ORIGINAL ARTICLE

Colorectal carcinoma in patients below 40 years of age with suspected clinical features

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Abstract

Objective: The aim of the study was to know the frequency of colorectal carcinoma in patients below 40 years of age presenting with suspected clinical features.

Materials and methods: This descriptive cross sectional study was carried out at department of general surgery, KTH, Peshawar, during 2 years from February 2016 to February 2018 including 70 patients below 40 years of age presented with bleeding per rectum, altered bowel habits, abdominal pain, persistent Diarrhea, loss of appetite, tenesmus, abdominal distension mass per abdomen and loss of weight.

Results: There were 52 (74.29%) males and 28 (25.71%) females with mean age of 36.90 years ± 2.45SD. The most common affected age group was 31-35 years old having 45 (64.29%) cases. Colorectal carcinoma was confirmed in 22 (31.42%) patients. The common clinical symptom was altered bowel habits in 49 (70%), abdominal pain and weight loss in 45 (64.29%) patients. Left and right sided colorectal tumors were in 55 (78.57%) and 25 (21.43%) patients respectively.

Conclusions: The clinical suspicion for colorectal carcinoma should be kept high in young age group (≤ 40 years) with suspected clinical features.

Keywords: Colorectal carcinoma, Suspected clinical features, Clinical suspicion, bleeding per rectum, alteration in bowel habit

Introduction:

Colorectal carcinoma (CRC) is one of the most common gastrointestinal malignancy diagnosed[1] and is one of the leading causes of malignancy related mortality worldwide.[2] It most commonly presents as altered bowl habits, bleeding per rectum, tenesmus, symptoms of anemia and weight loss.[3] Although colorectal cancer is considered as a disease of elderly, however a significant proportion of patients present below 40- years of age.[4]

The sporadic colorectal carcinoma has a higher incidence in developed countries, with Australia and New Zealand having an age adjusted incidence of 45.7 per 100,000 as compared to South East Asia which has a reported incidence of 15.9 per 100,000.[5] Interestingly, a rapid increase in colorectal carcinoma incidence rate in economically transitioning countries has been recently reported in the literature[6] and has been attributed to a change in the dietary habits and physical activity patterns superimposed on genetic predisposition. Age is considered a major risk factor as occurrence of colorectal carcinoma is less in patients less than 40 years and then with every decade of life, the incidence increases sharply. In developed countries, the risk of colon cancer is 1 in 10 males after the 8th decade of life. The life time risk of sporadic colorectal carcinoma is 5% and it accounts for 90% of the cases diagnosed in patients above 50 years.[7]

Colorectal carcinoma been reported to be of a much greater magnitude in several Asian and African countries.[8] Similarly, about 50% incidence

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Table-1: History/Symptoms and General Physical examination in patients (n=50)

Clinical Presentation	No of cases	Percentage
Altered bowel habits	49	70%
Abdominal pain	45	64.29%
Weight loss	22	31.43%
Loss of appetite	40	57.14%
Bleeding per rectum	46	65.71%
Tenesmus	36	51.42%
Abdominal distension	27	38.57%
Abdominal mass	23	32.86%
General Physical Examination		
Anemia	38	54.28%
Jaundice	22	31.42%
Edema feet	08	11.42%
Lymph node (inguinal)	10	14.29%

of CRC is the young population of Pakistan.[9] From this, coupled with the fact that greater than 80% of the Pakistani population is younger than 40 years, the "at-risk" population for early onset CRC in countries like Pakistan is much higher than the rest of the world.[10]

Pakistan is one of the developing countries having a lot of health care problems. No authentic population based studies are available on colorectal cancer in Pakistan. It is thought that Pakistan is lacking the high risk factors for colorectal cancer. But there is a general impression among the surgeons that the incidence of colorectal cancer is on the rise. In Pakistan it constitutes 25.4% and 20.1% of gastrointestinal malignancies in males and females respectively.[11]

Marerial and Methods:

This study was done at department of General Surgery, Khyber Teaching Hospital, Peshawar during 2 years from February, 2016 to February 2018, 70 patients were included in this study. The patients included in the study were patients younger than forty years of age who presented to surgical department with bleeding per rectum, altered bowel habits, abdominal pain, persistent Diarrhea, loss of appetite, tenesmus, abdominal distension, loss of weight and mass per abdomen. Patients with abdominal and pelvic organ malignancies other than colorectal malignancy and known cases of colorectal carcinoma were excluded from the study. Patients were admitted through emergency and out-patient department of the Surgical Department of Khyber Teaching Hospital, Peshawar.

Detailed history was taken in all cases and was correlated with the initial clinical presentation of patients. Detailed physical examination including general and systemic examination and digital rectal examination. Baseline and other relevant investigations including full blood count, serum electrolytes, blood urea, serum creatinine, chest x-ray, proctoscopy, colonoscopy, , ultrasound abdomen/pelvis, CT scan abdomen/pelvis were done in these patients. CT abdomen was done according to the findings of ultrasonography and colonoscopy. Biopsy was taken through colonoscopy or during exploratory laparotomy for obstruction for the confirmation of colorectal cancer.

