International Journal of Research in Medical Sciences
Bhat RA et al. Int J Res Med Sci. 2018 Nov;6(11):3652-3656
www.msjonline.org
pISSN 2320-6071 | eISSN 2320-6012

DOI: http://dx.doi.org/10.18203/2320-6012.ijrms20184424

Original Research Article

Clinical presentations of colorectal cancer at initial presentation to hospital and its site specific correlation

Rauf Ahmad Bhat, Shams Ul Bari*

Department of Surgery, SKIMS Medical College, Srinagar, Kashmir, India

Received: 21 August 2018
Accepted: 26 September 2018

***Correspondence:**
Dr. Shams Ul Bari,
E-mail: shamsulbari@rediffmail.com

ABSTRACT

Background: Colorectal cancer is one of the leading cause of death all over the world. It progresses slowly and may be asymptomatic for as many as 5 years. Aim of this study was to find the incidence and the initial clinical presentations of patients with colorectal cancer and its site specific correlation
Methods: This was a prospective hospital-based study conducted over a period of two years from August 2015 to September 2017 in the postgraduate department of surgery, Government medical college, Srinagar. Total of fifty three patients in the age group of 10 years to 80 years were included in the study. Colorectal tumors were divided into right colon growths (caecum, ascending colon and hepatic flexure), left colon growths (splenic flexure, descending colon and sigmoid colon) and rectal growths. Data was collected from their hospital records and analysed using SPSS computer program.
Results: In present study incidence of colorectal cancer was 0.2 per 100,000 people. Thirty percent of our patients were found to be in the sixth decade of their life with male preponderance in almost every age group. Mean age of presentation being 46.44 years (males= 48.5years, females= 43.76years). Out of 53 patients, rectal growths constituted 36%, left colonic growths 36% followed by 28% cases of right colonic growths. More than one symptom was present in several patients. Maximum number of patients (43%) presented with anemia (microcytic hypochromic) with Hb of <9gm% followed by constipation 38% and bleeding per rectum 28%. Pain abdomen was present in 23% of patients. Loss of weight and diarrhoea was equally seen in 19% of patients. Diarrhoea was seen in 6 males and 4 females and was statistically significant ($p<0.05$).
Conclusions: Colorectal cancer was found to affect the Kashmiri patients at younger age (38% were 40 years or less) with peak incidence at sixth decade. Males were affected more than females. Anaemia, constipation and bleeding per rectum were the most common predominant clinical features in right colon, left colon and rectal growths respectively.

Keywords: Anaemia, Bleeding, Colorectal cancers, Constipation, Weight loss

INTRODUCTION

Colorectal cancer is the third most common cancer in developed world, fifth most common in developing countries and the third most common in Kashmir in both men and women.[1,2] In India, the approximate annual incidence for colon cancer is 0.7 to 3.7 per 100,000 in men and 0.4 to 3.0 per 100,000 in women, for rectal cancer 1.6 to 5.5 per 100,000 in men and 0.1 to 2.8 per 100,000 in women.[3] Colorectal cancers occur in sporadic, familial or hereditary form. The risk of colon cancer is much higher in specific genetic syndromes.[4,5] Colorectal cancers progress slowly and may be asymptomatic for as many as 5 years. In symptomatic patients, symptoms depend on the location of the primary tumour. The signs and symptoms of colorectal cancer depend on the location of the tumor in the bowel and whether it has spread elsewhere in the body. The classic warning signs

include constipation blood in the stool, decrease in stool caliber, loss of appetite, loss of weight, and nausea or vomiting in patients over 50 years in age. While rectal bleeding or anemia are high-risk features in those over the age of 50, other commonly described symptoms including weight loss and change in bowel habit are typically only concerning if associated with bleeding. Treatment of colorectal cancers depends on several factors which include the size, location, and stage of the tumor, whether the cancer is recurrent or not and the current overall state of health of the patient. Various treatment options which are available at present chemotherapy, radiotherapy, and surgery. The present study was conducted with the aim of finding the incidence and the initial clinical presentations of patients with colorectal cancer and it's relation to the site of colorectal cancer.

METHODS

This was a prospective hospital-based study conducted over a period of two years from August 2015 to September 2017 in the Postgraduate Department of Surgery, Government Medical College, Srinagar. Total of fifty three patients in the age group of 10-80 years were included in the study. All patients who presented with persistent diarrhoea lasting more than 6weeks, constipation, significant changes of bowel habit, rectal bleeding, abdominal pain, loss of weight (>20%) or iron deficiency anaemia (haemoglobin <9gm%) were included in the study and investigated for malignancy as per the proforma.

