

Different clinical presentations of patients with colorectal cancer visiting Bahawal Victoria Hospital, Bahawalpur

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Abstract

Objective: Common clinical presentations of colorectal cancer include iron-deficiency anemia, rectal bleeding, abdominal pain, change in bowel habits, abdominal mass, weight loss and intestinal obstruction or perforation. The rationale of this study was to see the most common clinical presentation of colorectal cancer.

Materials & methods: A total of 105 patients of both sex and of age 30-70 year, diagnosed as a case of colorectal cancer on CT scan abdomen confirmed on histopathology at stage I, II and stage III were included. Patients with previously treated for colorectal carcinoma were excluded. Case sheet patients were prepared for age & sex and symptoms of colorectal cancer (Bleeding per rectum, altered bowel habits, anemia, weight loss).

Results: Mean age was 58.69 ± 7.91 years. Out of 105 patients, 69 (65.71%) were males and 36 (34.31%) were females with male to female ratio of 2:1. TNM staging revealed 28 (26.67%) patients with stage I, 33 (31.43%) with stage II and 44 (41.90%) with stage III carcinoma. The main presentation was rectal bleeding in 91 (86.67%) followed by altered bowel habits in 76 (72.38%), anemia in 35 (33.33%) and weight loss in 26 (24.76%) patients.

Conclusion: This study concluded that the rectal bleeding was the most common presentation of colorectal carcinoma and there was statistically insignificant difference of all clinical symptoms among different age groups, gender and stage of carcinoma

Keywords: Rectal, carcinoma, bleeding, anemia, rectocarcinoma, bleeding per rectum, Iron deficiency anemia, change in bowel habits, weight loss.

Introduction:

Colorectal carcinoma is the second most common cancer in women and third most common cancer in men¹ affecting 9.7% population worldwide.² Its incidence is more common in developed than developing countries. Greater than 75-95% of colon cancer occurs in people with little or no genetic risk.^{3,4} Risk factors include older age, male gender, high intake of fat, alcohol, red meat, obesity, smoking and a lack of physical exercise.³ Approximately 10% of cases are linked to insufficient activity.⁵ The risk for alcohol appears to increase at greater than one drink per day.⁶

Many symptoms have been described with the main ones being rectal bleeding, altered bowel

habbits, weight loss, abdominal pain, and anemia.^{7,8} However, these symptoms are also common with benign conditions, so the clinician has to select patients at higher risk for investigation. Most cases present with symptoms that prompt patients to consult their general practitioners.^{7,9}

The symptoms and signs of colorectal cancer depend on the location of tumor in the bowel, and whether it has spread elsewhere in the body (metastasis). The classic warning signs include: worsening constipation, blood in the stool, decrease in stool calibre, loss of appetite, loss of weight, and nausea or vomiting in someone over 50 years old.¹⁰ While rectal bleeding or anemia are high-risk features in those over the age of 50,¹¹ other commonly-described symptoms in-

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cluding weight loss and change in bowel habit are typically only concerning if associated with bleeding.^{11,12}

In order to improve survival through early diagnosis, symptoms indicative of a high risk of cancer must be better understood and recognized by both patients and general practitioners.^{13,14} In order to support the decision-making process in primary care, referral guidelines for colorectal cancer based on the best current evidence have been published and critiqued^{14,15} these identify rectal bleeding and a change in bowel habit as the most important symptoms. Carcinoma of rectum can be diagnosed at an earlier stage in patients presenting with symptoms of ano-rectal condition when examined properly including digital rectal examination, proctoscopy and biopsy of suspected lesions.^{16,17}

There are variations in different studies conducting in evaluation of different clinical presentations. According to one study conducted in England, the most common presentation was bleeding Per Rectum (89%) and other presentations were; altered bowel habit (58%), weight loss (18%).¹⁷ In other study Colorectal cancer presents most commonly as with the symptoms of anemia (27%) and bleeding per rectum (11%).¹⁰ With reference of these statistical values, the rationale of this study was to see that what is the most common clinical presentation among bleeding per rectum, altered bowel habits, abdominal mass, anemia and weight loss.

Material & methods

Study design: Descriptive, Cross-sectional study.

Setting: Department of Surgery, Bahawal Victoria Hospital, Bahawalpur.

Duration of study: 01-06-2014 to 31-07-2016

Sample size:

Anticipated proportion = 11%⁹

Confidence Interval = 95%

Precision required (d) = 0.06

Sample size (n) = 105

Total 105 patients were included in the study.⁹

Sample technique: Non-probability, consecutive sampling.

