

A Prospective Study on the Incidence of Colorectal Malignancy in <36 Years of Patients Attending the Surgery Department in a Tertiary Care Hospital

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ABSTRACT

Introduction: Colorectal cancers are one of the leading causes of cancer related deaths worldwide. Its a common knowledge that the colorectal cancers usually occur in older age groups.

Methods: 21 cases of colorectal malignancy each of age 40 years and below conducted in patients admitted in department of surgery were included. This study was conducted in Department of General Surgery, Muzaffarnagar Medical College, Muzaffarnagar, Uttar Pradesh, India.

Results: The analysis of this study of management suggestive that out of 21 patients, 15 patient were still receiving treatment and 2 patients presented in emergency with features of intestinal obstruction and underwent urgent exploratory laparotomy and were treated accordingly. 4 patients declined further adjuvant therapy after surgery.

Conclusion: This study suggests that the surgeons and primary care physicians should keep this high index of

suspicion in their mind while treating the young patients.


Keywords: Malignancy, Gastrointestinal Tract, Colorectal Cancer, Polyposis Coli.

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INTRODUCTION

The most common¹ malignancy of the gastrointestinal tract is colorectal carcinoma. All over the world, it is the major cause of cancer-related deaths.² There is an age-dependent increase in this problem. It starts at the age of 40 years and before. It is most rare in³ young adults and adolescents. Though colorectal cancers occur mainly in older patients yet it can affect younger adults also (varying between 2 and 23 %).⁴ Surprisingly, the finding of colorectal carcinoma in⁵ an infant has been reported. Steinberg and Co-workers reported that in more than half of adolescent, the diagnosis of colorectal cancer is delayed for more than 1 year. Peberon revealed the occurrence of carcinoma in a 9-year-old child in one of his study. He further observed that the colon is affected more frequently by cancer than any other parts of digestive in children.⁶ The primary factors which contribute to poor prognosis in young patients are inadequate screening and treatment, low index of suspicion, especially in familial adenomatous polyposis coli.⁷ Some of the other poor prognostic factors are also generally associated with carcinoma in younger age group.⁸ These are in advanced stage at presentation, delay in diagnosis and poorly differentiated carcinomas. There are some contradictory reports documented that colorectal cancer in young patients had worse survival compared with the older

counterparts.⁹ Therefore, it is essential for surgeons to identify the sign¹⁰ and symptoms of colorectal cancer in young patients and to take prompt action to diagnose. It will lead to early treatment of the disease. The above discussion emphasizes the early diagnosis of colorectal cancers in young patients. The present study was conducted on colorectal malignancy in young patients of age less than 40 years.

MATERIALS & METHODS

Study Population

21 cases of colorectal malignancy each of age 40 years and below conducted in patients admitted in department of surgery were included.

Study Area

This study was conducted in Department of General Surgery, Muzaffarnagar Medical College, Muzaffarnagar, Uttar Pradesh, India.

Data Collection

Informed consent was taken before enrolling the patient in the study. 21 cases of colorectal malignancy meeting the criterion of the study were approached for the study. Diagnosis was confirmed by histo-pathological examination contributed by

clinical, endoscopic and radiologic investigations. Preoperative evaluation was done with detailed clinical history. General examination was done in which contour of abdomen, presence of any visible lump, any visible bowel loops or veins over abdomen or presence of any scar was noted. Rest of the general and system examination was also carried out. Digital per rectal examination was done in all patients. If any growth was detected on per rectal examination then type, extent, consistency and fixity to adjacent structure, bleeding on touch and any associated pathology was noted. and further patient was evaluated by investigations like blood profile, ultrasound and CT- Scan. Special investigations like procto- sigmoidoscopy, colonoscopy and barium enema was done in some patients depending upon the site of growth. With proper bowel preparation in elective operable cases patients were subjected to radical or palliative surgery whenever possible and exact staging of malignancy was done. As per the staging, the patients were advised to attend chemotherapy and were kept in follow up to determine the follow up.

Follow up was done by regular visits with estimation of serum CEA, X-ray chest, ultrasound and CT-Scan of the abdomen as required. Follow up done every 3 months interval for first year and every 6 months for the next year.

Exclusion Criteria

Those cases more than 40 years of age were excluded from the study. None of the patient was found to be less than 10 years of age in this study.

Inclusion Criteria

All patients were below 40 years as it was the inclusion criteria for the study

Data Analysis

Data were analyzed by the using Microsoft excel.

Table 1: Distribution of cases according to gender

Gender	n	%
Male	12	57.1%
Female	9	42.9%
TOTAL	21	100%

Table 2: Distribution of cases according to age group

Age-group	n	%
11-20	1	4.7%
21-30	6	28.5%
31-40	14	66.7%
Total	21	100%

Table 3: Distribution of cases according to site of malignancy

Site of Malignancy	n	%
Rectum	11	47.6%
Sigmoid colon	3	14.2%
Descending Colon	3	14.2%
Transverse Colon	0	0%
Ascending Colon	0	0%
Caecum	4	19%

Table 4: Distribution of cases according to adenocarcinoma

	n	%
Polyposis coli involving entire colon	1	4.7%

Table 5: Distribution of cases according to Colorectal Malignancy

Complaints	Colorectal Malignancy	%
Bleeding per rectum	15	71.4%
Altered bowel habits	10	47.6%
Malena	4	19%
Pain in abdomen	12	57.1%
Features of intestinal obstruction	3	14.2%
Lump in abdomen	1	4.7%

