

Prevalence of Colorectal Malignancy in Patients of Early Age-Group – A Hospital Based Prospective Study

Ram Nagina Sinha¹, Puneet Agrawal^{2*}

¹Associate Professor; ²Assistant Professor, Department of Surgery, FH Medical College & Hospital, Tundla (UP), Firozabad, U.P.

ABSTRACT

Background: : Colorectal cancers being one of the leading causes of cancer related deaths in the world. Earlier it was thought that the colorectal cancers usually occur in older age groups. This thought has led to decrease in chances of malignancy in young patients. Therefore, we conducted this study of colorectal cancers in young patient to emphasise the importance of keeping in entity in mind while dealing with the patient presenting with complaints consistent with colorectal malignancy even if there age is less than forty year. **Methods** This study was a prospective cohort study of 30 cases of colorectal malignancy of age 40 years and below conducted in patients admitted in Department of Surgery at FH Medical College & Hospital, Tundla (UP), Firozabad, U.P. **Results:** In this study of colorectal cancers in young patient maximum number of patients were found in the age group of 31-40 years (70.4%) followed by in the age group of 21-30 years (27.57%) and 11-20 years (2.58%). Males were found to be affected more (59.76%) than females (41.23%). Most common site of involvement was found to be rectum (59.24%) followed by rectosigmoid (15.36%), caecum and descending colon (10.20%). Most common sign was found to be bleeding per rectum (71.24%) and most

common symptom was found to be altered bowel habits (53%) followed by pain abdomen (62.58%). Mucinous adenocarcinoma (54.68%) was found to be most common histological type of colorectal malignancy followed by adenocarcinoma (46.35%). **Conclusions:** Our study was aimed at analysing colorectal malignancy in young patients. It should promote high index of suspicion on the part of treating surgeons about this entity even in young patients.

Keywords: Colorectal malignancy, young adults, high index of suspicion, prognosis.

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Corresponding Author

Dr. Puneet Agrawal, Assistant Professor, Department of General Surgery, FH Medical College & Hospital, Tundla (UP), Firozabad, U.P.

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INTRODUCTION

Colorectal carcinoma is the most common malignancy of the gastrointestinal tract.^[1] It is one of the leading causes of cancer related deaths world-wide.^[2] There is an age dependant increase in incidence with each decade starting at the age of 40 years and before which it is rare particularly in

young adults and adolescents.^[3] Although colorectal cancers occurs predominantly in older patients, it does affect younger adults with incidence varying between 2 and 23 %.^[4] Interestingly the finding of colorectal carcinoma in an infant has been reported in literature.^[5] The diagnosis of colorectal cancer is delayed for more than 1 year in more than half of adolescent as reviewed by steinberg and co-workers. Peberton reported carcinoma in 9-year-old child. he further observed that in children the colon is affected more frequently by cancer than any other parts of digestive

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system.^[6] Inadequate screening and treatment due to low index of suspicion in young patients is one of the primary factors contributing to poorer prognosis in young patients.^[7] Advanced stage at presentation, delay in diagnosis and poorly differentiated carcinomas are some of the poor prognostic factors in younger age groups.^[8] Some reports documented that young colorectal cancer patients had worse survival compared with the older counterparts.^[9]

Thus, it is important for surgeons to recognise the potential for colorectal cancer in young patients and to take an aggressive approach to the diagnosis and early treatment of the disease.

This entity must be considered in differential diagnosis even in young patients if they present with signs and symptoms consistent with colorectal carcinoma.^[10]

METHODS

This study was a prospective cohort study of 30 cases of colorectal malignancy of age 40 years and below conducted in patients admitted in department of surgery at FH Medical College & Hospital, Tundla (UP), Firozabad, U.P. The duration of study was 1 years.

Diagnosis was confirmed by histopathological examination contributed by clinical, endoscopic and radiologic investigations. Preoperative evaluation was done with detailed clinical history.

Special investigations like proctosigmoidoscopy, 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 done every 3 months interval for first year and every 6 months for the next year.

RESULTS

All patients were below 40 years as it was the inclusion criteria for the study and those 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. There was 1 patient between 11-20 years. 12 cases were between age group of 21-30 years. Maximum number of patients (29/42) were in the age group of 31-40 years.

Out of the studied cases 23 (55%) patients were male and 19 (45%) were females.

The most common site of malignancy observed in our study was rectum (57.14%) followed by sigmoid colon (16.66%), descending colon (11.90%) and caecum (11.90%). No cases were found of malignancy affecting transverse and ascending colon [Table 1].

Commonest symptom was bleeding per rectum which was present in 29/42 patients (69.04%) followed pain in abdomen and altered bowel habits which were seen in 25 (59.52%) and 21 (50%) patients respectively. Less common presenting complaints were Malena (19.04%), features of

intestinal obstruction (11.90%) and lump in abdomen (2.38%). Family history was present only in 1 patient who had familial adenomatous polyposis coli.

