COLORECTAL CANCER: REVIEW OF 94 CASES IN AL-KADHIMIYA TEACHING HOSPITAL

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Abstract

Objectives: The aim of this study is to determine the preliminary epidemiologic and pathologic features of the tumor, to review patterns of presentation, to present operative management and compared to current international standards.

Subjects & Methods: The records of 94 patients with colorectal and anal canal tumors presented to our unit in the third floor of Al-Kadhimiya Teaching Hospital, between 1995-2002 were reviewed and analyzed regarding age, sex, tumor site, histopathology, degree of differentiation, stage (Duke) and type of operations.

Results: Fifty six (60%) patients were males and 38 (40%) females; male to female ratio was 1.5:1. The peak age incidence was between 40-50 years (30.85%) with 23 (24.46%) patients were under the age of 40 years. The commonest presenting symptom was bleeding per rectum, followed by change in bowel habits. The rectum was the most common anatomical site affected. The most common histopathological type was adenocarcinoma. Most of the tumors were moderately differentiated. The majority of tumors at presentation were in Duke stage B and C. The two most common operations performed were abdominoperineal resection and right hemicolectomy

Conclusion:

I. Colorectal cancer is not as uncommon in Iraq as has been believed, and the incidence could well be increasing, especially since the life style is rapidly becoming more westernized.

II. There is a particularly high incidence in younger people and for pathologically aggressive tumors.

III. Health education, especially of the warning signs of cancer, and increased awareness of the seriousness of the disease, both among the public and medical practitioners are essential for early diagnosis.

IV. Any screening program, if started, may need to start at a younger age group.

Key words: colorectal malignancies, epidemiology, pathology, presentation, surgery.

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Introduction

Cancer of colon and rectum is a common malignancy. It represents the second most commonly occurring visceral malignancy in the United State[1]. It is second only to the malignant lung tumor as the leading cause of death from cancer in UK[2]. It is the seventh cause of death from cancer in Iraq[3].

Although some differences exist between the disease in Iraq and west, it would appear from this relatively large study that, in general, the disease is similar to the disease that has been described elsewhere.

Although the tumor registry is not population based, Al-Kadhimiya Teaching Hospital is the primary referral hospital in Baghdad distinct, therefore, the registry probably documents the majority of the patients with colorectal tumor in this distinct.

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Factors related to the western environment, mainly diet and hereditary, are believed to be the major influences in the development of colonic tumor. It is usually believed that in country such as Iraq, where the lifestyle is natural, these tumors are rare or at least uncommon. Though we believed that carcinoma of large bowel occur more frequently than expected, with many patients presented late and in advanced stages, and that a significant number of young patients are affected.

The objectives of this study were to determine the preliminary epidemiologic and pathologic features of the disease, to review patterns of presentation, to present operative management and compared to current international standards.

Patients & Methods

The records of 94 patients with colorectal and anal canal tumors presented to our unit in the third floor, Al-Kadhimiya Teaching Hospital, between October 1995 to October 2002 were reviewed. There were 56 males and 38 females with a mean age of 55.5 years ranging from 4-87

years. Patients included in this study come from south, middle and north of Iraq.

The extent of spread of tumor was determined using clinical and operative records and the histopathological reports of the specimens and all of the cases were classified according to Duke's classification.

History, operative, pathologic reports and follow-up documents were reviewed, the data obtained were grouped and analyzed regarding age, sex, tumor site, histopathology, degree of differentiation, Duke's stage and type of operations. The period of follow up was limited, for few months in most of cases, because of poor compliance of patients.

Results

Ninety four patients were registered with malignant colorectal and anal canal tumors. The male to female ratio was 1.5:1. Twenty three (24.46%) patients were below the age of 40 and 16 (17%) were below 30 (Table 1).

Table 1: Distribution of patients according to age & sex

Age (years)	Males	Females	Total	%
0-10	1	0	1	1.06
11-20	1	1	2	2.12
21-30	8	3	11	11.7
31-40	3	6	9	9.57
41-50	14	15	29	30.85
51-60	16	7	23	24.46
61-70	9	3	12	12.76
71-80	3	3	6	6.38
>80	1	0	1	1.06
Total	56	38	38	100

Youngest age = 4 years, oldest age = 87 years, mean age = 55.5 years, M:F ratio = 1.5:1

The most common presentations in decreasing frequency were: rectal bleeding (40%), change in bowel habits (32%), pain (perianal or abdominal) (23%) and intestinal obstruction (22%), (Table 2).

Table 2: Symptomatology

Symptoms	Number	%
Bleeding		
Alone	31	32.97
With other	6	6.38
Pain		
Alone	12	12.76
With other	12	10.63
Bowel irregularity		
Alone	22	23.4
With other	8	8.51
Intestinal obstruction		
Alone	15	15.95
With other	6	6.38

Some of patients got more than one symptom

The single most common site for large bowel malignancy was the rectum (28.72%), followed by sigmoid colon (25.53%), (Table 3).

Table 3: Distribution of cancer according to the site

Site	Number	%
Appendix	1	1.06
Cecum	5	5.31
Ascending colon	10	10.63
Hepatic flexure	1	1.06
Transverse colon	9	9.57
Splenic flexure	4	4.25
Descending colon	3	3.19
Sigmoid colon	24	25.53
Colon (multiple primary)	3	3.19
Rectosigmoid	4	4.25
Rectum	27	28.72
Anal canal	2	2.12
Anus	1	1.06
Total	94	100

There were 81 (86.17%) simple adenocarcinoma, 3 (3.19%) lymphoma and a variety of other rare histological types (Table 4).

