

Emergency Presentation of Colorectal Carcinoma in Eastern India

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Abstract

Aim: To study the various presentations of carcinoma colon presenting at the emergency.

Methods: This was a non randomized prospective observational study, carried out over a period of one year at a tertiary care hospital in West Bengal. All patients of age 12 years and above suspected of or histopathologically proved colorectal cancer presenting with acute intestinal obstruction, perforative peritonitis or bleeding P/R and posted for emergency operation during the study period were included in the study.

Results: 50 cases of colorectal carcinoma patients presenting in emergency settings were analyzed over twelve months. 33 cases of carcinoma colon and 17 cases of carcinoma rectum constituted these 50 cases. The average age in this study was 55 years; 59 years for carcinoma colon and 50 years for carcinoma rectum. Median age of presentation was 51-60 years. Male: Female ratio is 1.27:1. The rectum (34%) is the most affected site. The most common site of involvement for rectum was lower 1/3rd (64.70). Most of the patients in emergency setting came with intestinal obstruction (90%). Proliferative / polypoidal type of carcinoma was seen commonly in colon and ulcerative type of growth was commonly in rectum. In all cases adenocarcinoma was the microscopic type both in colon and rectal carcinoma. 10ng/dl, whereas 24% had >10ng/dl. So over-all 56% patients had raised CEA level. Palliative colostomy alone was done in 6% of patients; rectosigmoid resection was done in 18% of patients, whereas, two stage— colostomy+ LAR and APR were done in 6% and 18% of patients respectively.

Key words: Colorectal carcinoma, emergency presentation, management

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I. Introduction

Colorectal cancer includes cancerous growths in the colon and, rectum. With 655,000 deaths worldwide per year, it is the fourth most common form of cancer in the United States and the third leading cause of cancer-related death in the Western world(1). The large bowel is a leading site for cancers in developed countries (2). Globally the highest incidence rates are seen in Australia, New Zealand, Europe and North America, and the lowest rates in Africa and Asia. Overall, 60% of the cancers are from developed countries. In Indian population it is the 10th most common cancer, and constitutes 4% of cancer deaths (3).

The proportion of colorectal cancer cases that present as an emergency varies in the recent world literature from 6% to 34%. Emergency presentation has been associated with higher morbidity, higher perioperative mortality, a longer hospital stay, advanced pathologic stage, and poorer long-term survival (4). In view of the above divergent opinions regarding management of colorectal carcinoma presenting as emergency case this study is undertaken to evaluate the clinical and histological factors which influence the management of colorectal carcinoma.

II. Methods

This was a non randomized prospective observational study, carried out over a period of one year at a tertiary care hospital in West Bengal. All patients of age 12 years and above suspected of or histopathologically proved colorectal cancer presenting with acute intestinal obstruction, perforative peritonitis or bleeding P/R and posted for emergency operation during the study period were included in the study. Patients who were conservatively managed and later posted in elective operation or deemed unfit for surgery were excluded. Parameters studied were the demographic profile, clinico-pathological profile and results of treatment. Study

tools included sociodemographic status, detailed history and examination, routine blood examination, imaging, operative notes and follow up records.

III. Results

50 cases of colorectal carcinoma patients presenting in emergency settings were analyzed over twelve months. 33 cases of carcinoma colon and 17 cases of carcinoma rectum constituted these 50 cases. Distribution according to age and sex is given in **Table 1**. The most common age group affected is in the 6th decade, followed by 7th decade. The average age in this study was 55 years; 59 years for carcinoma colon and 50 years for carcinoma rectum. Median age of presentation was 51-60 years. Male: Female ratio is 1.27:1. The male to female ratio for carcinoma colon and rectum were 1.06:1 & 1.83:1 respectively. About 82% of patients in the study were non vegetarian. The rectum (34%) is the most affected site. The most common site of involvement for rectum was lower 1/3rd (64.70). The colonic sites are illustrated in **Chart 1**. **Table 2** shows the various presentations. Most of the patients in emergency setting came with intestinal obstruction (90%).

