr>
<tr>
<td>18</td>
<td>9</td>
<td>Sigmoid colon</td>
</tr>
<tr>
<td>34</td>
<td>17</td>
<td>Rectum</td>
</tr>
<tr>
<td>100</td>
<td>50</td>
<td>Total</td>
</tr>
</tbody>
</table>

Table 3: Distribution of colorectal carcinoma

<table>
<thead>
<tr>
<th>% Age</th>
<th>No. of patients</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>17</td>
<td>Well differentiated</td>
</tr>
<tr>
<td>32</td>
<td>16</td>
<td>Moderately differentiated</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>Poorly differentiated</td>
</tr>
<tr>
<td>16</td>
<td>8</td>
<td>Anaplastic</td>
</tr>
<tr>
<td>12</td>
<td>6</td>
<td>Mucinous adenocarcinoma</td>
</tr>
<tr>
<td>100</td>
<td>50</td>
<td>Total</td>
</tr>
</tbody>
</table>

Table 4: Histopathological types of colorectal carcinoma
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### Discussion

The incidence of colorectal carcinoma has revealed a marked increase in southeastern region of Yemen and considered one of the most common cancers in both sexes. The frequency of colorectal carcinoma reported in Yemen and other different studies is higher than the annual incidence of colorectal carcinoma reported in Jordan and Lebanon(7-8).

In the present study, the predominant age group affected by the disease was 50-59 years. This is comparable to other studies where peak incidence was found in the 5th and 6th decades of life(8). Male predominance for colorectal carcinoma was seen in this study as likewise reported by other studies(10-11).

Abdominal pain and rectal bleeding were the presenting symptoms in most cases of colorectal cancers followed by loss of weight and altered bowel habits. These findings were similarly reported in other studies(11-12). About 52% cases of the carcinoma presented in rectum and sigmoid in this study. Findings from other studies also showed similar figures regarding location of malignancy(14-15).

The histopathological reports in 34% of patients were well to moderately differentiated adenocarcinoma followed with Anaplastic in 12% and mucinous in 16% of patients. Similar results were reported by other workers(16-17). Ahmad et al found moderately differentiated lesions were to be more common(18). Staging of colorectal carcinoma is considered to be the most important determinant of survival after surgical resection. On TNM classification, stage III was the commonest lesions in this study as also reported by another study(17). However, Khaled et al, McArdle et al and Okuno et al found stage II as the most number in Stage which may be explained due to early detection programs in their countries(10-11, 19).

Proximal tumors are diagnosed in more advanced stages rather than distal because of their less specific symptoms and more difficult diagnosis procedures. The etiology of colorectal cancer has not been well ascertained yet, but strong indications of close relationship with dietary factors come from epidemiological studies(20-22). The role for a diet change has been described in different cultures and different world regions(23).

Dietary characteristics in the Mediterranean have also changed in recent years, with decreased intake of fruits and vegetables and increased intake of milk, meat and animal protein(24). Current data suggest that consuming a western style diet high in meat, refined grains, and low in vegetables and fiber may contribute to the risk of having colon cancer(25). The meat and animal fat, which are epidemiologically considered important factors in the pathogenesis of colorectal carcinoma are consumed in high amount in Yemen. In some areas of Yemen like Shabwa governorate, meat is seldom eaten by the population. Others cook meat at high temperature which produces a class of carcinogens called heterocyclic amines (HCA)(26). Grilled meat contains the highest amount of polycyclic aromatic hydrocarbons (PAH) because of the exposure to smoke formed from pyrolysis of fatty juices that drip down into the heat source. It is possible that diet has a big role in the number of colon cancers in some parts of Yemen. Indeed, some authors have alluded to the carcinogenic properties of charcoal-roasted meat called “Madbey” in Yemen.

Chewing khat, increased caloric intake and reduced physical activity are the result of the changing lifestyle of most people in Yemen. This pattern leads to obesity which is directly related to the increase in number of colorectal cancer cases in Yemen.
References


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