Table 4: Histological findings

Histology	Number	%
Adenocarcinoma	81	86.17
Adinocarcinoma in villous adenoma	2	2.12
Mucinous	1	1.06
Signet-ring	2	2.12
Squamouss	2	2.12
Epidermoid	1	1.06
Melanoma	1	1.06
Lymphoma	3	3.19
Carcinoid	1	1.06
Total	94	100

Most of the tumors were moderately differentiated (71.3%), (Table 5).

Table 5: Grade (Differentiation)

Grade	Number	%
Well differentiated	5	5.31
Moderately differentiated	67	71.27
Poorly differentiated	21	22.34
Undifferentiated	1	1.06
Total	94	100

No patient had disease localized to the organ of origin. Thirty six (38.3%) patients had disease which extent beyond the colonic wall but without nodal metastasis. Forty eight (51.06%) patients had nodal metastasis and 10 (10.6%) patients distant metastasis mainly to liver (Table 6).

Table 6: Duke stage

Duke stage	Number	%
Stage A	0	0
Stage B	36	38.3
Stage C	48	51.06
Stage D	10	10.63
Total	94	100

The two most common operations performed were abdominoperineal resection (19.14%) and right hemicolectomy (18.08%), (Table 7).

Table 7: Surgical procedures

Surgical procedures	Number	%
Abdominal perineal resection	18	19.14
Anterior resection	7	7.44
Right hemicolectomy	17	18.08
Left hemicolectomy	4	4.25
Total colectomy with anastomosis	3	3.19
Hartman's operation	10	10.6
Local resection	13	13.82
Preliminary resection	10	10.06
Appendicectomy	1	1.06
No surgery	4	4.25
Palliative procedures		
Palliative colostomy	4	4.25
Palliative bypass	3	3.19
Total	94	100

Follow-up of patients has been poor because of poor patient compliance. During period of hospitalization the commonest complication was wound infection (20.21%), (Table 8).

Table 8: Postoperative complications

Complication	Number	%
Wound infection	19	21.21
Cardiopulmonary	13	13.82
Fistula	5	5.31
Intra-abdominal sepsis	5	5.31
Dehiscence	3	3.19
Renal failure	3	3.19
Total	48	51.06

Discussion

World-wide cancer of the colon and rectum emerges as the second most frequent form of cancer in males after lung cancer and in females after breast cancer[4]. The male to female ratio in west is about equal (1:0.9)[5], while this study showed higher incidence of the disease in males (the ratio 1.5:1). Sex ratio was similar in other series in Arab countries[6-9]. This finding may represent a true difference in the disease between Arab and west or it may simply be a function of referral bias.

The peak incidence of colorectal cancer was between 40-50 years age group (30.85%), like other series in Arab countries[6-9], while it was between 60-70 years age group in other studies[10-12].

The high incidence of the disease at a younger age group, below the age of 40 years was surprising finding in our series (24.46%) and other series in Arab countries[6-9]. The highest number seen in the literature, in the western studies (15%)[13]. This could be due to the different pyramidal age distribution in Iraqi and Arab population, the young people (below age of 40 years) constituting the majority of the Iraqi and Arab population. This fact should be born in mind when the physician sees a young patient with large bowel symptoms-very frequently the establishment of the diagnosis of colorectal cancer is significantly delayed as such as a possibility is not properly entertained.

The youngest age reported in our study was 4 years while the youngest age reported world-wide was in a premature infants[14].

Generally the clinical presentation is not much different from other studies[4,6,9]. Intestinal obstruction occur in (22%) of patients, which is similar to other studies (20%)[15,16].

The rectum was the single most common site for colorectal cancer in our study (28.72%). A similar rectal preponderance has been reported[6,7,15,17].

The tumor type in the majority of the cases was adenocarcinoma (88.29%). However, the incidence of lymphoma (3.19%), sequamous cell carcinoma (2.12%), signet-ring (2.12%) and carcinoid tumor (1.6%) were very uncommon. This is nearly similar to other studies[6-8,15,18-20].

The frequency of finding moderately differentiated tumors in this study (71.27%) was similar to that reported from other studies[4,6,7,9,13,15,18,20].

In our study staging of these malignancies were: 0% were in stage Duke's A, 38.30% were in Duke's B, 51.06% were in Duke's C and 10.63% were in Duke's D (metastasis). In a national series from New Zealand, these figures were 16.4%, 37.3% and 31.3%, respectively[15]. Data from the Lahey clinic showed 22.3%, 32.9% and 20.2%, respectively[21]. Data from Saudi Arabia showed 31.6%, 28.9%, 28.9% and 5.2% respectively[9] while data from Qatar showed 7%, 35.5%, 35.5% and 13% respectively[6].

These results suggested that colorectal cancer presents at an advanced stage in Iraq and that this is a function of poor patient education and poor patient awareness of the disease and late referral of patients by general practitioner.

The two most common operations performed were abdominoperineal resection (19.14%) and right hemicolectomy (18.08%). Similar types of operations were done to colorectal cancer cases in other studies[14,18,21,22].

The follow-up of patients has been poor because of poor patient compliance. Survival data do not exist and this does not seem to be unique to this study[7,8,17].

It is felt that the present series is probably representative of the disease at present time in Iraq and that it may be used as basis for further prospective studies in future.

Conclusion

1. Colorectal cancer is not as uncommon in Iraq as has been believed, and the incidence could well be increasing, especially since the life style is rapidly becoming more westernized.
2. There is a particularly high incidence in younger people and for pathologically aggressive tumors.
3. Health education, especially of the warning signs of cancer, and increased awareness of the seriousness of the disease, both among the public and medical practitioners are essential for early diagnosis.
4. Any screening program, if started, may need to start at a younger age group.

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