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AGE INCIDENCE OF COLORECTAL CARCINOMA

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ABSTRACT

Objectives: The aim of the study was to see any change in the age incidence of colorectal carcinoma at the time of presentation.
Study Design; Retrospective analytical study.
Material and methods; The study was conducted in the Northern areas of Pakistan. Two groups of patients at an interval of five years were compared. Group "A" included 45 patients diagnosed before Jan1997 v/s group "B" including 45 patients diagnosed after Jan 2002. These were already diagnosed cases of colorectal carcinoma. Two groups of patients were made as "A" and group "B".
All the histopathological specimen of the patients were formalin fixed and paraffin embedded. The sections taken were four micron thick and stained with hematoxylin & eosin. The cases reviewed included both excised and sigmoidoscopic biopsies. The cases included colorectal carcinoma patients diagnosed in continuation and no skip selection was made. The relevant data including in particular the ages of the patients was noted from the biopsy request forms. No particular sex or histologic type of carcinomas were selected for the purpose of study.
Results: An increase in incidence in younger ages was noted in group "B" (those patients who were diagnosed five years later than group "A" patients).
Conclusion : Age incidence for colorectal carcinoma shows a slight shift for the younger patients. Further studies are suggested to assess for any additional carcinogens in the Northern areas of Pakistan.
Key words: Colorectal carcinoma. Increase in younger age incidence.

INTRODUCTION

Colorectal carcinoma is one of the most common form of malignancy.[1,2,3] The age incidence varies in different countries. The peak incidence at presentation is around 65 years.[4,5] The cancer is strongly age related, the incidence rises with increasing age.[4] In high risk areas approximately 8% of patients present under the age of 50years.[5,6] The prognosis is worse for younger patients.[7]

The carcinoma most commonly arises in an already existing adenomas.[4] Colorectal carcinoma may evolve within a background of precancerous condition such as familial adenomatous polyposis, chronic inflammatory bowel disease including ulcerative colitis, shistosomiasis, Crohn's disease, juvenile polyposis and following pelvic irradiation. [2,4,7,8] Hereditary nonpolyposis colorectal cancer (HNPCC) develop at a relatively early age group.[8]

Cancers of the rectum presents with bleeding or tenesmus, that of the left colon present with altered bowel habit and ultimately obstruction and that of the right side often present with anemia due to chronic blood loss or a mass in right iliac fossa.[9]

Cancer spread directly trough the layers of bowel, by lymphatics to regional lymph nodes, by veins and transcoelomically if the serosa is breached. More lymph nodes examined give more positivity, but on the average a minimum number of fourteen nodes give equivalent results.[10]

Majority of the colorectal carcinoma are relatively well circumscribed and show little submucosal or intramural spread beyond their gross borders and so the resections margins are generally clear even when the margin is close to the tumor. It is unnecessary to sample distal resection margin unless it is within two centimeters of the lower resection margin.[4,11]

Histologically the colorectal tumors are 90% adenocarcinomas, about 10% are mucinous (when more than 50% of the tumor consists of mucus), signet ring cell carcinoma account for only 1% of primary tumors (more than 50% is made up of isolated malignant cells containing intracytoplasmic mucin). Other histological form are quite uncommon and includes adenosquamous , small cell carcinoma and undifferentiated carcinomas.[3,5]

Young age at the time of presentation has been claimed to carry bad prognosis.[12] Synchronous carcinomas have been reported in 4.8%cases but the prognosis does not differ from single carcinoma.[13]

MATERIALAND METHODS

Patients included in this study were from the same geographical area. These were already diagnosed cases of colorectal carcinoma. Two groups of patients were made as "A" and group "B" . The group "A" was further split into the following subgroups.

Group "A1" age group up to 24 years
Group "A2".....age group 25years to 49years
Group "A3".....age group 50years and above.
Similar age subgroups were made for group "B".
All the histopathological specimen of the patients were formalin fixed and paraffin embedded. The sections taken were four micron thick and stained with hematoxylin & eosin. The cases reviewed included both excised and sigmoidoscopic biopsies. The cases included colorectal carcinoma patients diagnosed in continuation and no skip selection was made. The relevant data including in particular the ages of the patients was noted from the biopsy request forms. No particular sex or histologic type of carcinomas were selected for the purpose of study.