After a detailed clinical history and complete physical examination, including a digital rectal examination, patients were assessed by all routine investigations including stool examination for occult blood, anoproctoscopy, sigmoidoscopy, colonoscopy, Tissue biopsy and Carcinoembryonic antigen (CEA) level. Fine needle aspiration cytology, transrectal ultrasonography (TRUS), computerized tomography Scan of abdomen and pelvis and MRI of abdomen and pelvis was done in selected patients.

In patients diagnosed to have colorectal malignancy after tissue biopsy, the clinical presentations of colorectal cancer at initial presentation to hospital and its site specific correlation was noted down and assessed. Patients already operated or having recurrence of colorectal cancer and patients from outside the valley were not included in the study.

RESULTS

This prospective study included a total of fifty three with colorectal cancer patients. Total patients admitted during the period of August 2013 to august 2014 was 20114, while as number of patients admitted from September 2014 to September 2015 was 18686. Incidence of colorectal cancer during these two years was found to be 0.13 and 0.14 per 100,000 respectively (Table 1).

Table 1: Incidence of colorectal cancer in two years in authors' hospital.

Year	Total no. of patients admitted	Patients with colorectal cancer	Incidence
2013-2014	20114	26	0.13
2014-2015	18686	27	0.14

Majority studied patient (30%) presented in the sixth decade of life (Table 2). Total of 20 patients (37.7%) were below 40 years of age which included 4 patients (7.5%) below 20 yrs and 12 patients (22.6%) below 30 yrs of age. Mean age of patients in the present series was 46.44 years. Mean age of male patients was 48.5 years and 43.76 years for females. The youngest patient reported was 14 years of age and the oldest was 75 years of age. Twenty four patients (45%) were from rural areas and twenty nine (55%) were from urban areas. Thus, showing a preponderance of disease in present study in urban population.

Table 2: Age and gender wise distribution of patients.

Age (years)	Male	Percentage	Female	Percentage
11-20	1	3	3	13
21-30	5	17	3	13
31-40	5	17	3	13
41-50	2	3	4	17
51-60	10	33	6	26
61-70	4	13	4	17
71-80	3	10	0	0
Total	30	56.60	23	43.39

More than one symptom was present in several patients. Maximum number of patients in the present series presented with anemia (microcytic hypochromic) of <9gm% haemoglobin (43%) followed by constipation (38%) and bleeding per rectum (28%) (Table 3). Pain abdomen was present in 23% of patients. Loss of weight (>20%) and diarrhoea was equally seen in 19% of patients each. Diarrhea which was present in 6 males and 4 females was statistically significant ($p < 0.05$).

Microcytic hypochromic anemia (Hb <9gm%) was the predominant symptom in 32% patients followed by bleeding per rectum in 23% of patients, constipation in 19% of patients, pain abdomen in 11% of patients, diarrhoea in 9% of patients and loss of weight in 6% of patients (Table 4). Male and female distribution of the symptoms were found to be statistically insignificant ($p > 0.05$).

Maximum number of studied patients were diagnosed as carcinoma of rectum (36%) and the lowest number of

cases had carcinoma of caecum (4%) (Table 5). Ascending colonic cancer constituted 17% of cases, hepatic flexure 8%, while as none of studied patients had cancer of transverse colon. Descending colon growth comprised 13% of cases, splenic flexure growth 6% cases and sigmoid colon growth 17%. Lesions of right side of colon which included caecum, ascending colon and hepatic flexure accounted for 28% of cases while as left sided growths were seen in 72% of cases, which included left colonic growth in 36% and rectal growth in 36%. Most of the patients (59%) with right sided growth cases presented with anemia (Hb<9gm%) followed by loss of weight in 13% of patients, bleeding per rectum in 7% of cases, constipation in 7% of cases, diarrhoea in 7% of cases and pain abdomen in 7% of cases (Table 5).

Table 3: Clinical presentations at the time of disease.

Symptoms	No. of patients	Percentage	Males	Percentage	Female	Percentage	P value*
Anemia (<9gm% Hb)	23	43	14	26	9	17	0.78
Bleeding PR	15	28	11	21	4	8	0.14
Constipation	20	38	13	25	7	13	0.40
Diarrhoea	10	19	6	11	4	8	0.01*
Loss of weight	10	19	4	8	6	11	1.0
Pain abdomen	12	23	3	6	9	17	0.73

Diarrhea which was present in 6 males and 4 females was statistically significant (p <0.05, significant) Fisher's Exact test

Table 4: Predominant clinical presentation.

