

Original Article

Clinico-demographic Characteristics of Colorectal Carcinoma in Bangladeshi Patients

AKM Maruf RAZA¹, Mohammed KAMAL², Ferdousy BEGUM³, Md. Abdullah YUSUF⁴,
Din MOHAMMAD⁵, Mahbuba BEGUM⁶, Abdur Rabban TALUKDER⁷

¹Assistant Professor, Department of Pathology, Jahurul Islam Medical College, Kishoregonj, Bangladesh; ²Professor, Department of Pathology, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh; ³Associate Professor, Department of Pathology, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh; ⁴Assistant Professor, Department of Microbiology, National Institute of Neurosciences & Hospital, Dhaka, Bangladesh; ⁵Assistant Professor, Department of Surgery, Shaheed Suhrawardy Medical College, Dhaka, Bangladesh; ⁶Assistant Professor, Department of Surgery, Medical College for Women & Hospital, Dhaka, Bangladesh; ⁷Assistant Professor, Department of Surgery, Shaheed Mansur Ali Medical College, Sirajgonj, Bangladesh

[Reviewed: 30 June 2015; Accepted on: 1 July 2015]

Abstract

Background: Colorectal carcinoma is one of the most common human malignancies worldwide. **Objectives:** The purpose of the present study was to see the clinico-demographic Characteristics of colorectal carcinoma. **Methodology:** This cross sectional study was carried out in the Department of Pathology at Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh during the period of November 2009 to July 2010. Patients with colorectal carcinoma from all ages and both sexes were included in the study. Detailed clinical information was obtained by taking history from patient's attendant's statement. Fresh unfixed specimens were obtained after surgical resection. **Result:** A total of 50 cases of colorectal adenocarcinoma from all ages and both sexes were included in the study. The mean age of the 50 cases was 47±14.8 years. Per rectal bleeding was the most common clinical presentation of colorectal carcinoma which was 20(40.0%) cases followed by abdominal pain, altered bowel habit, generalized weakness, anorexia and pallor and p/r bleeding and abdominal pain which were 8(16.0%) cases, 7(14.0%) cases, 6(12.0%) cases and 6(12.0%) cases respectively. **Conclusion:** In conclusion middle age male patients are the most vulnerable for colorectal carcinoma with common presenting features of per rectal bleeding, abdominal pain and altered bowel habit. [Journal of Current and Advance Medical Research 2016;3(1):22-25]

Keywords: Clinical features; demographic Characteristics; Colorectal carcinoma; adenocarcinoma

Correspondence: Dr. AKM Maruf Raza, Assistant Professor, Department of Pathology, Jahurul Islam Medical College, Bhagalpur, Bajitpur, Kishoregonj, Bangladesh; Cell No.: +8801711306123; Email: drmarufraza@gmail.com

Cite this article as: Raza AKMM, Kamal M, Begum F, Yusuf MA, Mohammad M, Begum M, Talukder AR. Clinico-demographic Characteristics of Colorectal Carcinoma in Bangladeshi Patients. Journal of Current and Advance Medical Research 2016;3(1):22-25

Conflict of Interest: All the authors have declared that there was no conflict of interest.

Contributions to authors: AKMMR, MK and FB have contributed in protocol preparation up to surgical procedures as well as the report writing; furthermore, MAY, DM, ART and MB have written the manuscript and have revised the manuscript.

Introduction

Colorectal cancer (CRC) is the third most common cancer in the world¹. It is the second leading cause of cancer related deaths in the United States².

Globally, the incidence of CRC varies widely with higher incidence rates in North America, Australia and Northern and Western Europe³⁻⁵. In the South Asian population, patients tend to present with CRC at a younger age and typically at later stage⁶⁻⁷. CRC

is relatively uncommon in Indian sub continent. In India the incidence of colorectal cancer was found to be 4.2 and 3.2 per hundred thousand for male and female population respectively⁸. Early detection of colonic cancers is a challenging task as because clinical symptoms develop slowly. Patients with colorectal cancer have usually presented with abdominal pain, alteration of bowel habit, loss of weight, vomiting, frequently with colic, anorexia, bleeding per rectum, lump, indigestion and acute-on-chronic obstruction⁹. Screening tests like digital rectal examination, simple laboratory investigations like estimation of CEA, estimation of haemoglobin, faecal occult blood test and visualization of the gut mucosa by sigmoidoscopy and colonoscopy examination may be a help in the diagnosis¹⁰.

The incidence of colorectal cancer in Bangladesh is not exactly known, it appears to be common and occur in younger age group with slight male preponderance¹¹. This study was undertaken to see the clinico-demographic characteristics of colorectal carcinoma.