Table 1: Site distribution of malignancy in studied cases.

Site of Malignancy	Total No of Patients	Percentage
Rectum	20	59.24%
Sigmoid colon	5	15.36%
Descending Colon	2	10.20%
Transverse Colon	0	0
Ascending Colon	0	0
Caecum	3	10.9

Haemoglobin was low in 10 patients suggestive of anemia while in 30 patients haemoglobin was normal.

All patients of carcinoma rectum (22/30) had palpable growth per rectally. Patients underwent investigations in the form of complete hemogram, random blood sugar, kidney function test, liver function test, Sr CEA estimation, FNAC/ biopsy, Xray chest and abdomen, Ultrasound, CT abdomen, colonoscopy and barium Enema.

Table 2: Surgery done in studied cases.

Surgery performed	No of patients
Abdominoperineal resection (APR)	10
Anterior resection (AR)	4
Right hemicolectomy (RHC)	3
Palliative sigmoid colostomy (SC)	6
Palliative transverse colostomy (TC)	3
Total proctocolectomy with ileostomy (TPCL-i)	1
inoperable	3
Total	30

Estimation of Sr-CEA was done in 25 patients 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 10 patients because either they presented in emergency or because of non-affordability of the patient. Post-operative Sr CEA estimation was done in 16 patients. Majority of them showed reduction in CEA values after resection and some of them later showed rising levels of CEA due to recurrence or metastasis.

All patients were subjected to proctoscopic biopsy, colonoscopic biopsy or fine needle aspiration cytology and the diagnosis of malignancy was confirmed based on histopathology.

All patients were subjected to chest X-RAY and no patient revealed lung or bony metastasis on Xray chest. Computerised tomographic scans were done in all patients except in those presented in emergency. CT scan confirmed

the findings found in ultrasound. Moreover, it was more precise in detecting metastasis.

14 patients underwent preoperative colonoscopy, revealed no synchronous malignancy. 4 of them were having polypoidal growth in rectosigmoid region. One patient had polyps involving whole of the colon. 1 patients had growth in caecum and rest had growth only in rectum. Those patients presented in emergency were not subjected to this investigation.

Barium enema was done only in 2 patients out of which 1 patient revealed multiple polyps and rest revealed filling defects in rectosigmoid region.

Out of 27 patients who were operated radical surgery was done in 18 (66%) while palliative surgery was done in 12 (34%) patients.

The analysis of staging of the patients revealed that majority of the patients ie 20 out of 42 presented in stage C followed by in stage B and D. Least cases presented in stage A (9.52 %).

The histopathological examination of the colorectal malignancy revealed that most common type of malignancy was mucinous adenocarcinoma which was seen in 20 (54.68%) patients followed by adenocarcinoma which was seen in 8 (46.35%) patients. Signet ring cell adenocarcinoma and basaloid variant type of carcinoma was seen in 1 patient each [Table 3].

Table 3: Histopathology of carcinoma in studied cases.

Type of Neoplasm	No of patients	Percentage
Adenocarcinoma	8	46.35%
Mucinous adenocarcinoma	20	54.68%
Signet ring cell Adenocarcinoma	1	2.38%
Basaloid variant	1	2.38%

DISCUSSION

Colorectal malignancies are one of the major cause of deaths due to malignancies worldwide. it is found to be cause of death in 9% of all cancer related deaths.^[11] Countries earlier thought to be having low incidence rates of colorectal cancers have started reporting increase in incidence rates. This increase is also shown to be influenced by improved diagnostic techniques and screening program.^[12]

Like in most of the malignancies the incidence of colorectal cancer diagnosis increases as the age advances. Its incidence increases after the age of 40 and there is significant increase in the incidence of colorectal malignancies after 50 years of age.^[13]

Approximately 90% of colorectal malignancies occur in people in the age group of more than 50 years. However, the incidence of colorectal cancers is increasing in younger population.^[14]

Environmental factors, dietary habits, obesity, sedentary lifestyle and smoking are the most important modifiable risk factors for colorectal malignancies.^[15] Diet strongly influences the risk of colorectal cancer, and changes in food habits might reduce risk of developing this cancer

substantially. Diets high in animal fat is a major risk factor for colorectal cancer.^[16] High meat consumption has also been implicated in the development of colorectal cancer. Meat consumption increases the risk of colon cancer more than rectal carcinoma.^[17]

In our study, we found rectum to be commonest site of colorectal malignancies. in other studies of colorectal malignancies rectum, ascending colon and descending colon were near about equally affected. It was moreover found that in women malignancy involving caecum was more common and a lower proportion of cancers located in the rectum.^[18]

CONCLUSION

The common knowledge about colorectal cancer occurring after 5th decade is responsible for overlooking the possibility of this entity in younger patient even when some of them present with classical features pointing towards the possibility of colorectal malignancy. Our study was aimed at analysing colorectal malignancy in young patients. It should promote high index of suspicion on the part of treating surgeons about this entity even in young patients.

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