

Pattern of Colorectal Carcinoma: Two Year Experience

Bushra Kiran Naeem,^{1*} Mazhar Iqbal,¹ Muhammad Tahir,¹ Gul Muhammad,¹ Malik Musadiq,¹ Sughra Perveen¹

ABSTRACT

Objective To find out the common presentation, anatomical location and stage of colorectal carcinoma in patients presenting to the tertiary care hospital.

Study design Descriptive case series.

Place & Duration of study Department of Surgery Ward - 3, Jinnah Postgraduate Medical Centre Karachi, from June 2016 to June 2018.

Methodology All patients above 12 years of age were who presented to surgical service diagnosed after necessary investigations as having colorectal carcinoma were included. TNM and Duke staging was done with the help of CT scan of abdomen and chest, operative findings and histopathological results. The results were analyzed in SPSS version 24. Descriptive statistics were used to present data.

Results A total of 120 patients of colorectal carcinoma were included. Most (n=80 - 66.67%) of the patients were males. There were 56 (46.67%) patients from 20 to 40 year and 48 (40%) 40 to 60 year of age. Large number of patients (n=100 - 83.33%) presented with intestinal obstruction. Other symptoms included constipation (n= 56- 46.67%), per rectal bleeding (n= 48 , 40%), altered bowel habits (n= 15 , 13.33%) and abdominal pain (n= 20 , - 6.66%). Majority of the patients were in Duke stage C (n= 72 - 60%) and Duke D (n= 36 - 30%). The left sided colorectal tumours were 90%, rectum 40%, and rectosigmoid 36.67%.

Conclusions Most of the patients of colorectal carcinoma presented with intestinal obstruction in advanced stage of Duke C and D. On left side rectosigmoid and rectum were most commonly involved.

Key words Colorectal Carcinoma, Duke staging, Intestinal Obstruction.

INTRODUCTION:

Colorectal cancer (CRC) is a common malignancy that results in significant morbidity and mortality. This is the second commonest cause of cancer related death in both males and females in developed countries.¹ There is a great variability in clinical presentation, ranging from incidental or early to advanced symptoms with complications. They may

require emergency surgical treatment.¹ The variety of symptoms in these patients overlap between the different acute abdominal conditions. Delays in diagnosis and treatment lead to worse prognosis.² Duke and TNM tumor staging system are used for documentation and treatment.³

Right and left sided colon cancer can effect the prognosis and treatment of the disease.⁴ Left-sided tumors (originating in the splenic flexure, descending colon, sigmoid colon, rectum, or one-third of the transverse colon), whereas right-sided tumors (originating in the appendix, cecum, ascending colon, hepatic flexure, or two-thirds of the transverse colon). Left sided colorectal carcinoma is more common than right sided colorectal carcinoma.⁵ The rationale of the study was to find out the common presentation of CRC, the stage and anatomical location, and

¹ Department of Jinnah Postgraduate Medical Centre Karachi

Correspondence:

Dr. Bushra Kiran Naeem^{1*}
Department of General Surgery
Jinnah Postgraduate Medical Centre
Surgical Ward -3
Karachi
E mail: bushrakiran.naeem@gmail.com

symptoms and signs that may help in early identification and treatment of this cancer. This may help in reducing morbidity and mortality.

METHODOLOGY:

This was a descriptive case series conducted in the Department of General Surgery ward- 3 Jinnah Postgraduate Medical Centre Karachi, from June 2016 to June 2018. All patients diagnosed with CRC, above 12 years of age, of both genders were included in the study.

Patients who presented with large gut obstruction in emergency department diagnosed on clinical grounds and radiological examination (abdominal x-ray) were resuscitated and exploratory laparotomy was performed. Operative findings were noted and clinical staging done. Biopsy was performed and diagnosis was confirmed on histopathological reporting. Distal and proximal margins of tumor, number of lymph node involvement, perineural and perivascular invasion were noted in histopathology report. Tumor staging was also done.

In right sided CRC right hemicolectomy or extended right hemicolectomy depending upon the site and condition of the patient was done. In advanced CRC only diversion colostomy or ileostomy was made. Postoperatively the metastatic workup was done using CT scan chest and abdomen. In other group of patients who presented in Outpatient Department with symptoms like constipation, per rectal bleeding, altered bowel habits, lower colicky abdominal pain were investigated. Barium enema and colonoscopy were done and biopsy taken from the lesion. Right or left hemicolectomy, anterior resection and

abdomino-perineal resection were done according to the involvement of the colorectal site. Staging of the carcinoma was also done after histopathology report, CT scan findings of the chest and abdomen, and pre and operative notes. Results were reported in frequency and percentages, and staging of tumor. Chemotherapy was given to the patients of colorectal carcinoma with stage C and D.

RESULTS:

A total of 120 patients of colorectal carcinoma were included in the study. The age range was 12 to 71 year. There were 4 (3.33%) patients between 12 to 19 year of age and 56 (46.67%) between 20 to 40 year, 48 (40%) between 40 to 60 and 12 (10%) above 60 year of age. There were 80 (66.67%) male and 40 (33.33%) female patients. Majority of the patients presented with intestinal obstruction in emergency department (n=100 - 83.3%). Other symptoms are given in table I. Most of the patients were in Duke stage C and D (90%). Details are given in table II. Of the total, 108 (90%) patients presented with left sided colonic tumor. Rectum was predominantly involved (n=48 - 76.67 %). Other anatomical locations of the tumor are presented in table III.