Sample selection:

a. Inclusion Criteria: All patients of both sex and of age 30-70 year, diagnosed as a case of colorectal cancer on CT scan abdomen confirmed on histopathology at stage I, II, and stage III.

b. Exclusion Criteria: Patients previously treated for colorectal cancer.

Data collection procedure: After approval from ethical review committee, 105 patients presenting to Surgical Out-Patient Department of Bahawal Victoria Hospital and BINO Hospital Bahawalpur fulfilling the inclusion criteria were included in the study after taking informed written consent. Study was approved for institutional review board.

Case sheet patients were prepared for age & sex and symptoms of colorectal cancer (Bleeding per rectum, Altered bowel habits, Anemia, Weight loss). All the data was recorded along with demographic profile of the patients on pre-designed proforma (Annexed).

Data analysis procedure:

The data was analyzed by computer software SPSS version 16. Descriptive statistical tests were performed. Mean and standard deviation for age was calculated. The qualitative data like gender, stage of carcinoma and presentations of colorectal cancer (Bleeding per rectum, altered bowel habits, anemia and weight loss) were labeled as frequency distribution table.

Stratification was done to control effect modifiers like age, gender and stage of carcinoma to observe effect on outcome. Post stratification chi-square test was applied to see the effect of these with outcome variable. P value ≤ 0.05 was considered as significant.

Table 1: %age of participants according to age distribution (n=105)

Age (in years)	No. of Patients	%age
30-40	11	10.48
41-50	24	22.86
51-60	38	36.19
61-70	32	30.48

Mean ± SD = 58.69 ± 7.91 years

Table 2: %age of patients according to gender (n=105)

Gender	Frequency	%age
Male	69	65.71
Female	36	34.29

Table 3: %age of patients according to Stage of carcinoma (n=105)

Stage	Frequency	%age
I	28	26.67
II	33	31.43
III	44	41.90

Table 4: Presentation of Colorectal Carcinoma

Presentation	Frequency %	
	Yes	No
Bleeding per rectum	91 (86.67%)	14 (13.33%)
Altered bowel habits	76 (72.38%)	29 (27.62%)
Anemia	35 (33.33%)	70 (66.67%)
Weight loss	26 (24.76%)	79 (75.24%)

Table 5: Stratification of presentation of carcinoma with respect to age

		30-50 years (n=35)	51-70 years (n=70)	P-value
Bleeding per rectum	Yes	30 (85.71%)	61 (87.14%)	0.839
	No	05 (14.29%)	09 (12.86%)	
Altered bowel habits	Yes	26 (74.29%)	50 (71.43%)	0.758
	No	09 (25.71%)	20 (28.57%)	
Anemia	Yes	12 (34.29%)	23 (32.86%)	0.884
	No	23 (65.71%)	47 (67.14%)	
Weight loss	Yes	08 (22.86%)	18 (25.71%)	0.749
	No	27 (77.14%)	52 (74.29%)	

Table 6: Stratification of presentation of carcinoma with respect to gender

		Male (n=69)	Female (n=36)	P-value
Bleeding per rectum	Yes	59 (85.51%)	32 (88.89%)	0.839
	No	10 (14.49%)	04 (11.11%)	
Altered bowel habits	Yes	50 (72.46%)	26 (72.22%)	0.758
	No	19 (27.54%)	10 (27.78%)	
Anemia	Yes	24 (34.78%)	11 (30.56%)	0.884
	No	45 (65.22%)	25 (69.44%)	
Weight loss	Yes	19 (27.54%)	07 (19.44%)	0.749
	No	50 (72.46%)	29 (80.56%)	

Table 7: Stratification of presentation of carcinoma with respect to stage

		I (n=28)	II (n=33)	III (n=44)	P-value
Bleeding per rectum	Yes	26 (92.86%)	29 (87.88%)	36 (81.82%)	0.839
	No	02 (7.14%)	04 (12.12%)	08 (18.18%)	
Altered bowel habits	Yes	21 (75.0%)	22 (66.67%)	33 (75.0%)	0.758
	No	07 (25.0%)	11 (33.33%)	11 (25.0%)	
Anemia	Yes	06 (21.43%)	13 (39.39%)	16 (36.36%)	0.884
	No	22 (78.57%)	20 (60.61%)	28 (63.64%)	
Weight loss	Yes	03 (10.71%)	09 (27.27%)	14 (31.82%)	0.749
	No	25 (89.29%)	24 (72.73%)	30 (68.18%)	

Results:

Age range in our study was from 30 to 70 years with mean age of 58.69 ± 7.91 years. Majority of the patients i.e. 38 (36.19%) were between 51 to 60 years of age as shown in Table I. Out of 105 patients, 69 (65.71%) were males and 36 (34.31%) were females with male to female ratio of 2:1 (Table II). TNM staging revealed 28 (26.67%) patients with stage I, 33 (31.43%) with stage II and 44 (41.90%) with stage III carcinoma as is shown in Table III.