Methodology

This cross sectional study was carried out in the Department of Pathology at Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh during the period of November 2009 to July 2010. Patients with colorectal carcinoma from all ages and both sexes were included in the study. Clinically suspected colorectal carcinoma subsequently proved to be non-malignant lesions after histological examination, non-Hodgkin lymphoma and other non epithelial tumors of the colon were excluded from this study. Detailed clinical information was obtained by taking history from patient's attendant's statement. Fresh unfixed specimens were obtained after surgical resection. Large plastic containers with lid were used for collection. Containers were properly labeled with identification number, name of the patient, address, type of specimen and date and place of operation. The unfixed specimens were transferred to 10.0% formalin for overnight fixation. The next morning the specimens were examined during gross cut up and tissue blocks were taken. All the tissue blocks were submitted for routine processing and paraffin embedding. The tissue processing and staining was performed following the standard protocol. Microscopic examination of routine paraffin sections stained with haematoxyline and eosin staining method were carried out and relevant points were recorded. The tumour was classified according to the World Health Organization

classification and the tumour staging was done using TNM classification.

Results

A total of 50 cases of colorectal adenocarcinoma from all ages and both sexes were included in the study. The age range was from 19 years to 84 years with a mean age of 46.6 ± 14.8 years.

Table 1: Age and Gender Distributing of Study Population (n=50)

Age Group	Male	Female	Total
10 to 19 Yrs	1(2%)	-	1(2%)
20 to 29 Yrs	4(8%)	2(4%)	6(12%)
30 to 39 Yrs	5(10%)	6(12%)	11(22%)
40 to 49 Yrs	6(12%)	5(10%)	11(22%)
50 to 59 Yrs	7(14%)	5(10%)	12(24%)
60 to 69 Yrs	3(6%)	2(4%)	5(12%)
70 to 79 Yrs	3(6%)	-	3(6%)
80 to 89 Yrs	-	1(2%)	1(2%)
Total	29(58%)	21(42%)	50(100%)

Out of 50 cases maximum number 12 (24%) of patients belonged to the age group 50-59 years, followed by 11(22%) cases each in 30-39 years and 40-49 years groups, 6(12%) cases in 20-29 years group, 5 (10%) cases in 60-69 years group, 3 (6%) in 70-79 years group and 1 (2%) case each in 10-19 years and 80-89 year groups. 29 (58%) cases were male and 21 (42%) cases were female with male to female ratio of 1.4:1 (Table-I).

Table 2: Symptoms with tumour location of colorectal cancer cases (n=50)

Clinical Features	Frequency	Percentage
P/R bleeding	20	40.0
Abdominal pain	8	16.0
Altered bowel habit	7	14.0
Generalized weakness, anorexia and pallor	6	12.0
P/R bleeding & abdominal pain	6	12.0
Palpable abdominal mass	3	6.0
Total	50	100.0

Per rectal bleeding was the most common clinical presentation of colorectal carcinoma among the study population which was 20(40.0%) cases followed by abdominal pain, altered bowel habit, generalized weakness, anorexia and pallor and p/r bleeding and abdominal pain which were 8(16.0%)

cases, 7(14.0%) cases, 6(12.0%) cases and 6(12.0%) cases respectively (Table 2).

Table 3: Types of Colorectal Carcinoma Detected from Study Population (n=50)

Types of Tumour	Frequency	Percentage
Adenocarcinoma (NOS)	44	88.0
Mucinous Adenocarcinoma	6	12.0
Total	50	100.0

In the 50 cases of colorectal adenocarcinoma, 44(88%) were adenocarcinoma (NOS) and 6(12%) were mucinous adenocarcinoma (Table 3).

Discussion

The mean age of the 50 cases was 47 ± 14.8 years. The age range was from 19-84 years with male and female ratio of 1.4:1. 58% of the cases were below the age of 50 years. Peak incidence of colorectal cancer in this study was 50-59 years which is lower than that of western and other countries. Turner² found only 20% of the cases below 50 years. Keating et al¹⁰ found only 6.3% cases below 50 years. The mean age of colorectal cancer in this present study indicate that colorectal carcinoma is relatively common in lower age group in our country. Though incidence of colorectal cancer in Bangladesh is not exactly known, it appears to be common in younger age group. This may be due to both environmental factors and genetic factors. It was also observed in present study that there is slight male preponderance regarding colorectal cancer cases. Keating et al¹⁰ found equal gender distribution in their study. Rectal bleeding was the commonest presentation (40% cases) at the time of first consultation. The other presenting complaints were abdominal pain (16% cases), altered bowel habit (12% cases), anorexia, pallor and generalized weakness (12% cases). Palpable abdominal mass, partial intestinal obstruction and weight loss were present in addition to the major complaints. Though abdominal pain has been described by some to be the commonest symptom in colorectal cancer¹¹, it was not the case in this present study. Only 8(16%) cases had this feature. One possible explanation is negligence on the part of the patient and frequent use of analgesics¹².