DISCUSSION:

Colorectal cancer basically evolves from the adenomatous polyps which have some genetic mutations in their DNA over time. Positive family history along with the risk factors like diet, smoking, inflammatory bowel disease are involved in causing colorectal cancer.² Familial adenomatous polyps are labeled when there are more than hundred polyps in the large colon and approximately there is 0.1%

Table I: Clinical Presentation of Colorectal Carcinoma

Signs & Symptoms	Number (n)	Percentage (%)
Intestinal obstruction (large gut)	100	83.33
Constipation	56	46.67
Per rectal bleeding	48	40
Abdominal pain	20	16.67
Altered bowel habits	16	13.33

Table II: Duke Stages of Colorectal Carcinoma

Stages of Colorectal Carcinoma	Number (n)	Percentage (%)
Stage A	4	3.33
Stage B	8	6.67
Stage C	72	60
Stage D	36	30

Table III: Stages of Colorectal Carcinoma					
Right Sided Colorectal Carcinoma			Left Sided Colorectal Carcinoma		
Site	Number (n)	Percentage (%)	Site	Number (n)	Percentage (%)
Caecum	4	3.33	Splenic Flexure	8	6.67
Ascending Colon	4	3.33	Descending Colon	0	0
Hepatic Flexure	0	0	Sigmoid Colon	0	0
Transverse Colon	4	3.33	Rectosigmoid	44	36.67
			Rectum	48	40
			Anal Canal	8	6.67
Total	12	10	Total	108	90

chance of developing colorectal cancer. The average age in these patients is 29 year and average age of colorectal cancer is 39 year.⁶ In this study there were 46.6% patients between the ages of 20 to 40 years.

There is slight female predominance in colon carcinoma and male predominance in rectal cancer.⁶ In this study males were predominantly involved, but no gender predominance noted in colon and rectal carcinoma. Intestinal obstruction is the commonest feature as a complication in colorectal carcinoma.¹ In this study the most common presentation was intestinal obstruction, (83.33%) which is much higher than that reported in literature. This may be due to late presentation and ignoring symptoms like per rectal bleeding, constipation, altered bowel habits etc. The most common presenting symptoms in literature is altered bowel habits (48.3%), per rectal bleed (37.1%) and abdominal pain (33.6%).⁷ Chappell in his study reported abdominal pain, per rectal bleed, altered bowel habits and weight loss as common symptoms.⁸ The cancer site, size and the occurrence of distant metastasis determines the type of symptoms in an individual.

In this study following intestinal obstruction the most common presentation was per rectal bleeding 46.66%, followed by constipation in 40% of the patients, abdominal pain in 16.66% and altered bowel habits in 13.33%. In this study most of the patients ignored and did not took any notice of the milder signs and symptoms. They took over the counter medication and presented in emergency mostly in the advanced stage with poor prognosis. We should encourage and make our people aware of the colorectal carcinoma, and educate them not to ignore the common minor symptoms of colorectal carcinoma. Proper investigation with colonoscopy and barium enema for early diagnosis of the

colorectal carcinoma are helpful. Every step must be taken for screening and surveillance of such signs and symptoms.⁸

In the clinical data available in literature for the right and left sided tumours, it is being mentioned that the position of the primary tumour of colorectal carcinoma can change the treatment options. In primary tumors which arise in left side of the colon (descending colon, splenic flexure, sigmoid and rectum) the survival of patient was longer than those having primary tumors arising from the right side of the colon.⁹ The right sided colorectal carcinoma are larger in size and lymphnodes are more commonly involved. In the right sided colorectal carcinoma there were differences in the stage at the time of presentation. In right sided tumors stage 1 and 3 were more common than left sided colorectal carcinoma (16,7.5% vs 7,2.7%, 29,13.7% vs 15,5.6%).¹⁰

The prognosis of the right sided tumors is bad and the overall survival is 10.9 months while it is 15.8 months in left sided tumors.¹¹ The location of the tumor must be taken into account when deciding the treatment of the advanced and early colorectal carcinoma, as there is a role of radiotherapy in rectal carcinoma and chemotherapy in colonic carcinoma.¹²

In this study 90% of the patients presented with the left sided CRC and most common sites were rectum (40%) and rectosigmoid junction (36.67%). Few studies suggested that right sided colorectal cancers are more common (54.53%) than left sided colorectal cancer.^{13,14} Right sided colorectal cancer presents with more advance stage and are poorly differentiated tumors as compared to left sided colorectal cancer.¹⁵

Frequency of Duke A and B in the right side and left side of the colorectal carcinoma is 27.4% and 72.6% respectively.⁷ In this study Duke stage A and

B were 10% of the total colorectal carcinoma. The percentage of Duke C and D in the literature is 36.9% in the right sided tumors. In this study patients presented with advanced stage which is alarming. Awareness must be created among general population and medical practitioners as to the identification of early symptoms and prompt referral of such patients to oncology services.

CONCLUSIONS:

Most of the patients presented in emergency with large bowel obstruction in advanced stage of Duke C and D with bad prognosis. Left sided colon was predominantly involved and the most common site was rectum and rectosigmoid areas.

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Received for publication: 05-06-2018

Accepted after revision: 20-09-2018

Author's Contributions:

Bushra Kiran Naeem: Manuscript writing, planning and data analysis

Mazhar Iqbal: Manuscript writing, planning and data analysis.

Muhammad Tahir: Data collection.

Gul Muhammad: Data collection.

Malik Musadiq: Data collection.

Sughra Perveen: Data collection

Conflict of Interest:

The authors declare that they have no conflict of interest.

Source of Funding:

None

How to cite this article:

Naeem BK, Iqbal M, Tahir M, Muhammad G, Musadiq M, Perveen S. Pattern of colorectal carcinoma: Two year experience. J Surg Pakistan. 2018;23(3):115-19. Doi:10.21699/jsp.23.3.9.