The management of such patients included maintaining good hydration and administration of antibiotics, intravenous fluids and surgical treatment. In anemic patients blood transfusion was also carried out. The nature of surgical procedure carried out depended upon the stage and the findings at the time of surgery. All these patients were operated in the general surgical operation theatre and the resection specimens were taken for histo-pathological examination. All the above mentioned informations were recorded in a proforma.

Results:

The total number of patients in our study was 70 comprising of 52 (74.29%) males and 18 (25.71%) females. The mean age of the male and female patients was 34.56 years ± 3.89SD and 32.78 ± 5.89SD with overall mean age 36.90 years ± 2.45SD.

The most common affected age group was 31-35 years old having 45 (64.29%) cases, followed by 36-40 years old having 12 (17.14%) patients. There were 7 (10%) patients in the age group of 26-30 years, 5 (7.14%) patients were in the age group of 21-25 years and 1 (1.43%) case was in 15-20 years age group.

On histopathology, colorectal carcinoma was confirmed in 22 (31.42%) patients. The common clinical symptom was altered bowl habit which was present in 49 (70%) patients followed by abdominal pain and weight loss in 45 (64.29%) patients. On the other hand, anemia was the commonest clinical sign which was present in 66 (94.28%) patients followed by jaundice in 22 (31.42%) patients. The clinical features are shown in Table No. 1.

Left sided colorectal tumors were found more frequently than right sided tumors. Left sided colorectal tumors were present in 55 (78.57%) patients and right sided in 15 (21.43%) patients.

Discussion:

Colorectal cancer (CRC) is traditionally a disease observed in patients after the sixth decade of life, and currently only patients older than 50 years of age are recommended for surveillance. However, the challenging issue is the increasing incidence of CRC in patients less than 40 years of age which has been attributed to different molecular features and low suspicion of CRC in young symptomatic individuals.[12] Even recent literature has reported colorectal cancer in young males and female aged 11-20 years old.[13]

In our study, majority of the patients (64.29%) were from age group of 31 to 35 years and only one (1.43%) case was in 15-20 years age group. On histopathology, colorectal carcinoma was confirmed in 22 (31.42%) patients. the common clinical symptom (70%) was altered bowel habits, abdominal pain and weight loss (64.29%). on the other hand, anemia was the commonest clinical sign (94.28%) followed by jaundice (31.42%). left sided colorectal tumors were found more frequently than right sided tumors (78.57% vs 21.43%). In a local study by Zahir MN et al,[14] the mean age of the study population was 33.3 years ± 7.7 years. Male to female ratio was 2 : 1. The most common clinical presentations were abdominal pain (87%), weight loss (66%), and bleeding per rectum (52%) and 22% presented with intestinal obstruction. 55% had colon cancer while the 45% had presented with a diagnosis of rectal carcinoma, 53% with colon cancer had right sided disease. In other studies, altered bowel habit is reported as 86%15 (Ayaz), 35.71%11 and 30%16, Rectal bleeding in 66%15, 62.05%16, 62.7%17 and 22%11 of the patients, weight loss was 84%15, 62%.18

In young population, the main challenges is to distinguish sporadic from the hereditary forms of CRC. Overall, only 2%-5% of CRC are caused by highly penetrant genes19 and 15%-20% of CRC in young age population are hereditary.[20,21] The unrecognized family history of hereditary syndromes is an additional problem in CRC patients that is almost one fifth in these patients.[22] Besides when a CRC is diagnosed in young patients, we recommend that a young patient should undergo genetic tests, even in the absence of clinical phenotype or normal MSI-IHC studies which is also recommended by advanced centres dealing with CRC.[23]

Although controversial, CRC in young age group patients is considered to having a more aggressive biological behaviour and poor prognosis.[24,25,26] Furthermore, there is a greater prevalence of mucinous and less differentiated tumors.[27] In the young patients which is again a characteristics with bad prognosis. For these reasons, most of the times it is a constant matter of debate to considering 40 years as the basis for colonoscopic surveillance.[28]

We acknowledge the limitations of the study that future studies with population based approach should be carried out, but such studies are very difficult as only few hospitals have cancer registries in the county.

Conclusion:

The incidence of CRC is rising in young population and one should have a high index of suspicion for colorectal carcinoma when patients present with suspected clinical features. The changing pattern of the disease regarding age as well as the geographic distribution as it was considered as the disease of the West predominantly may have to do something with the change of our lifestyle and dietary habits. It is therefore pertinent to stress upon the need of screening

programmes in order to have any early diagnosis and better outcomes in treatment.

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Role and contribution of authors:

Dr. Abid Halim, collected the data and references and wrote the initial writeup

Dr Zia ud din Afridi, helped in collection of references and helped in introduction writing.

Dr Munir Khattak, critically review the article and made the final changes.

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