Per rectal bleeding was observed in 17(85%) cases of left colon cancer. Most of the cases with per rectal bleeding, tumour were present in rectum

which explains partly that per rectal bleeding may be most common symptoms in rectal cancer. CEA (Carcinoembryonic antigen) level in serum were ranged from 0.39 ng/ml to 672 ng/ml with mean level 26.6. CEA was elevated (>5 ng/ml) in 25(50%) cases. Rosai¹¹ commented CEA more than 5 ng/ml is the adverse prognosis factor in CRC. In this present study, in 25 cases having CEA more than 5 ng/ml, 17(68%) cases were in stage III and one case was in stage I. This shows majority of the patients having elevated CEA are in high stage disease. The sub site distribution of colorectal cancer in this study shows 37(74%) cases were in the left colon and 13(26%) cases in the right colon. Recent trend of shifting of CRC towards right colon observed by Gomez et al¹³ is not supported by this present study. In Among 37 cases of left colon cancer cases, 33 cases were in rectum. This shows higher percentage of rectal cancer in this study. Size and shape of the tumour were recorded in all 50 cases. The size of the tumour ranged from 3 cm to 10 cm. Pattern of growth were, 25(50%) cases ulcerating, 22(44%) cases exophytic/polypoid and the rest 3(6%) infiltrative. 18(72%) of the ulcerated lesion was present in rectum. This may be one of the probable cause of per rectal bleeding in most of the rectal cancer cases. On histological examination of 50 colorectal cancer cases, 44(88%) of cases were usual adenocarcinoma and 6(12%) cases were mucin secreting adenocarcinoma. Ekem et al¹⁴ found similar result.

Conclusion

In conclusion mid age group people are the most vulnerable for colorectal carcinoma. Furthermore male is predominant than female. Per rectal bleeding, abdominal pain and altered bowel habit are the most commonly reported clinical features of the colorectal carcinoma patients. Adenocarcinoma of usual pattern was most common type, other common type was mucin secreting adenocarcinoma.

References

1. Kim SK, Lee J, Sidransky D. DNA methylation markers in colorectal cancer. *Cancer Metastasis Review* 2010;29:181-206.
2. Turner JR. The Gastrointestinal Tract. In: Kumar V, Abbas AK, Fausto N and Aster JC, editors. *Robbins and Cotran Pathologic Basis of Disease*, 8th ed. USA: W B Saunders company; 2010:822-25
3. Aljebreen AM. Clinico-Pathological Patterns of Colorectal Cancer in Saudi Arabia: Younger with an Advanced Stage Presentation. *Saudi J Gastroenterology* 2007;33(2):84-87
4. Hamilton SR. Carcinoma of the colon and rectum. In: Hamilton SR and Aaltonen LA, editors. *Pathology and*

- Genetics of Tumour of the Digestive System. France: IARC press; 2000:103-142
5. Jemal A, Bray F, Center MM, et al. Global cancer statistics. *CA Cancer J Clin* 2011;61:69–90
 6. Ahmed S, Banerjee A, Hands RE, Bustin S, Dorudi S. Microarray profiling of colorectal cancer in Bangladeshi patients. *Colorectal Dis* 2005;7:571–575
 7. Moore MA, Ariyaratne Y, Badar F, et al. Cancer epidemiology in South Asia-past, present and future. *Asian Pac J Cancer Prev* 2009;11(Suppl 2): 49–66
 8. Afroza A, Hasan S, Rukunuzzaman M, Hussain SA, Amin, R. Carcinoma- Rectum in an 11 Years old Boy. *Mymensingh Med J* 2007; 16(2 Suppl):70-72
 9. Hossain T. Clinicopathological study of colorectal carcinoma. [MD Thesis]. Dhaka: Bangabandhu Sheikh Mujib Medical University; 2007.
 10. Keating J, Pater P, Lolohea S, Wickremesekera K. The epidemiology of colorectal cancer: what can we learn from the New Zealand Cancer Registry. *New Zealand Med J* 2003;116(1174):1-8
 11. Rosai J. Gastrointestinal tract. In: Rosai J, editors. *Ackerman's Surgical Pathology*, 9th ed. USA: Mosby company; 2004:776-825
 12. Ayyub MI, Alradi AO, Khazeinder AM, Nagi AH, Maniyar IA. Clinicopathological trends in colorectal cancer in a tertiary care hospital. *Saudi Med J* 2002; 23: 160-163.
 13. Gomez D, Dalai Z, Raw E, Roberts C, Lyndon PJ. Anatomical distribution of colorectal cancer over 10 year period in a district general hospital: is there a true rightward shift? *Postgraduate Med J* 2004; 80: 667-669
 14. Ekem TE, Bahadir B, Gun BD, et al. Colorectal carcinomas: Clinicopathologic investigation, correlation with expression of estrogen and progesterone receptors. *Turkish J Cancer* 2008; 38(3):118-122