Proliferative / polypoidal type of carcinoma was seen commonly in colon and ulcerative type of growth was commonly in rectum. In all cases adenocarcinoma was the microscopic type both in colon and rectal carcinoma. More than 50% of the tumours of colon and rectum were moderately differentiated. From the study we found patients younger than 50 yrs presented more with advanced disease [50% with Duke's C and 35% with Duke's D stage] than the patients in the 6th decade. Liver was the commonest site of distant metastases, followed by peritoneum, omentum, ovary, lung and bone. 32% of patients had preoperative CEA level between 5-10ng/dl, whereas 24% had >10ng/dl. So over-all 56% patients had raised CEA level.

Palliative colostomy alone was done in 6% of patients; rectosigmoid resection was done in 18% of patients, whereas, two stage— colostomy+ LAR and APR were done in 6% and 18% of patients respectively. Various operations performed are given in **Table 3**. In this series, 13 cases were presented with distant metastasis. All had local, perineal or pelvic recurrence and distant metastases in liver, lung and were associated with persistent local pain and other debilitating symptoms.

Post-operative CEA level was found a good investigative tool for early determination of recurrence of the disease. Preoperative CEA level was found higher in advanced stage and in bad pathological variant of tumor. Post-operative complications were seen in approximately 20% of cases and majority of them were mild in nature. Mortality rate in this study was more in carcinoma rectum (23.52%) than carcinoma colon (21.21%).

IV. Discussion

Though colorectal carcinoma is a disease of old age, over the last twenty years a changing trend has been noted with younger patients presenting with the disease more frequently (5). A study on white and oriental population with colorectal carcinoma showed the mean age at diagnosis was 69.8 years in white patients vs. 48.3 years in oriental patients (6). Survival is poor in colorectal carcinoma patients admitted to hospitals through the emergency department than in electively admitted patients even after adjusting for age and morbidity. Patients diagnosed through an emergency department present with higher rates of complications and most frequently undergo emergency surgery (7).

Colorectal malignancy is more common in males than in females. According to study, male: female ratio for rectal carcinoma in India is 2.9:1 (8), Our study showed male: female ratio 1.27:1, affecting 56% men and 44% women. But there are studies which show a higher ratio of females to males (9). There has been a rise of Colorectal Carcinoma (CRC) in India during last three decades. This rise in case loads in hospital is primarily due to the increase in the Indian population combined with ageing of the population. A significant proportion of patients with CRC will seek emergency medical care during the course of their illness and treatment. These conditions include, but are not limited to perforation, hemorrhage, and obstruction. The presentation of a patient with these conditions can lead to higher morbidity and mortality. The high incidence of emergency presentations in our study is again a finding which does not conform to the incidence published in the literature. The reason for this high incidence for acute presentation could be that people of our country tend to visit a doctor very late in the course of the disease process.

Our study reaffirmed the general trend towards a right sided migration of colonic carcinoma which has been reported in a number of population based studies (8). The commonest histologic type of our series was moderately differentiated adenocarcinoma (52%). In this study, 18% had well differentiated carcinomas and 24% were poorly differentiated adenocarcinomas. Mucinous carcinoma was seen in three (6%) patients. According to various literatures (10), the usual histological variety of colorectal malignancy is moderately differentiated adenocarcinoma. So in this series resectability of carcinoma colon was 81%. Lower resectability rates were obtained by Johnson *et al* (1959), 42.8%. While much higher resectability rates were reported by Glenn and Mischery (1966) 92.3%, which compares best with our series.

The limitations of this study to begin with were that the actual incidence of this disease in the population as a whole could not be assessed, as the study deals with hospital admission only. Secondly a

detailed study could not be undertaken to establish any epidemiological trend, because of small number of cases. And finally detailed follow- up studies to find out the long term survival rates, the efficacy of and complications of treatment could not be carried out because of lack of time.

To conclude, our study reaffirms the general trend towards a right sided migration of colonic carcinoma and also corroborates the recent worldwide trend where younger patients are presenting with advanced disease.

