TAJ December 2018; Volume 31 Number-2

ISSN 1019-8555
The Journal of
Teachers Association
RMC, Rajshahi

Original Article

Factors Affecting Survival Trend in Colorectal Cancer- A Hospital Based Study

Md Khalequzzaman Sarker,[1] Md Moniruzzaman Sarker,[2] Nasrin Ara Parveen,[3] Anisur Rahman,[4] Mohammad Sofiul Kadir,[5] ASMA Raihan[6]

Abstract

Colorectal carcinoma is the second most common malignancy and the second leading cause of cancer deaths in Western countries. The condition becomes increasingly common over the age of 50 years. The total number of colorectal cancer patients available for the study within the stipulated time was 56. Among them 64.29% patients were male and 35.71% patients were female. 01.79% patient belonged to age group ≤ 20, 12.5% belonged to age group 21-30, 19.64% belonged to age group 31-40, 25.0% belonged to age group 41-50, 26.79% belonged to age group 51-60, 08.93% belonged to age group 61-70 and 05.35% patients were >70 years of age. Mean age was 48.05 years ± 13.97 SD. In our study, 27.2% survived ≤3 months, 36.4% 4-6 months, 09.1% 7-9 months, 18.2% 10-12 months, 09.1% 13-24 months and 0% >24 months. Among 11 expired patients, 03 got curative treatment and rest of 08 got palliative treatment. Those who got curative treatment, 66.7% survived 10-12 months and 33.3% 13-24 months. Those who got palliative treatment 37.5% survived ≤3 months, 50.0% 4-6 months and 12.5% 7-9 months. Overall median survival was 07 months, for curative treatment 15 months and for palliative treatment 05 months.

Key Words: Colorectal carcinoma, Survival trend, Metastasis, Curative treatment, Palliative treatment.

TAJ 2018; 31: No-2: 12-16

Introduction

Gastrointestinal tract is the most common site for malignancy and second most common cause of cancer related mortality in the United States.[1] The common malignancy in gastroenterology are carcinoma oesophagus, carcinoma stomach, colorectal cancer, hepatocellular carcinoma, carcinoma pancreas and cholangiocarcinoma. The incidence of these cancers of different sites differs significantly by geographic region and race. Age of presentation also varies from country to country. Colorectal carcinoma is the second only to lung cancer as a cause of death in the United States. The incidence rate has remained relatively unchanged during the first 30 years, while the mortality rate has been decreased particularly in female. Colorectal cancer generally occurs in persons over the age of 50 years.[1]

Incidence of cancer according the SEER report: Approximately 0.1% was diagnosed under age 20; 1.1% between 20 and 34; 3.8% between 35 and

[1] Assistant Professor, Department of Gastroenterology, Rajshahi Medical College, Rajshahi
[2] Senior Consultant, Department of Surgery, Rajshahi Medical College Hospital, Rajshahi
[3] Medical Officer, Department of Gynaecology & Obstetrics, Rajshahi Medical College Hospital. Rajshahi
[4] Assistant Professor, Department of Gastroenterology, Sher-E-Bangla Medical College, Barishal
[5] Assistant Professor, Department of Gastroenterology, Tangail Medical College, Tangail
[6] Professor, Department of Gastroenterology, Bangabandhu Sheikh Mujib Medical University, Dhaka

44; 12.4% between 45 and 54; 19.2% between 55 and 64; 24.4% between 65 and 74; 26.8% between 75 and 84; and 12.2% 85+ years of age. The age-adjusted incidence rate was 47.9 per 100,000 men and women per year. These rates are based on cases diagnosed in 2003-2007 from 17 SEER geographic areas. Incidence Rates by race/ethnicity, sex : all races 55.8 per 100,000 men 41.7 per 100,000 women; white 55.4 per 100,000 men 40.9 per 100,000 women; black 68.1 per 100,000 men 52.6 per 100,000 women; Asian/Pacific Islander 45.5 per 100,000 men 34.2 per 100,000 women; American Indian/Alaska Native a 43.4 per 100,000 men 40.4 per 100,000 women; hispanic black 44.5 per 100,000 men 31.6 per 100,000 women.[2] A measure of net survival that is calculated by comparing observed (overall) survival with expected survival from a comparable set of people that do not have cancer to measure the excess mortality that is associated with a cancer diagnosis., which measures the survival of the cancer patients in comparison to the general population to estimate the effect of cancer. The overall 5-year relative survival for 1999-2006 from 17 SEER geographic areas was 65.0%. Five-year relative survival by race and sex was: 66.0% for white men; 65.7% for white women; 55.6% for black men; 56.6% for black women.[2]

