ORIGINAL ARTICLE

YOUNG COLORECTAL CANCER PATIENTS - A REVIEW OF 21 CASES

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ABSTRACT: All cases of primary colorectal carcinoma in patients below 30 years of age seen at the University Hospital Kuala Lumpur between 1990 - 1994 inclusive were reviewed. There were 21 cases seen during this period and 4 cases were less than 20 years of age (19%). The male:female ratio was 1:2. The majority of the patients were Chinese (about 14/21, 67%), with only 1 Indian patient (4%). 1 patient had a family history of colonic polyps. Most patients presented with advanced disease and the tumour was mucinous predominantly in histology. The overall 5 year survival was 25%. *(JUMMEC 1996 1(2): 49-52)*

KEYWORDS: carcinoma, colorectal, young

Introduction

Carcinoma of the colon and rectum is the second overall leading cause of death from cancer (after lung cancer) in Malaysia. In men, colorectal cancer ranks third, behind lung and prostate cancer in terms of new cancers diagnosed each year. It trails only lung cancer as a cause of death from cancer. In women, colorectal cancer ranks behind breast cancer in new cancer cases annually and behind lung cancer in causes of death by cancer (1). Clearly, colorectal cancer is primarily a disease of the older population. The median age for the diagnosis of colorectal cancer from 1982 through 1986 was 70 years (1).

Of all patients with colorectal cancer, approximately 0.6% to 5.4% are 30 years or younger (2-4), and approximately 3 to 10% are 40 years or younger (5-9)

This report represents our experience with patients suffering from colorectal cancer aged 30 years or younger through 1990-1994 at the University Hospital Kuala Lumpur, Malaysia.

Methods

The records of all patients aged 30 years or younger diagnosed or treated for colorectal cancer from1978 through 1992 at the University Hospital Kuala Lumpur were reviewed. Charts were reviewed for the following information: age, gender, race, site of tumour, presenting symptomatology, duration of symptomatology before diagnosis, histology, extension of tumour and nodal involvement, predisposing factors, treatment, and follow up.

Results

Age, gender & ethnic group distribution (Table 1)

Over the study period, 5 patients (24%) were 30 years old at diagnosis. Twelve patients (57%) were aged 20 through 29 years, and four patients (19%) were less than 20 years old. 13 of the 21 patients were female, and 8 (38%) were male. There were 14 Chinese (67%), 6 Malays (28%) and 1 Indian (5%).

Site of tumour (Table 2)

6 patients (29%) had their primary tumour located in the recto-sigmoid region, 4 (19%) in the left colon, one (5%) in the splenic flexure, two (10%) in the transverse colon, and five (24%) in the caecum. One patient had tumour too diffuse to detect a primary site at time of operation. One patient with a family history of polyps had his entire colon removed at age 14 years. He had 3 separate foci of tumour and was ultimately diagnosed with Turcot's syndrome.

Presenting symptoms

The most common presenting symptoms were pain in 12 patients (60%) and haematochezia or haemoccult-positive stool in 8 patients (40%). All

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patients with fresh blood per rectum had tumour localised to the rectum. Other common presenting symptoms included weight loss, nausea and vomiting, constipation, and diarrhoea.

Duration of symptoms

The average duration of symptoms was 2.6 months, with a range of 2 days to 9 months. In addition, one patient had ulcerative colitis, and diffuse carcinoma was found when the colon was removed for symptomatology of his disease.

Histology (Table 3)

The 21 patients had the following histology: 10 adenocarcinoma, 9 mucinous type adenocarcinoma, and 2 small cell carcinoma (undifferentiated).

Table 1

AGE DISTRIBUTION

Age	Number of patients
<20 years	4
20-29 years	12
30 years	5

Table 2

SITE OF TUMOUR

Site	Number of cases (%)
Rectosigmoid	6 (29%)
Left colon	4 (19%)
Splenic flexure	1 (5%)
Transverse colon	2 (10%)
Hepatic flexure	1 (5%)
Right colon	Nil
Caecum	5 (24%)
*Indeterminate	2 (10%)

*Ulcerative colitis & Turcot's syndrome

Table 3

HISTOLOGY OF COLORECTAL CANCER

Histology	Number of cases (%)
Mucinous adenocarcinoma	9 (43%)
Typical adenocarcinoma	10 (48%)
Small cell carcinoma	2 (10%)

Extension of tumour and nodal involvement

Sixteen of 21 patients (76%) had nodal involvement (Dukes' C) at the time of their initial surgery (7 mucinous, 7 typical, 1 small cell). Of the remaining 5 patients without nodal involvement, 1 patient had tumour of mixed mucinous and typical pathology that did not invade through the wall of the bowel *(Dukes'A)*. Another one had Dukes' *B* and tumour with mucinous pathology. The other 3 patients had Dukes' *B* typical adenocarcinoma that were poorly differentiated.