Predominant symptoms	No. of patients	Percentage	Males	Female	p-value*
Anemia (<9gm% Hb)	17	32	10	7	0.51
Bleeding PR	12	23	9	3	0.19
Constipation	10	19	5	5	0.73
Diarrhoea	5	9	2	3	0.64
Loss of weight	3	6	1	2	0.57
Pain abdomen	6	11	3	3	1.0
Total	53	100	30	23	

*Fisher's Exact test, significant <0.05

Table 5: Predominant symptoms in relation to site of tumour.

Predominant symptoms	Right colon	%	Left colon	%	Rectum	%	
Anemia (<9gm% Hb)	9	59	5	26	3	16	
Bleeding PR	1	7	2	11	9	47	Chi square=22.04
Constipation	1	7	7	37	2	11	
Diarrhea	1	7	2	11	2	11	p-value=0.01*
Loss of weight	2	13	1	5	0	0	
Pain abdomen	1	7	2	11	3	16	
Total	15	100	19	100	19	100	

*significant at 0.05

Total number of cases who presented with tumor of left sided colon (splenic flexure, descending colon and sigmoid colon) was 19 (36%). Most of these patients of cases presented with constipation (37%), followed by anaemia in 26% of patients, bleeding per rectum, pain abdomen and diarrhoea in 11% of patients each. Loss of weight was seen in only 5% of patients. Total number of cases who presented with rectal growth was 19 (36%). The maximum number of cases presented as bleeding per rectum (47%) followed by anaemia (16%) and pain abdomen. Constipation and diarrhoea was seen in 11% of patients each. The results obtained were statistically significant (p<0.05).

DISCUSSION

In the present study, incidence obtained for colorectal cancer was approximately 0.2 per 100,000 population in both the study years, is explained by the fact that present study was only a hospital-based study conducted in a tertiary care hospital and not a population-based study. Maximum number of patients in present series presented

in the sixth decade of life (30%). Males were 57%. These findings are consistent with the findings observed by Abdulla et al, Walderon et al, Eltinay et al, and Alley PG et al, but differ from David et al, whose peak incidence was at 7th decade of life.[6-9] Fifty-seven percent of patients of present series were males and forty-three percent were females, with a ratio of 1.3:1. This male preponderance was also noted by Abdulla et al, Garden OJ et al, Buechter KJ et al, Verschuren RC et al, Regland JJ et al, and Barillari et al.[6,10-14]

However, many others noted a female preponderance in their studies which included the studies of Ohman U, Loeffler I et al, Welch et al, Serpell JW et al, and Kingston RD et al.[15-19] Baquet CR et al, reported that colorectal cancer rates are moderately higher in urban residents than rural residents which is consistent with present study.[20] Predominant or first symptom noted by the patients in present study was anemia <9gm% of haemoglobin in 32% patients followed by bleeding per rectum in 23% of patients. Constipation was noted as a predominant symptom by 19% of patients, pain abdomen by 11% of patients, diarrhea by 9% of patients and loss of weight by 6% of patients. Anemia was the most common symptom (43%) noted by the patient at any time in the present series followed by constipation (38%), bleeding per rectum (28%) and pain abdomen (23%).

These findings were almost similar to those recorded by Eltinay F et al.[8] Stapley S et al, observed bleeding per rectum as the most predominant clinical feature followed by anemia.[21] Postelthwait RW, reported that symptoms depend on the location of tumor and stage of presentation.[22] Right sided tumors usually give symptoms of lump, weight loss, anemia and easy fatigability whereas left sided tumors give symptoms of pain abdomen, constipation or obstruction. The rectal tumors present with bleeding per rectum, altered bowel habits and tenesmus.

The findings of this study were consistent with various studies reported. Present study also showed the right sided growth cases usually present with anemia in 59% of patients. The left sided colon growth cases usually present with constipation i.e. 37% of cases and the rectal growth cases present with bleeding per rectum i.e. 47% cases.

CONCLUSION

Colorectal cancers form a good proportion of surgical based admissions in authors' hospital with majority of cases coming in the sixth decade of life. A worrisome feature is the increasing number of colorectal cancers in younger age groups (<40yrs age). Anemia and bleeding per rectum are the most common presenting symptoms. Anemia is the most predominant clinical feature in right sided colon growths, constipation in left sided colon growths and bleeding per rectum in rectal growths.