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TABLE 1: DISTRIBUTION OF CASES OF COLORECTAL CANCER WITH RESPECT TO AGE & SEX

Age group in years	Colon(n=33)				Rectum(n=17)			
	M	F	Total	%	M	F	Total	%
12-20		1	1	3.03%	0	0	0	0%
21- 30	1	0	1	3.03%	0	2	2	11.76%
31-40	1	3	4	12.1%	3	1	4	23.5%
41-50	2	4	6	18.18%	3	0	3	17.64%
51-60	3	7	10	30.30%	5	2	7	41.17%
61-70	8	1	9	27.27%	0	1	1	5.88%
71-80	1	0	1	3.03%	0	0	0	0%
>80	1	0	1	3.03%	0	0	0	0%
Total	17	16	33	100%	11	6	17	100

CHART1: SITES OF COLORECTAL CARCINOMA

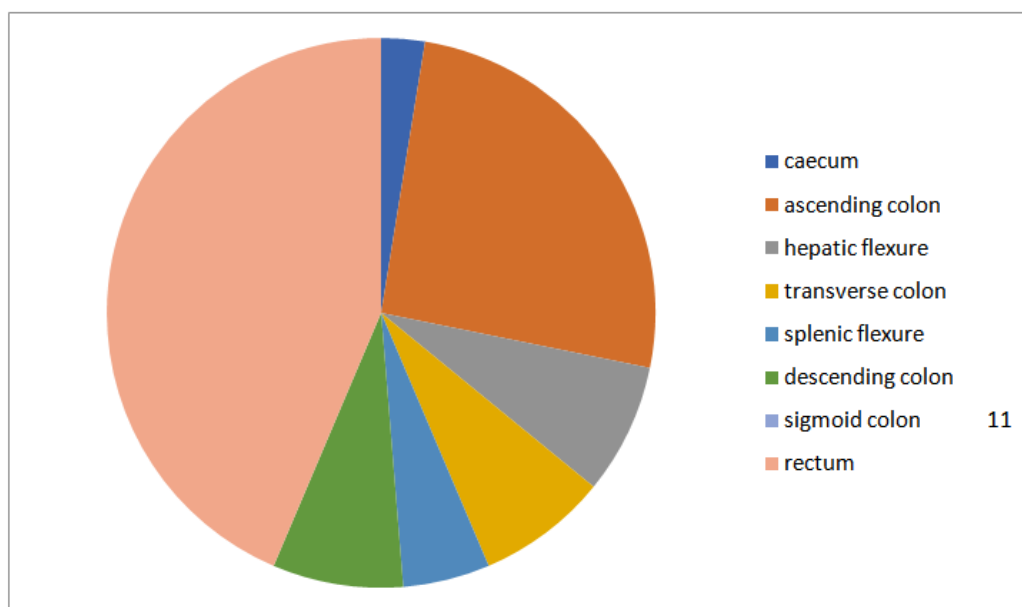


TABLE 2: TABLE SHOWING NO. OF CASES PRESENTING WITH DIFFERENT SYMPTOMS

PRESENTATION	NO.OF PATIENTS	%
BLEEDING PR	24	48%
MUCOUS IN STOOL	8	16%
CHANGE IN BOWEL HABIT	33	66%
TENESMUS	10	20%
PAIN	35	70%
WEIGHT LOSS	40	80%
INTESTINAL OBSTRUCTION	45	90%
PERITONITIS	04	8%
HEPATOMEGALY	01	2%
ANAEMIA	44	88%
MELENA	19	38%
ABDOMINAL LUMP	13	26%

TABLE 3: OPERATIONS PERFORMED

SURGERY DONE	NO OF PATIENTS	PERCENTAGE
Colostomy Alone	3	6%
Loop ileostomy	2	4%
Rt. Hemicolectomy	8	16%
Extended Rt. Hemicolectomy	5	10%
Extended Lt. Hemicolectomy	00	00
Lt. Hemicolectomy	06	12%
Transverse colectomy	1	2%
Rectosigmoid Resection	9	18%
caecostomy	1	2%
2 Stage— colostomy+ resection+colorectal anastomosis	3	6%
2 Stage— colostomy+ LAR	3	6%
2 Stage— colostomy+ APR	9	18%

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