Materials and Methods

It was a prospective cross sectional study done in the Department of Gastroenterology, BSMMU, Dhaka from16th April 2010 to 15th October 2011. Cases were selected from patients who were admitted in the Department of Gastroenterology, Medicine, Surgery and Oncology as well as patients of gastric cancers attending outpatient department of BSMMU.

Results

The total number of cases available for the study within the stipulated time was 56. Among them 36 (64.29%) patients were male and 20 (35.71%) patients were female.

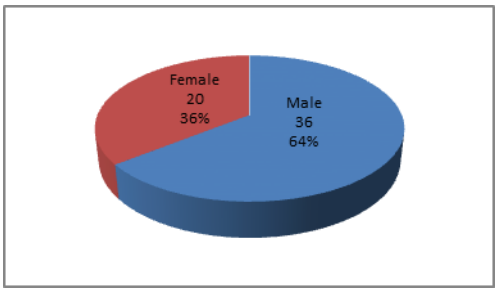

Fig.1: Male and female ratio of colorectal carcinoma patients

Among 56 patients, 01 patient belonged to age group ≤ 20, 07 belonged to age group 21-30, 11 belonged to age group 31-40, 14 belonged to age group 41-50, 15 belonged to age group 51-60, 05 belonged to age group 61-70 and 03 patients were >70 years of age. Mean age was 48.05 years ± 13.97 SD.

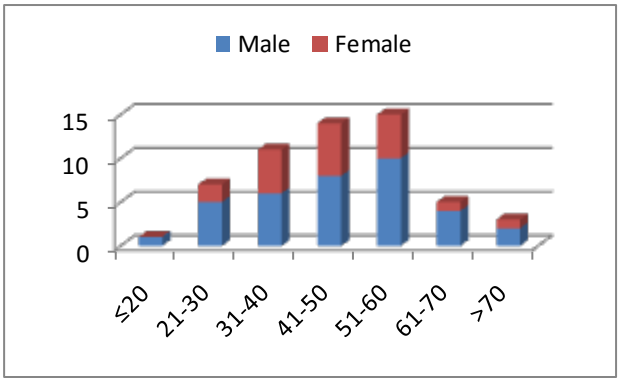

Fig.2: Age distribution and male/female distribution according to age

Among 56 patients of carcinoma colon, 12.50% (07) involved in the caecum, 21.43% (12) in the ascending colon, 07.14% (04) in the transverse colon, 10.71% (06) in the descending colon, 14.29% (08) in the sigmoid colon and 33.93% (19) in the rectum.

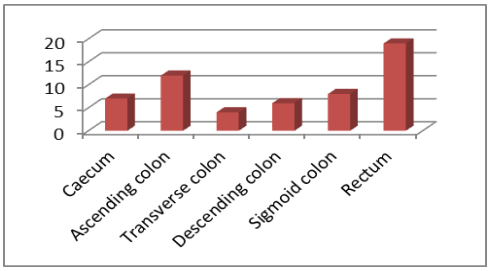

Fig.3: Involvement of cancer in different parts of the colon and rectum

Among 56 patients of carcinoma colon, histopathology showed 100% (56) adenocarcinoma.