Recommendations

Authors recommend health education, further studies and screening-based strategy at the community level for the proper management of the disease.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Brown ML, Goldie SJ, Draisma G, Harford J, Lipscomb J. Health Service Interventions for Cancer Control in Developing Countries. Data from Ferlay and others. 2004. Chapter 29. Available at https://www.ncbi.nlm.nih.gov/books/NBK11756/.
2. Sameer AS, Ul Rehman S, Pandith AA, Syeed N, Shah ZA, Chowdhri NA, et al. Molecular gate keepers succumb to gene aberrations in colorectal cancer in Kashmiri population, revealing a high incidence area. Saudi J Gastroenterol. 2009 Oct;15(4):244-52.
3. Mohandas KM, Desai DC. Epidemiology of digestive tract cancers in India. V. Large and small bowel. Indian J Gastroenterol. 1999;18(3):118-21.
4. Laken SJ, Petersen GM, Gruber SB, Oddoux C, Ostrer H, Giardiello FM, et al. Familial colorectal cancer in Ashkenazim due to a hypermutable tract in APC. Nature Genetics. 1997 Sep;17(1):79.
5. Landis SH, Murray T, Bolden S, Wingo PA. Cancer statistics, 1999. CA Cancer J Clinicians. 1999 Jan;49(1):8-31.
6. Abdalla AA, Musa MT, Khair RZ. Presentation of colorectal cancer in Khartoum teaching hospital. Sudan J Med Sci. 2007;2(4):263-5.
7. Woods SE, Narayanan K, Engel A. The influence of gender on colon cancer stage. J Women's Health. 2005 Jul 1;14(6):502-6.
8. Eltinay OF, Guraya SY. Colorectal carcinoma: Clinico-pathological pattern and outcome of surgical management. Saudi J Gastroenterol. 2006 Apr 1;12(2):83-6.
9. Sabiston D, Lyerly KL. The biological basis of modern surgical practice. Philadelphia: WB. Saunders. 1995;32(9):1020-30.
10. Garden OJ, AW B. Forsythe J. Principles and practice of surgery. City: Churchill Livingstone. 2002;23:343-8.
11. Buechter KJ, Boustany C, Caillouette R, Cohn I. Surgical management of the acutely obstructed colon: a review of 127 cases. Am J Surgery. 1988 Sep 1;156(3):163-8.
12. Verschueren RC, Mulder NH, Van AL, De AR, Szabo BG. The anatomical substrate for a difference in surgical approach to rectal cancer in male and female patients. Anticancer Res. 1997;17(1B):637-41.

13. Ragland JJ, Londe AM, Spratt JS. Correlation of the prognosis of obstructing colorectal carcinoma with clinical and pathologic variables. Am J Surgery. 1971 May 1;121(5):552-6.
14. Barillari P, Aurello P, De RA, Valabrega S, Ramacciato G, D'Angelo F, et al. Management and survival of patients affected with obstructive colorectal cancer. Int Surgery. 1992;77(4):251-5.
15. Öhman U. Prognosis in patients with obstructing colorectal carcinoma. Am J Surgery. 1982 Jun 1;143(6):742-7.
16. Loefler I, Hafner CD. Survival rate in obstructing carcinoma of colon. Arch Surgery. 1964 Oct 1;89(4):716-8.
17. Welch JP, Donaldson GA. Management of severe obstruction of the large bowel due to malignant disease. Am J Surgery. 1974 Apr 1;127(4):492-9.
18. Serpell JW, McDermott FT, Ketrivessis H, Hughes ESR. Obstructing carcinomas of the colon. Br J Surg. 1989;76:965-9.
19. Kingston RD, Walsh SH, Jeacock J. Physical status is the principal determinant of outcome after emergency admission of patients with colorectal cancer. Ann Royal Coll Surge England. 1993 Sep;75(5):335-8.
20. Baquet CR, Horm JW, Gibbs T, Greenwald P. Socioeconomic factors and cancer incidence among blacks and whites. J National Cancer Inst. 1991 Apr 17;83(8):551-7.
21. Stapley S, Peters TJ, Sharp D, Hamilton W. The mortality of colorectal cancer in relation to the initial symptom at presentation to primary care and to the duration of symptoms: a cohort study using medical records. Br J Cancer. 2006 Nov;95(10):1321.
22. Postlethwait RW. Malignant tumors of the colon and rectum. Annals Surgery. 1949 Jan;129(1):34.

Cite this article as: Bhat RA, Bari S. Clinical presentations of colorectal cancer at initial presentation to hospital and its site specific correlation. Int J Res Med Sci 2018;6:3652-6.