The main presentation was rectal bleeding in 91 (86.67%) followed by altered bowel habits in 76 (72.38%), anemia in 35 (33.33%) and weight loss in 26 (24.76%) patients (Table IV).

Stratification of carcinoma presentation with respect to age groups and gender has shown in Table V & VI respectively which have shown no significant difference (p>0.05). Stratification of carcinoma presentation with respect to stage of carcinoma has shown in Table VII which has also shown no significant difference (p>0.05).

Discussion:

In our study, mean age was 58.69 ± 7.91 years which is very much comparable to the study of Pomerrri S et al¹⁸ and Ather HM et al¹⁹ who had also observed mean age of 61 and 58 years respectively. On the other hand, Dar RA et al²⁰ and Irabor DO et al²¹ found much lower mean age i.e. 53% 50 years in their studies respectively. In our study, the males were affected more than females with ratio of 1.8:1 which correlates with many previous studies.^{21,22} So, our study has shown that colorectal carcinoma was more common in

males with increasing incidence with age. Age is a well-known risk factor for colorectal cancer, as it is for many other solid tumors. The median age at diagnosis of colorectal cancer in the US was 69 years of age. Approximately 0.1% was diagnosed under age 20; 1.1% between 20 and 34; 4.0% between 35 and 44; 13.4% between 45 and 54; 20.4% between 55 and 64; 24.0% between 65 and 74; 25.0% between 75 and 84; and 12.0% 85+ years of age.²³

In our study, rectal bleeding was found in 91 (86.67%), altered bowel habits in 76 (72.38%), anemia in 35 (33.33%) and weight loss in 26 (24.76%) patients. The most common presenting complaint observed in our study was rectal bleeding as was also found by Eltinay OF et al²⁴ and Ather HM et al¹⁹ while Reis WD et al²⁵ observed abdominal pain as the main presenting complaint (86.9%) followed by anorexia or weight loss (52.1%), diarrhea (52.1%), and rectal bleeding (21.7%). Ather HM et al¹⁹ in his study has found rectal bleeding in 49.76%, altered bowel habits in 28.99%, anemia in 4.83% and weight loss in 24.40% patients

Al-Shamsi SR et al²⁵ in his study has shown pain in 81%, altered bowel habits in 72% and bleeding per rectum in 78% patients of colorectal carcinoma. According to one study conducted in England, the most common presentation was bleeding per rectum (89%) and other presentations were; altered bowel habit (58%), weight loss (18%).¹⁵ In other study Colorectal cancer presents most commonly as with the symptoms of anemia (27%) and bleeding per rectum (11%).⁹ Eltinay OF et al²⁴ in his study on 43 colorectal carcinoma patients had found sixteen (37.2%) cases with rectal bleeding, ten (23.2%) with abdominal pain, eight (18.5%) with altered bowel habits whereas anaemia was found to be the most frequent clinical result reported in twenty (46.4%) patients.

In a study done in Pakistan by Shaikh AR et al,²⁶ bleeding per rectum was found in 60.0% and altered bowel habits in 30.0% patients. In another study done in Pakistan by Gul A et al,²⁷ bleeding per rectum was found in 66.0%, altered bowel

habits in 86.0%, weight loss in 84.0%, abdominal pain in 84.0% and abdominal mass in 34.0% patients. Smith D et al¹⁵ in his study has compared the clinical presentation of colorectal carcinoma according to the stage of the tumour. He concluded that in the early cancer group, 89% had rectal bleeding, 58% a change in bowel habit and 24% had abdominal pain, as compared to the advanced group, where abdominal pain ($P = 0.001$) and change in bowel habit ($P < 0.001$) were more common and reached significance. Systemic symptoms, decreased appetite, tiredness & unexplained weight loss was not significant, there was a tendency towards this in the advanced colorectal cancers group ($P=0.17$). On the other hand, in our study, we had not found any significant difference in clinical presentations of colorectal carcinoma in different stages of cancer.

Conclusion:

This study concluded that the frequency of rectal bleeding was in 86.67% patients, altered bowel habits in 72.38% patients, anemia in 33.33% patients and weight loss in 24.76% patients with rectal bleeding being the most common presentation of colorectal carcinoma, and statistically insignificant difference of all clinical symptoms among different age groups, gender and stage of carcinoma.

Conflict of interest: None

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Role and contribution of authors:

Dr Muhammad Younus Khan, FCPS (Surgery), Senior Registrar Surgery, BVH Bahawalpur, collected the data, references and wrote the initial writeup

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