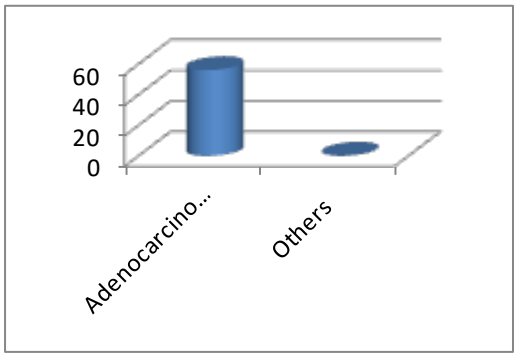

Fig.4: Histopathological pattern of colorectal carcinoma

Among 56 patients, 26.79% (15) patients presented with metastasis (lymph node and other organ) during diagnosis.

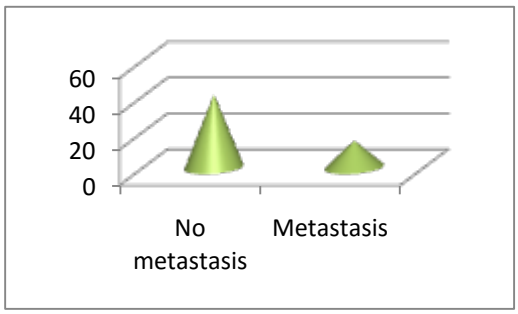

Fig.5: Presence of metastasis during diagnosis

Table 1: Duration between onset of symptoms and date of diagnosis (n=56)

Total no n	≤3 months %	4–6 months %	7–9 months %	10–12 months %	>12 months %
56	35.8 (20)	33.9 (19)	08.9 (05)	08.9 (05)	12.5 (07)

Mean duration of diagnosis was 07 months.

Among 56 patients, 16.07% (09) lost follow up during the study period.

Table 2: Follow up of colon cancer patients. (n=56)

Total no	Attrition problem		Regular follow up	
n	n	%	n	%
56	09	16.07	47	83.93

Among 47 patients, who were in regular follow up, 76.59% (36) alive and 23.41% (11) expired during the follow up period.

Table 3: Outcome of patients of colon cancer (n=47)

Total no	Alive		Expired	
n	n	%	n	%
47	36	76.59	11	23.41

Table 4: Percentages of survival of the expired patients of colorectal cancer (n=11)

Total	≤3	4–6	7–9	10–12	13–24	>24
no	months	months	months	months	months	months
n	%	%	%	%	%	%
11	27.2 (03)	36.4 (04)	09.1 (01)	18.2 (02)	09.1 (01)	0 (0)

Among 11 patients, 03 got curative treatment and rest of 08 got palliative treatment.

Table 5: Survival trend of colorectal cancer patients according to treatment (n=11)

Survival Time	Curative R_x		Palliative R_x		Overall Median Survival
	n=03	%	n=08	%	
≤3 months	0	0	3	37.5	
4 – 6 months	0	0	4	50.0	
7 – 9 months	0	0	1	12.5	
10 – 12 months	2	66.7	0	0	7 months
13 – 24 months	1	33.3	0	0	
> 24 months	0	0	0	0	

Median Survival of the patients:

Overall: 07 months

For patients with Curative treatment: 15 months

For patients with Palliative treatment: 05 months

Discussion

The total number of colorectal cancer patients available for the study within the stipulated time was 56. Among them 64.29% patients were male and 35.71% patients were female. 01.79% patient belonged to age group ≤ 20, 12.5% belonged to age group 21-30, 19.64% belonged to age group 31-40, 25.0% belonged to age group 41-50, 26.79% belonged to age group 51-60, 08.93% belonged to age group 61-70 and 05.35% patients were >70 years of age. Mean age was 48.05 years ± 13.97 SD. Incidence of cancer according the SEER report: Approximately 0.1% cases were diagnosed under age 20; 1.1% between 20 and 34; 3.8% between 35 and 44; 12.4% between 45 and 54; 19.2% between 55 and 64; 24.4% between 65 and 74; 26.8% between 75 and 84; and 12.2% 85+ years of age.

