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CLINICO-PATHOLOGICAL STUDY OF COLORECTAL CARCINOMA

Dr. Md Masud Sattar[1*] and Dr. Mahboobur Rahman[2]

[1]MBBS, MS (Surgery), Assistant Professor of Surgery, Khulna Medical College Khulna, Bangladesh.
[2]M.Sb(General Surgery), Senior Consultant (Surgery), 250 bed General Hospital, Kishorganj, Bangladesh.

***Corresponding Author: Dr. Md Masud Sattar**

MBBS, MS (Surgery), Assistant Professor of Surgery, Khulna Medical College Khulna, Bangladesh.

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ABSTRACT

Background: Adenocarcinoma of the rectum is a major cause of mortality & morbidity in north America & Western Europe. Colorectal carcinoma is the fourth most common variety of malignant tumor foundinfemale andsecondmostinmale.Overall,itisthesecond 1nost common carcinoma in western countries withapproximately 18000 patients in the UK dying per annum. The rectum is the frequent site involved. The 5-year survival rate is approximately 50%. Screening & removing adenomatous polyps may improve survival rate. Almost all rectal cancers are primary adenocarcinoma, which arises in rectum as an intramural epithelial lesion, usually in an adenomatous polyp or gland. As cancers grow, they invade the muscularis mucosa and lymphatic and vascular structures to involve regional lymph nodes, adjacent structures & distant sites especially the liver. **Objective:** The purpose of the study was to consider the serum CEA level as a diagnostic tool for advanced colorectal carcinoma. **Methodology:** This study was a cross sectional study. This study was conducted by Histopathologically prayed all colorectal carcinoma patients were selected from the surgical wards of DMCH who will meet the selection criteria of the study. 50 cases (Ideally the sample size should be 368 but due to time & resource constraints the present study has been done on 50 cases only). **Result:** For this purpose, patients' age ranged from 15 years to 75 years & above were allowed in the study in which 41 (82%) cases had been suffering from rectal carcinoma and rest 9 (18%) from Colonic carcinoma. The present study reveals that serum CEA level is raise in 3 (11.11%) of cases with tumor size 2-5 cm and 21 (91.30%) of cases with tumor size >5 cm; serum CEA is normal in other cases. It was observed that S. CEA level was raised in 100% cases of stage 'D', 92.31% cases of stage 'C', and 30.56% cases of stage 'B' lesion. **Conclusion:** So, it can be concluded that S. CEA level is significantly higher in advanced stages of carcinoma with or without metastasis and lower in early stages. Conclusively it can be said that S. CEA level could play an important role to determine the diagnosis of advanced stages of colorectal carcinoma and prognosis.

KEYWORD: Colorectal carcinoma, adenocarcinoma, colon & rectum.

INTRODUCTION

Tumors of the colon & rectum are the second most common malignancy in male and fourth most in female. It is one of the most frequent neoplasms with an incidence of 40 in 100,000.[1] Till date it is a major source of mortality and morbidity. Overall, it is the second most common carcinoma in western countries, with approximately 18,000 patients in the United Kingdom dying per annum.[2] Though the incidence of colorectal carcinoma in our country is no less than the western world, there is no broad-based study regarding this. The rectum is the most frequent site involved.[3] Carcinoma of colon is more common in women and carcinoma of the rectum is more common in men. Increased intake of saturated fat, increased caloric intake, decreased dietary calcium and decreased intakes of fiber are among the possible dietary influences for causing colorectal carcinoma.[4] In the early stages of presentation, the patient may be asymptomatic or many have per rectal bleeding, tenesmus, early morning diarrhea, unexplained anemia and weight loss may be present.[5] Pelvic pain is seen in later stages of disease and indicates local extension & infiltration of the surrounding nerves.[6] In our country those who come to tertiary level hospitals are mostly late cases & already treated outside the hospital inadequately or inappropriately. Serum Carcinoma Embryonic Antigen level correlated well with histological type & duke's staging.[7]

There was a strong correlation between mean preoperative C.E.A & tumor stage, depth & lymph node involvement. C.E.A measurement is never found to be the most cost-effective test in detecting potentially curable recurrent disease.[8]

The Clinicopathological study of colorectal carcinon1a a study of 50 cases was done in patients of Dhaka Medical

College Hospital during the period of July 2005 to June 2006. In this study I have tried my level best to give special emphasis to clinical pattern of presentation and pathological corroboration.

OBJECTIVE

General Objective

To consider the serum CEA level as a diagnostic tool for advanced colorectal carcinoma.

Specific Objectives

1. To see the level of CEA in colorectal carcino1na.
2. To see the frequency of colorectal carcinoma among the patients coming from different income group.
3. To observe the significance of dietary habits among the patients.
4. To observe any relationship of colorectal cancer with blood group.

MATERIAL AND METHODS

Type of study: Cross sectional study.

Sample size: 50 cases (Ideally the sample size should be 368 but due to ti111e and resource constraints the present study has been done on 50 cases only).

Selection of cases: Admitted patients in surgery wards of DMCH.

Histopathologically prayed all colorectal carcinoma patients were selected from the surgical wards of DMCH who will meet the selection criteria of the study.

Study period: The study was carried out during the period fro1n July 2005 to June 2006.

Data collection technique

Data were collected by face-to-face interview by a se1nistructured questionnaire. History taking and clinical examination was done. Observation of laboratory investigation and its findings. All the information, which was collected by above 111eans, was put in the structured questionnaire.

Data analysis

After data processing, it was analyzed with the help of computer using SPSS program. Data were analyzed & findings were focused with the tables and graphs as required. Different association of findings was also assessed with the help of statistical tools & techniques.