RESULTS

Two groups of patients with already diagnosed colorectal carcinoma were compared. Group "A" included 45 patients diagnosed before Jan 1997 v/s group "B" including 45 patients diagnosed after Jan 2002.

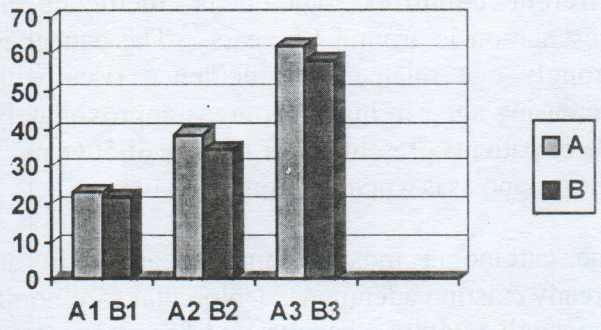
Table No 1: Group A
Colorectal carcinoma diagnosed before January 1997.
Mean age for group A: 41.5 years

Group	Age in years	No. of Patients	Mean age
A1	< 24	5	23.4 yrs
A2	25-49	17	38.8 yrs
A3	>50	23	62.3 yrs

Table No 2: Group B
Colorectal Carcinoma diagnosed after January 2002
Mean age for group B:- 38.2 years

Group	Age in years	No. of Patients	Mean age
B1	≤ 24	11	21.7 yrs
B2	25-49	23	34.8 yrs
B3	≥50	11	58.2 yrs

Table.No3
Chart comparing group A, B (Mean Ages)
It is clear from this chart that the incidence is on rise in more younger age group. It is seen in each age subgroup.



DISCUSSION

The epidemiology of colorectal carcinoma in developing countries differs from those in the developed countries.[8,9,14] In the Middle East it show a younger age of onset, poor differentiation and paucity of precursor adenomas[2]. Different gene methylation has been traced in these countries[7]. In

Egyptian patients average age of patients was 42± 17 years while in Turkey it was 62±12 years. [2] A study at King Khalid University Hospital showed a mean age incidence of 42.7 years as compared to the Western figure of ≥ 50 years[3]. A higher proportion of colorectal carcinoma in Egypt occurs before the age of 40 years.[8] Nutritional factors like high fiber diet has been claimed widely to be protective.[12,15]In southern Africa it has been noted that black race have low incidence of developing carcinoma as compared to the whites.[12] The increase in age for colorectal carcinoma is on the rise in Japan.[16] On the other hand Kuzuhiro K et all have noted an increased incidence of flat colorectal carcinomas in Japan.[17]

The rise in colorectal carcinoma on the right side has also been note in Italy.[18] In a study conducted in the Northern population of Pakistan, it has been noted that peak incidence for colorectal carcinoma is slightly more in younger age group and quite a number of patients were younger than 20years of age.[14] On the contrary the over all incidence of colorectal carcinoma is decreasing in California.[9] The ebbs and tides in the incidence of this cancer varies from one geographic area to an another. Even in the same geographic areas also different incidences have been noted in different races.

In our study the mean age of patients with colorectal carcinoma was 40 years in both age groups . There was a slight shift in the occurrence of colorectal carcinoma to the younger age group, this change was noted in the same geographical area. The mean age shifted from 41.5 years (group A) to 38.03 years (group B) after an interval of five years.

The shift of incidence to younger age group produce many questions the context of this disease e.g. any additional carcinogen or any change in the life style.

A presumption made could be atmospheric pollution from the atomic experiments/ accidents. The population at these areas are mostly using water from shallow wells and springs, rain fall can easily find excess to these sources of drinking water. An epidemiological study in needed to assess that

1. Can rain water be a source of water contamination from atmospheric pollution of radiation ? Or
2. Is there any other predisposing factor in the Northern areas of Pakistan for the development of colorectal carcinoma evaluation.

CONCLUSION

Age incidence for colorectal carcinoma show slight shift for the younger patients.

An epidemiologic study is recommended to assess for any additional carcinogen in the Northern hilly areas of Pakistan.

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