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Clinico-pathological characteristics of colorectal carcinoma at university teaching hospital, Nepal

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ABSTRACT

Introductions: Colorectal cancer is a major health problem in developing countries. The purpose of this study was to analyze the clinico-pathological characteristics of colorectal carcinoma at Patan hospital, Nepal.

Methods: A retrospective chart review was done for patients operated for colorectal carcinoma at Patan Hospital from May 2004 to April 2012. Demographic information, chief complains, site of primary cancer, and histological types were analyzed.

Results: There were 73 patients (37 males and 36 females) with colorectal carcinoma. The mean age was 52 years. There were 21 (28.77%) patients below 40 years of age. Patients with rectal carcinoma presented with bleeding per rectum in 69.70% and 60% of patients with colon cancer presented with pain abdomen. Rectum was involved in 31 (42.47%) and right colon in 30 (41.10%). Adenocarcinoma was seen in 72 (98.63%).

Conclusions: The colorectal carcinoma is not only the disease of old age. We had 29% of our patients below 40 year. Rectum and right colon were equally affected.

Keywords: bleeding, colorectal carcinoma, pain abdomen

Plain Language Summary

This study was done to know the pattern of colorectal carcinoma regarding its clinical presentation and its histopathology. This study showed that colorectal carcinoma is not uncommon in younger age group. Thus we should think of colorectal carcinoma as a differential diagnosis in younger age group.

INTRODUCTIONS

Colorectal cancer (CRC) is the third most common cancer in men and the second in women worldwide and the second leading cause of cancer related deaths in both men and women causing major health problem in developing countries.¹

There is change in pattern of CRC occurrence which involved more distal part, greater proportion of younger patients, especially females, with high prevalence of more advanced and aggressive tumors.²

Thus we felt that it was time to review regional data and analyze the clinico-pathological characteristics of colorectal carcinoma.

METHODS

This was a cross sectional, descriptive study carried out from May 2004 to April 2012 by reviewing chart of colorectal carcinoma patients, and comprised 73 patients. Patients underwent preoperative evaluation; diagnosis was confirmed by biopsy and thereafter underwent surgery in the department of surgery at Patan Hospital. Specimens were sent to Pathology department for histopathological examination. Hospital numbers of colorectal carcinoma cases were retrieved from computerized data record system in department of pathology and case sheets were retrieved from medical record section department. Total 92 cases were retrieved from computer data base, out of which 19 were excluded from analysis because these were of only colonoscopy biopsy report and did not undergo surgery at Patan Hospital. Remaining 73 pathologically proven colorectal carcinoma patients who underwent surgery at Patan Hospital were included in the study. The demographic information, chief complain, site of primary cancer, and histological type were analyzed with Microsoft office excel 2007. Ethical approval was taken from Institutional review committee for this study.

RESULTS

Among 73 cases of colorectal carcinoma, 37 (50.68%) were male and 36 (49.32%) female with mean age 52 (18 to 87). The mean age was 46 years (20 to 80 years) for rectal carcinoma and 52 years (18 to 87 years) for colon carcinoma.

Table 1. Frequency of colorectal carcinoma in different age groups (n = 73).

Age group	No (%)
≤40	21 (28.77%)
41-60	27 (36.99%)
>60	25 (34.25%)

Pain abdomen was seen in 32 (80%) patients with colon cancer out of which 8 (20%) were presented in emergency with the features of acute intestinal obstruction. Bleeding per rectum was seen in 23 (69.70%) patients with rectal carcinoma.

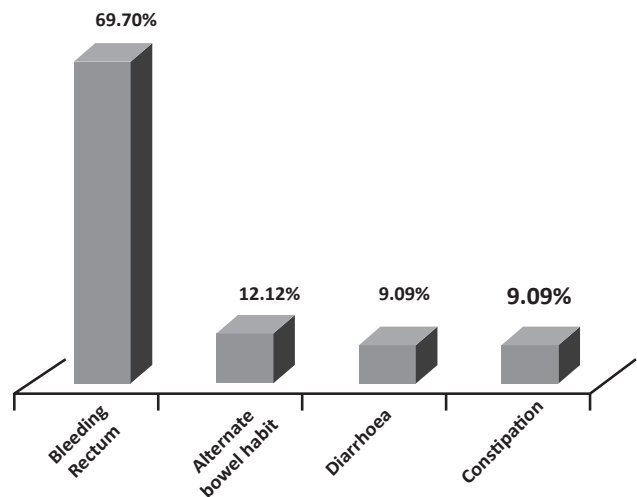


Figure 1. Clinical Presentations of rectal cancer (n = 33)

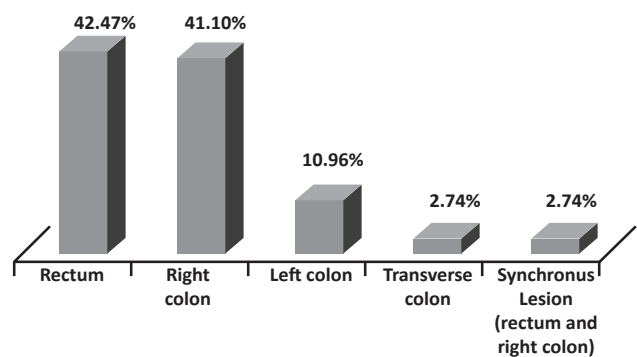


Figure 2. Colorectal Carcinoma involving different parts of large bowel (n=73)

