



Original Article

Factors Affecting The Survival Trend In Carcinoma Stomach- A Hospital Based Study

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Abstract

Stomach cancer is a gastrointestinal malignancy with insidious onset and poor prognosis. The disease predominantly affects the older age groups with pick incidence between 60 to 70 years of age. The total number of stomach cancer patients available for the study within the stipulated time was 105. Among them 69.52% patients were male and 30.48% patients were female. 0.95% patient belonged to age group <20, 11.43% belonged to age group 21-30, 09.52% belonged to age group 31-40, 23.81% belonged to age group 41-50, 28.57% belonged to age group 51-60, 20.0% belonged to age group 61-70 and 05.72% patients were >70 years of age. Mean age was 54.91 years \pm 13.42 SD. In our study, 45.6% survived <3 months, 15.8% 4–6 months, 07.0% 7–9 months, 14.0% 10–12 months, 10.6% 13–24 months and 07.0% >24 months. Among 57 expired patients, 14 got curative treatment and rest of 43 got palliative treatment. Those who got curative treatment, 36.4% survived 10–12 months, 45.5% 13–24 months and 18.1% > 24 months. Those who got palliative treatment 51.5% survived <3 months, 24.2% 4–6 months, 12.1% 7–9 months, 09.1% 10–12 months and 03.1% 13–24 months. Overall median survival was 06 months, for curative treatment 16 months and for palliative treatment 03 months.

Key Word: Carcinoma stomach, Survival trend, Metastasis, Curative treatment, Palliative treatment.

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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. Gastric adenocarcinoma has been one of

the leading mortality of the world. As of 1990, gastric cancer had declined to the second most frequent cancer worldwide, accounting for 9.9% of new cancer cases.²

Gastric cancer is the second most common fatal malignancy worldwide having been over taken by lung cancer.³ Gastric cancer incidence has decreased worldwide but remains high in Japan, China, Chile and Ireland.⁴ SEER report on incidence of gastric cancer in USA: Approximately 0.1% were diagnosed under age 20; 1.6% between 20 and 34; 4.8% between 35

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and 44; 11.9% between 45 and 54; 18.1% between 55 and 64; 24.2% between 65 and 74; 27.2% between 75 and 84; and 12.2% 85+ years of age.⁵ Incidence Rates by Race Race/Ethnicity Male Female ; All Races 10.9 per 100,000 men 5.5 per 100,000 women ; White 9.6 per 100,000 men 4.7 per 100,000 women; Black 16.7 per 100,000 men 8.6 per 100,000 women; Asian/Pacific Islander 17.5 per 100,000 men 10.0 per 100,000 women; American Indian/Alaska Native a 15.5 per 100,000 men 7.3 per 100,000 women; Hispanic b 14.8 per 100,000 men 9.1 per 100,000 women.⁵ The age-adjusted incidence rate was 7.8 per 100,000 men and women per year. These rates are based on cases diagnosed in 2003-2007 from 17 SEER geographic areas.⁵

Cancer survival is a valuable indicator for international comparison of progress in cancer control⁶. In this study we shall try to find out the survival trends of stomach cancer patients. We shall also try to find out the time of onset of symptoms and diagnosis, causes of delayed

Result

The total number of cases available for the study within the stipulated time was 105. Among them 73 (69.52%) patients were male and 32 (30.48%) patients were female.

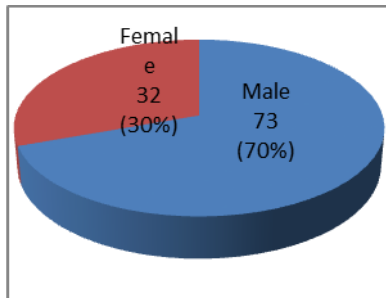


Fig.1: Male and female ratio of stomach cancer patients

Among 105 patients, 01 patient belonged to age group ≤ 20, 12 belonged to age group 21-30, 10 belonged to age group 31-40, 25 belonged to age group 41-50, 30 belonged to age group 51-60, 21 belonged to age group 61-70 and 06 patients were >70 years of age. Mean age was 54.91 years ± 13.42 SD.

diagnosis, health status at diagnosis, extent of the disease at diagnosis, use of different modalities of treatment, adherence to treatment, supportive care and regular follow up. All these will help to analyze the factors affecting the survival of stomach cancer that will help our future guidelines to improve the survivals of the patients of our country.