Data collection tools

A semi structured (Both open & close ended questions) questionnaire, which was used for face to face interview.

An observation checklist, which was used for collection of information by clinical examination of the patients & the findings of their relevant laboratory investigations.

Data processing

Proper permission was taken from the dependent concerned for this study. All the patients were informed about the nature of the study. Their consent was taken on a consent form.

Inclusion criteria

Histopathologically diagnosed case of adenocarcinoma of colon & rectum.

Exclusion criteria

Presence of concurrent other malignant tumor.
Any disease of colon & rectum other than adenocarcinoma.

Data analysis

After data processing, it was analyzed with the help of computer using SPSS program. Data were analyzed & findings were focused with the tables and graphs as required. Different association of findings was also ·assessed with the help of statistical tools & techniques.

RESULTS

Table 1: Age distribution of the patients.

Age group	Number of patients (N)	Percentage (%)
15-24	05	10
25-34	12	24
35-44	14	28
45-54	07	14
55-64	07	14
65-74	02	04
75 & above	03	06

The above table reveals that highest percentage of patients came from 35-44 age group (28%), followed by 25-34 age group (24%). The mean age of the patient is 40.90 & standard deviation is 16.06.

Table 2: Sex distribution of patients.

Sex	Frequency	Percentage (%)
Male	30	60
Fe1nale	20	40
Total	50	100

Table 2, Shows the relation between colorectal carcinoma with sex among the patients. Here it clearly indicates that the percentage of male is more than female who suffered fro1n colorectal carcinoma.

Table 3: Distribution of blood group (ABO) of the patients with *colorectal carc1noina.*

Blood group	Frequency (n)	Percentage (%)
'A'	11	22
'B'	19	38
'AB'	5	10
'O'	15	30
Total	50	100

Table 3, Shows the relation between different blood groups with the colorectal carcinoma the highest frequency was found among the 'B' group 19(38%) followed by 'O' 6>group 15 (30%).

Table 4: Distribution of dietary preferences of patients.

Dietary preference	Frequency	Percentage (%)
Fish+ Vegetable	02	4
Meat + Vegetable	10	20
Fish + Meat+ Vegetable	38	76
Only vegetable	0	0
Others	0	0

Among the patients more than ¾th of the patients were used to take mixed food containing (fish, meat, & vegetable); none were truly vegetarian.

Table 5: Site of the lesion of the patients.

Site of the lesion	Frequency	Percentage (%)
Colon	9	18
Rectum	41	82
Total	N= 50	100

Here, the table shows that according to site rectal cancer occurs 1nore frequently 41 (82%) whereas the number of patients of colonic carcino1na is 9 (18%).

DISCUSSION

In USA colorectal carcinoma is the second most common cause of cancer death. There were an estimated 130,200 new cases of colorectal cancer of which 36400 involved the rectum & 18,500 the recto sigmoid junction.[9]

This study of colorectal carcinoma has been carried among 50 cases, Ideally the sample size should be 368 but due to time & resource constraints the present study has been done on 50 cases only; who were treated in surgery wards of DMCH during the period of July' 05 to June' 06. All the cases were finally diagnosed after being confirmed by Histopathological examination.

Western study reveals that overall male to female ratio is 1.7:1 & median age of presentation is 67 years. But the frequency of colorectal carcinoma in our study are as follows 28% in age group 35-44 yrs. Followed by 24% in age group 25-34 yrs. 14% in age group 45-54 yrs.14% in age group 55-64 yrs.10% in age group 15-24 yrs. 06% in age group 75 & above. The majority of patients have enrolled in primary education (38%). The mean age of the patient was 40.90 and standard deviation was 16.06.

This study shows that colorectal carcinoma is mostly prevalent among middle (56%); lower income group (42%) & least in higher income group only (2%). This may be due to the fact that this study was done in Government hospitals where the low-income group used to take health facilities.

It is evidenced that in my study of 50 cases, 30 patients are male (60%) & 20 patients were female (4.0%). So, the overall male, female ratio was 3:2. But this study significantly differs from the western study.[10]

It includes only 50 cases it is really difficult to comment on the difference. Moreover, in our society, females are always neglected & have got little access to health facilities.

Reviewing educational status of the cases we can say that most of the incidence found among the patient who were completed their primary level (38%) and secondary level (24%) only, while the percentage of diseased person in illiterate or graduate and above level was very minimal (8%) & (6%) only.[11] This statistic has a direct. relationship with the income of the patient because most cases came from middle (56%) & lower (42%) income group.

In this study incidence of Colorectal carcinoma was highest in blood group 'B' patient (38%), followed by 'O' group (30%), 'A' (22%), 'AB'. (10%). It is difficult to draw a definitive relation between the blood group & colorectal carcinoma from such a small number of cases. It was perhaps due to overall majority of our peoples having blood group B, O, A, AB respectively.[12]

Among the 50 cases of this study irresistible of all stages S. CEA was raised in 48% of cases but when we compared it with the tumor size then we found that S. CEA level has a direct relation with the tumor size because it was evidenced that it was raised in 91.30% of cases having >5 cm of size. This study shows that S.CEA level raised with the advanced stage of the disease, Such as it was highest in stage D (100%), followed by stage C (92.31%) & stage B (30.56%). Statistically it also shows highly significant in Chi-square test where the P value is <.001.

CONCLUSION

It can be concluded that S. CEA level is significantly higher in advanced stages of carcinoma with or without metastasis and lower in· early stages. Conclusively it can be said that S. CEA level could pfay an important role to determine the diagnosis of advanced stages of colorectal carcinoma and prognosis.

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