Twenty five were underwent right hemicolectomy for cecal and ascending colon cancer, four extended right hemicolectomy for hepatic flexure cancer, one underwent right hemicolectomy with excision of fistula for ascending colon cancer with enterocutaneous fistula, three left hemicolectomy for descending colon cancer, five anterior resection for sigmoid colon cancer, 10 low anterior resection and 24 abdominoperineal resection for rectal cancer. One patient underwent total proctocolectomy with ileal pouch anal anastomosis for rectal cancer with synchronous lesion at ascending colon.

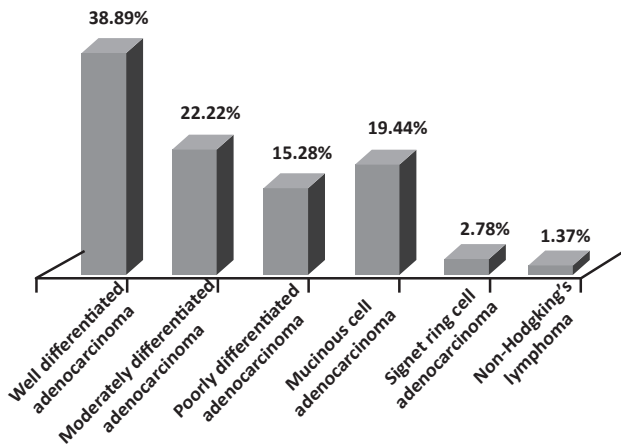


Figure 3. Histological types of colorectal carcinoma

Table 2. Histological types of colorectal carcinoma

Stage	Colon Ca	Rectal Ca	Total
Stage I	4(5.48%)	3(4.11%)	7(9.59%)
Stage IIA	24(32.88%)	13(17.81%)	37(50.68%)
Stage IIIA	4(5.48%)	6(8.22%)	10(13%)
Stage IIIB	7(9.59%)	5(6.85%)	12(16.44%)
Stage IIIC	0.00	6(8.22%)	6(8.22%)
Stage IVA	1(1.37%)	0.00	1(1.37%)

DISCUSSIONS

Our study shows the incidence of colorectal carcinoma peaks in the fourth and fifth decades, that is 27 (36.99%) and 21 (28.77%) in younger than 40 years. Though the incidence of carcinoma of the colon and rectum peaks in the seventh and eight decades of life, it is increasing in the younger age group. Colorectal carcinoma was seen in 7 (10.94%) during 1970 to 1980, which was increased to 76 (28.75%) during 1990 to 2000. The most common age group for colorectal carcinoma was 71-80 years (mean age=63 years) during 70s but during 90s it was 40-50 years (mean age=52.3 years).^{3,4}

There were no differences in the incidence of colorectal carcinoma among genders that is, 37 (50.68%) males and 36 females (49.32%) in our study which was similar to the study done by Khan M R et al.⁵

Most common symptom in our patients was pain abdomen 24 (60%) followed by intestinal obstruction 8 (20%) in carcinoma colon, and bleeding per rectum in carcinoma rectum 23 (69.70%) followed by altered bowel habit four (12.12%), similar to other studies.^{6,7} The study by Sarmast et al reported the most common symptoms was bleeding per rectum (34%) followed by intestinal obstruction (26%) and the most common site of colorectal carcinoma was recto-sigmoid.⁸ Gordon et al reported, the most common site of colorectal carcinoma was rectum that is 122 out of 312 (39.1%) followed by left sided colon 104 out of 312 (33.4%) which is similar to the study done by Alidzanov J et al.^{3,9} The proportion of left-sided, sigmoid colon and rectal cancers of all colorectal cancers decreased from 56% in 1970–80 to 54.1% in 1990–2000. However, the prevalence of right sided colorectal cancer increased significantly from 33% in 1970–80 to 42% in 1990–2000. The prevalence of left-sided cancers was significantly higher than right sided cancers in the years of 1970–80. This value was almost equal in the years of 1990–2000 and did not show significant difference. Thus, the percentage proportion of right sided colon cancer is increasing.^{4,10} The most common site of colorectal carcinoma was rectum 31 (42.47%) and second common site was right sided colon 30 (41.1%) in our study. Thus, our study also shows the rising trend of incidence of right sided colon carcinoma.

In our study, the most common histological type was adenocarcinoma 72 (98.63%) and majority was well differentiated adenocarcinoma 29 (38.89%) which is similar to the study done by Saberi-Firoozi M et al, Hosseini S V et al and Stewart et al.^{4,7,11}

CONCLUSIONS

Occurrence of colorectal carcinoma in younger age group and the proportion of right sided colon carcinoma are more in this study. We need to think of colorectal carcinoma in younger age group as a differential diagnosis.

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