

Colorectal Carcinoma An Analytical Study of 104 Cases

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The study includes 104 cases of colorectal carcinoma who reported during last two years (1995-96) to the Department of Radiotherapy an Oncology, I.E. Medical College/Mayo Hospital, Lahore. The analytical data revealed that the incidence increases with the increasing age having peak ages between 40-49 and 60-69 years. Male and female ratio is 1.63:1. Smoking habits were found in 33% of the case whereas 67% were non smokers; 27% of the patients presented with abdominal pain, 42% with bleeding per rectum and 31% combined of both. Also presented with constipation 48%, diarrhea 8% some were with discharge and mass. Most of the patients reported between 6-12 months after 1st symptom i.e. 37% and about 23% cases reported after one year. Concomitant diseases are hypertension, D.M. hyperthyroidism and haemorrhoids constitutes 10% of the cases Histopathology revealed adeno-carcinoma in 86% followed by melanoma. Rural and urban inhabitants were 61% and 39% respectively. Majority of the patients came with advanced stages i.e. Stag-IV 51% , Stage-III 37% and Stage-II with 12%, Overall presentation from poor socio-economical group was 75%. Patients were treated at Radiotherapy Department but the response and follow up was found poor.

Colorectal carcinomas are the second most common malignancy after lung cancer in male and breast cancer in female and the third most frequent cause of death in both sexes¹. The number of cases increase after the age of 35. Males are at greater risk than females i.e. colon 1.3:1 & rectum 1.7:1. White race is more prone to this disease. The history of colorectal carcinoma increases the risk in first degree relative whereas familial polyposis syndrome also contributes in increasing the risk factor².

Families who have propensity to develop uterine, breast or colon cancer appear to be at high risk³. In recent year the disease is moving towards right colon⁴. Adenocarcinomas are most commonly located in the colon, carcinoid tumours are most commonly found in appendix, rectum and tend to have little propensity to metastasize unless they are longer than 2cm. In the anal canal most carcinomas are epidermoids or cloacogenic in type; and adeno carcinomas are rare⁵.

The only curative therapy is surgical resection of primary tumours and regional metastatic lymph nodes. Post operative radiation therapy in tumours dissecting the bowel wall or with positive lymph node is recommended. Advanced or metastatic rectal cancers are best treated with palliative surgery or radiation Chemotherapy may be an effective radiation sensitizer⁶.

Patient and Methods

One hundred and four patients were included in this randomized study. Most of the patients were referred by consultants and general practitioners from teaching institutions and periphery in and outside Lahore during 1995-96. Majority of the patients had undergone for preliminary evaluation. In the Department of Radiotherapy an Oncology, the patients were re-evaluated after plotting and designing of the proforma and then subjected to a series of investigations for staging work up

and management. All histopathologies, bio-chemistry work up and tumour marker studies were done in Pathology Lab. K.E. Medical College, Radiological and nuclear uptake studies were carried out in Radiology, and Atomic Energy Medical Center, Mayo Hospital, Lahore. Major surgical procedures were performed in Surgical Units of Mayo Hospital, and finally radiation, chemotherapy and follow ups were carried out in Radiotherapy Department, Mayo Hospital, Lahore.

Results

All the cases examined in this study emerged both from rural (61.54%) and urban (38.46%) population of Lahore city and also from other rural parts of Punjab.

Table I

| Years | No. of Patients | Percentage |
|---------------|-----------------|------------|
| 30 | 8 | 7.70 |
| 30-39 | 18 | 17.30 |
| 40-49 | 28 | 26.92 |
| 50-59 | 12 | 11.54 |
| 60-69 & above | 38 | 36.59 |

Table II

| Years | No. of Patients | Percentage |
|--------|-----------------|------------|
| Male | 64 | 61.54 |
| Female | 40 | 38.46 |

Table III*

| Status | No. of Patients | Percentage |
|--------|-----------------|------------|
| Poor | 78 | 75 |
| Middle | 16 | 15.38 |
| Upper | 10 | 9.61 |

Table IV

| Area | No. of Patients | Percentage |
|--------|-----------------|------------|
| Rural | 64 | 61.54 |
| Female | 40 | 38.46 |

The data analyzed revealed that majority 36 cases (36.61%) of the patients falling in age group 60-69 years whereas next higher numbers of patients suffering from colorectal carcinoma were 28 cases (26.92%) in 40-49 years. The further %age of incidence is represented in chronological orders in Table I. Distribution of sex in this study revealed in Table 2. There was no significant reason for female less in number as majority of the case reported and registered reason for female less in number as majority of the cases reported and registered were male. Total 64 were male and 4 were female. The percentage are evident in Table II. Both the sexes belong to upper and lower socio-economical group. Majority 78 cases (75%) were from poor soio-economical group. Probably is of the major causative factor in propagation of the disease Table III. Demographically all the subject conceded in this study belong to both urban (40) 38.46% and rural 64 (61.54%) area Table IV. Since majority of our population concentrated in the rural area reciprocated the incidence. Thirty four cases (32.70%) gave history of smoking whereas over 67% reported to be non-smokers. Not a single cases registered as alcoholic. Smoking habits favor to enhance colo-rectal carcinoma. Out of a total 104 cases, a high %age of 44 cases (42.30%) presented with bleeding per rectum. However, over 30% cases had abdominal pain with bleeding per rectum. Majority 48% had constipation whereas other presenting complaints one reported in Table V.