Predisposing condition

3 patients had conditions known to predispose to carcinoma. One patient diagnosed at age 29 had ulcerative colitis for 14 years. This patient was found to have diffuse carcinoma at laparotomy. He received palliative chemotherapy, but died within 1 year.

One patient diagnosed at age 14 years had a family history of polyposis. He was subsequently diagnosed to have Turcot's syndrome. He underwent a total colectomy with ileo-sigmoidostomy, chemotherapy and surveillance. He subsequently had an ileo-anal pull-through. He died 5 years later of glioblastoma multiforme, but was free of colon cancer.

One patient diagnosed at age 24 years had Gardner's *Syndrome*. She was found to have inoperable cancer at operation and died thereafter. Interestingly, a fourth patient diagnosed at age 11 had a Wilm's tumour resected at 5 months and received abdominal irradiation. He had a left colectomy, but was found to have diffuse tumour 3 years later. He died approximately 8 months after that.

Patient treatment and outcome

Of 21 patients, 14 (67%) underwent surgery with the intention of cure, five (24%) for palliation. No futher treatment was possible for two patients (10%). Twelve patients died within the follow-up period, of which eleven patients died of their colorectal carcinoma. Two

patients were alive with extensive cancer present at 18 months and 26 months, respectively, at last follow up. One patient had extensive disease at laparotomy, but was lost to follow up.

There were three *5-year* survivors (14%). One patient is alive at 14 years, another at 7 years. A third patient died at 5 years from a primary brain tumour. 2 patients who were less than 5 years from diagnosis were alive and disease-free at 30 months and 33 months, at last follow up. All the 3 patients had typical adenocarcinoma (1 Dukes' A & 2 Dukes' B).

Discussion

Approximately 4%-5% of the population can expect to develop colorectal carcinoma by age 75. Survival is 60%-70% for tumour without nodal involvement, depending upon the extent of tumour invasion of the bowel wall. Survival drops to 20%-50% when nodes are involved, and less than 5% when distant disease is encountered (12). Although this disease is relatively uncommon in the younger population, it is nonetheless well-recognised. A number of observations are important regarding colorectal carcinoma in the younger population.

Overall 5-year survival is worse in the younger population than in older population. Some reports suggest that for any given stage of disease, prognosis parallels that of the older population (5,9,13). However, more young patients present with advanced disease (5,6,8,9,11,13,14). Our series reflects the latter trend, as 16 of 21 patients (76%) presented with lymph node metastases. However, only 3 patients of 5 without lymph node metastases are long-term survivors.

It would seem that delayed presentation might account for advanced stage at presentation in young patients. Yet, in our series, many patients did not have inordinately long periods of symptoms. It is possible, as some assert, that a preponderance of tumours with mucinous histology account for more aggressive cancer presentation (6-8,11,15,16). Interestingly, one recent series reported a rather high 5-year survival rate of 57% for 55 patients with colorectal cancer aged 30 years and under. However, only 33% of the cancers were found to have mucinous or poorly differentiated histology (14).

This series would appear to be the exception, as other series of patients aged 40 years and under report an incidence of mucinous histology from 69% to 82% (3,4,11,17). The incidence in this series is 43% . Survival was exceedingly poor in all studies (7%-38%).

In our current studies, 3 patients were 5-year survivors. All had typical adenocarcinoma with negative nodes. None of the mucinous type survived the period. This would suggest a trend toward a poor outcome for those patients with mucinous histology, in our institution's experience.

Despite the relatively unusual occurrence of colorectal cancer in young patients, relatively few have predisposing causes (4,8,10,15,18). Only 3 patients in our series, had conditions known to predispose to the development of colorectal cancer.

Pain and blood per rectum are the most common symptoms manifested in patients with colorectal cancer in our experience. This is reflected in other series as well (5,11,18). In addition, in our patients the preponderance of tumours were in the rectosigmoid region, which is again consistent with other reports (2,7,8,14).

The surgeon should entertain the possibility of colorectal carcinoma in any young patient who presents with abdominal pain, haematochezia, haemoccult-positive stools, weight loss, or development of persistent constipation, diarrhoea, nausea or vomiting. Young people have a predilection for mucinous type pathology that appears to be quite aggresive. Thus, it is imperative that symptoms in young people be investigated promptly in order to detect these tumours at an early stage. Colorectal cancer at an early stage may still be successfully treated in young people.

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