The Commission on Cancer (COC) of The American College of Surgeons performs a national survey of practices for several cancer sites. They found that the distribution of cases by anatomic site was consistent with a hypothesis of rightward migration of colon carcinoma. Colon and rectal carcinomas in African-Americans were reported in more advanced stages and with corresponding decreases in survival rates.[3] In our study, we found 12.50% cancer involved in the caecum, 21.43% in the ascending colon, 07.14% in the transverse colon, 10.71% in the descending colon, 14.29% in the sigmoid colon and 33.93% in the rectum. Histopathology showed 100.0% adenocarcinoma. 26.79% patients presented with metastasis (lymph node and other organ) during diagnosis. Duration between onset of symptoms and date of confirmatory diagnosis were 35.8% ≤3 months, 33.9% 4-6 months, 08.9% 7-9 months, 08.9% 10-12 months and 12.5% >12 months. Mean duration of diagnosis was 07 months. 16.07% lost follow up during the study period and who were in regular follow up, 76.59% was alive and 23.41% expired during the follow up period. 27.2% survived ≤3 months, 36.4% 4-6 months, 09.1% 7-9 months, 18.2% 10-12 months, 09.1% 13-24 months and 0% >24 months. Among 11 expired patients, 03 got curative treatment and rest of 08 got palliative treatment. Those who got curative treatment, 66.7% survived 10-12 months and 33.3% 13-24 months. Those who got palliative treatment 37.5% survived ≤3 months, 50.0% 4-6 months and 12.5% 7-9 months. Overall median survival was 07 months, for curative treatment 15 months and for palliative treatment 05 months. In USA, 5 years survival for carcinoma colon is

63.9%.[4] In India 1 year and 5 years survival rate are 58.7% and 36.6% respectively.[5] Colon cancer with distant metastasis is associated with poor prognosis with 5 years survival rate of only 5-10%.[6] If we consider worldwide 5 years survival trend, Bangladesh record is not adequate and median survival is also low due to some factors like early age of presentation, more time required for confirmatory diagnosis, most of the patient diagnosed at advance stage, lack of facility for curative as well as palliative treatment and loss of follow up.

Conclusion

This study was done keeping in mind to estimate the survival trend of the patients who had malignancy involving colon. The current study identified most of the patients of carcinoma colon were died earlier than expected due to a variety of reasons including early age of presentation, delayed confirmatory diagnosis, diagnosis of the cancer at advance stage, unavailability of curative treatment, financial problem to take curative as well as palliative treatment and loss of follow up. The patients who received curative treatment were having more chance of better survival. The current study may be beginning for further studies and more prospective studies are needed to bring out the real condition of the stomach cancer patients.

References

1. Mayer JR. In: Gastrointestinal tract cancer. Fauci, Braunwald, Kasper, Hauser, Longo, Jameson, Loscalzo. Harrison's Principles of Internal Medicine. 17th edn. McGrawHill, 2008; 1: 570-5.
2. Colon Cancer Report. Surveillance, Epidemiology and End Results (SEER) Program. National Cancer Institute, U.S. National Institutes of Health, 2008.
3. Beart RW, Steele GD Jr, Menck HR, Chmiel JS, Ocwieja KE, Winchester DP. Management and survival of patients with adenocarcinoma of the colon and rectum: a national survey of the Commission on Cancer. J Am Coll Surg. 1995; 181: 225-36.
4. SEER Cancer Statistics Review 1975-2005. National Cancer Institute, USA, 2008.
5. Yeole BB, Sunny L, Swaminathan R, Sankaranarayanan R, Parkin DM. Population-based survival from colorectal cancer in Mumbai, (Bombay) India. Eur J Cancer. 2001; 37: 1402-8.
6. Kee F, Wilson R, Currie S, Sloan J, Houston R, Rowlands B, Moorehead J. Socioeconomic circumstances and the risk of bowel cancer in Northern Ireland. J Epidemiol Community Health. 1996; 50: 640-4.

All correspondence to-
Dr. Md. Khalequzzaman Sarker
Assistant Professor
Department of Gastroenterology
Rajshahi Medical College
Rajshahi, Bangladesh
email:drkazaldmc@gmail.com