Table V

| Complaints | n | %age |
|-----------------|----|-------|
| Bleeding rectum | 44 | 42.30 |
| Abdominal pain | 28 | 26.92 |
| Combined | 32 | 30.76 |
| Constipation | 50 | 48.07 |
| Vomiting | 12 | 11.54 |
| Diarrhoea | 8 | 7.69 |
| Anal mass | 4 | 3.38 |

There is direct co-relation between duration and staging of the disease the disease was significantly high 36.54% in the patient with duration of 6-12 months whereas over 23% of the patients in the study were registered between 1-2 years Table VI. All 104 cases were subjected to histopathological investigations by taking of the biopsies from rectum and colon 86.54% cases showed adenocarcinoma whereas significant number of cases (11.54%) were identified as squamous cell carcinoma. The detail is reflected in Table VII. Tumour marker studies are done in 8 cases only.

In all of cases, the staging work-up was done according to Dukes staging and compared with TNM staging and it revealed that maximum number of 53 (50.96%) were from Stage-IV whereas 38 cases (36.5%) were from Stage III and 12 cases (12.5%) were in Stage

II. Surprisingly none of the case came with Stage I Table VIII.

Table VI

| Duration | n | %age |
|-------------|----|-------|
| 6 Month | 12 | 11.54 |
| 6-12 months | 38 | 36.54 |
| 1-2 year | 24 | 23.07 |
| 2-3 year | 20 | 19.23 |
| 3-4 year | 2 | 1.92 |
| 4 year | 4 | 7.70 |

Table VII

| H/P | n | %age |
|-------------------------|----|-------|
| Adenocarcinoma | 90 | 86.54 |
| Squamous cell carcinoma | 12 | 11.54 |
| Leiomyosarcoma | 2 | 1.92 |
| M Melanoma | | |

Table VIII

| Stage | n | %age |
|-------|-----|-------|
| I | Nil | 00 |
| II | 13 | 12.5 |
| III | 38 | 36.54 |
| IV | 53 | 50.96 |

All the patients were managed using different treatment modalities i.e. surgery radiation therapy, chemotherapy and combined treatment. Majority of the cases 84 (80.77%) under went abdominal surgery. Radiation therapy was done on 60 patients (57.69%) and a good number 48 cases (46.15%) underwent chemotherapy.

After implementing the above plan of treatment modalities, a high number of patient 14(3.46%) showed significant regression and 4 cases (13.84%) showed stability were 26 cases (25%) showed progression of the diseases. The reason for poor follow up are discussed.

A comprehensive plan was made for the follow up of all the cases. However 44 patients (43.30%) showed up for 1-6 months and only ix cases subsequently followed up for one year whereas a high %age of patients (51.92%) were lost during the follow up period.

Discussion

The colorectal carcinoma is very common malignancy in the industrialized world. It however, shows marked demographically variation in its distribution. It has high incidence in North America, Europe and Australia and is less common in South America, Africa and Asia.

It is one of the frequent malignancies encountered in the Northern areas of Pakistan, being the 6th commonest tumour in males and 7th commonest tumour in female⁸. This trend is persistent since the last 3 decade. In contrast, it is not a frequent malignancy in the Southern region of the country. However, the data is compared with figures showed a complimentay trend in central parts of Punjab.

Our study revealed high numbers of male suffering from colorectal carcinoma as compare to female in both rural and urban population. Male generally involved in such habits of smoking as predominant habit causative factor analyzing the diseases. When compared with the study conducted in this Northern areas of Pakistan our of 78 cases of colorectal carcinoma presented with passage of fresh blood with stool in conformity to our study which registered over 42% of the cases with bleeding per rectum⁹. Again when the duration of the disease was compared it was found that a large proportion had been having symptoms for more than six months, on compared to this study when the highest & age 36.54% with duration of symptom for 6-12 months.

The evaluation during this study showed no significant difference existed in adenocarcinoma and squamous cell carcinoma 86.54% and 11.54% respectively. This finding is in conformation to a previous study in the northern areas of Pakistan. Adenocarcinoma was the most common histological type 7.9% and most of the carcinomas were diagnosed in Duke's stage "C" 53% whereas in our finding it was significantly higher and fall in Duke's Stage IV 50.96%¹⁰. In another study, advanced stage is found in 50% of the cases at the time of surgical resection¹¹. Whereas the TNM system is bases on the facts that prognosis is largely a function of size and location of the tumour and extent of spread concomitantly when compared with Duke's advanced Stage IV 50.96% in our study which is in conformity to the Stage IV of the TNM^{12,13}.

The yield of diagnosis could have been improved by considering the precise technique in stool cytological technique which is well developed and accurate¹⁴. Immunoscintigraphy using radiolabelled antibodies directed against CEA¹⁵. CT scan which give information about extent of the disease. MRI which are more useful for defining this extent of the tumor, lacked in our study¹⁶. In

conclusion colorectal carcinoma though less common in the developing countries like Pakistan take a heavy toll of the elderly as well as the younger population at the prime of their life. However, diagnostic modalities like MRI, CT scan transrectal ultrasonography and tumour marker may help diagnosis of the colorectal carcinoma early which remains the only stool for curing colorectal carcinoma at the early stages of their development.

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