Table 6: Distribution of cases according to hemoglobin

Hemoglobin	n	%
Low	5	23.8%
normal	16	76.2%
Total	21	100%

Table 7: Sr-CEA Preoperatively & Postoperatively

PREOPERATIVE	n	%
Done	14	66.7%
Not done	7	33.4%
Total	21	100%
POSTOPERATIVE	n	%
Done	10	47.6%
Not done	11	52.3%
Total	21	100%

Table 8: Distribution of cases according to Pre- operative colonoscopy

Pre- operative colonoscopy	n	%
Having polypoidal growth	4	40%
Had polyps involving whole of the colon	1	10%
Growth in caecum	3	30%
Growth only in rectum	2	20%
Total	10	100%

Table 9: Distribution of cases according to Barium enema

Barium enema	n	%
Multiple polyps	1	50%
Filling defect in recto sigmoid region	1	50%
Total	2	100%

Table 10: Distribution of cases according to treatment

Treatment	n	%
Operative	18	85.7%
Non-operative (By chemotherapy)	3	14.3%
Total	21	100%

Table 11: Distribution according to operated cases

Operated by	n	%
By radical surgery	12	66.7%
Palliative surgery	6	33.3%
Total	18	100%

Table 12: Distribution of cases according to management

Management	n	%
Receiving treatment	15	71.4%
Presented in emergency	2	9.5%
Further adjuvant therapy after surgery	4	19%
Total	21	100%

OBSERVATIONS & RESULTS

In the present study, from the cases 57.1% were male and 42.9% were female. We found that, most of the cases were belongs to 31-40 (66.7%) age group followed by 28.5% (21-30) & 4.7% (11-20) age group. In this study, observed site of malignancy commonly in was rectum (47.6%) followed by sigmoid colon (14.2%), descending colon (14.2%) and caecum (19%). We were not found of malignancy affecting transverse and ascending colon cases. 1 patient had polyposis coli involving entire colon and colonoscopies biopsy revealed adenocarcinoma. In the present study, symptom were bleeding per rectum which was found in 71.4% patients followed pain in abdomen and altered bowel habits seen in 57.1 & 47.6% respectively. Anaemia was occurring in 23.8% patients while in 76.2% cases haemoglobin was normal. In the suggestive study, Sr-CEA estimation was done in 66.7% cases preoperatively. Normal value was taken as < 2.5 ng/ml in non -smokers and < 5 ng/ml in smokers. Sr CEA estimation was not done in 13 patients because either they presented in emergency or because of non-affordability of the patient. Post-operative Sr CEA estimation was done in 47.6% patients. In 2 patients barium enema was done among of which 1 patient revealed multiple polyps and 1 exposed filling defect in recto sigmoid region. The analysis of this study of management suggestive that out of 21 patients,15 patient were still receiving treatment and 2 patients presented in emergency with features of intestinal obstruction and underwent urgent exploratory laparotomy and were treated accordingly. 4 patients declined further adjuvant therapy after surgery.

DISCUSSION

Worldwide, Colorectal malignancies are the leading cause of deaths. It is reported to be 9% of all cancer related deaths.¹¹ In developed countries like Australia, New Zealand, the United States, and Europe, colorectal malignancies incidences are high. Whereas India and China are considered to be low-risk areas. In developed countries, colorectal cancer occurs within 5 most frequent cancers. Earlier countries which are having low incidence rates of it have started reporting an increase in incidence rates.

The increase in incidence rate is also influenced by improved diagnostic techniques.¹² Around 90% of colorectal malignancies incidence occurs in the age group of 50 years. Though the prevalence of colorectal cancers is¹³ increasing in younger people. Due to the low index of suspicion, it tends to be diagnosed late in young patients. Furthermore, it is also reported that it is very much aggressive in young age and shows more venous and perineural invasion. Early diagnosis with a high index of suspicion can take the prognosis in favour of younger patients.¹⁴

There are similar rates of colorectal malignancies in men and women. It has been found that male to female ratios for incidence and surgeries was highest for distal cancer. It is also reported that it is increasing with time.¹⁵

There are some modifiable and non-modifiable factors which are responsible for colorectal cancers. Non-modifiable factors constitute age, history of adenomatous polyps, history of colorectal cancers in family members and inherited genetic disorders like familial adenomatous polyposis (FAP) and hereditary nonpolyposis colorectal cancer (HNPCC). Modifiable risk factors for colorectal¹⁶ cancers are environmental factors, dietary habits, obesity, sedentary lifestyle, and smoking.^{17,18}

The present study found that rectum was the commonest site of colorectal malignancies. In females, malignancy in caecum was more common and a lower proportion of cancers located in the rectum.¹⁹

Sr-CEA plays an important role in diagnosis as well as in assessing the metastasis and recurrence of the colorectal malignancies.²⁰ Early diagnosis is decisive in the management of colorectal carcinoma especially in the young age group in whom the diagnosis may be delayed due to low index of suspicion. Delay in diagnosis affects the outcome directly.²¹ The prognosis is very good if the malignancy is diagnosed earlier in the localized stage. The 5-year prognosis of localized stage disease is 90%. While the 5-year prognosis of the regional and metastatic stage is 70% and 10% respectively.

CONCLUSION

Just Because of the labelling of the colorectal carcinoma as geriatric age group disease, it may be overlooked in young age group even when some of them present with classical features. The present study was aimed at analysing the colorectal malignancy in younger patients. This study suggests that the surgeons and primary care physicians should keep this high index of suspicion in their mind while treating the young patients.

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