Objectives

To determine the factors affecting the survival trend of carcinoma stomach.

Material and Methods

It was a prospective cross sectional study done in the Department of Gastroenterology, BSMMU, Dhaka from 16th 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.

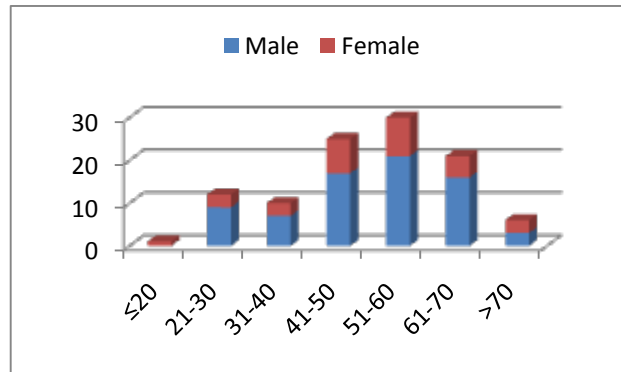


Fig.2: Age distribution and male/female distribution according to age

Among 105 patients of carcinoma stomach, 09.52% (10) involved in the fundus, 40.00% (42) in the body and 50.48% (53) in the antrum of the stomach.

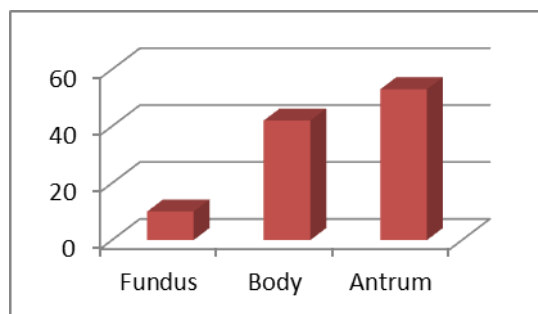


Fig.3: Involvement of cancer in different parts of the stomach

Among 105 patients of carcinoma stomach, histopathology showed 99.05% (104) adenocarcinoma and 0.95% (01) GIST.

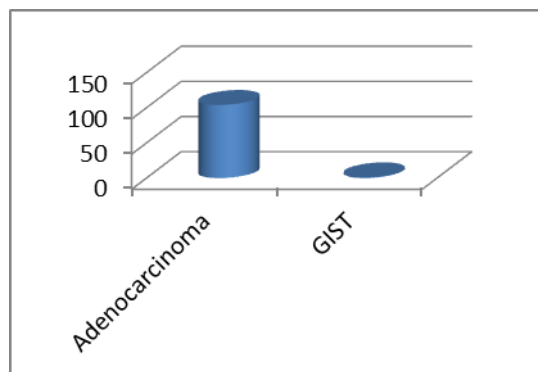


Fig.4: Histopathological pattern of carcinoma stomach

Among 105 patients, 66.67% (70) patients presented with metastasis (lymph node and other organ) during diagnosis.

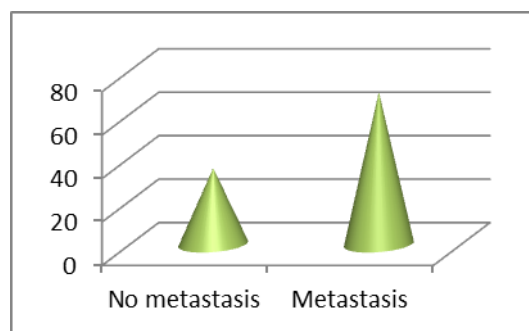


Fig.5: Presence of metastasis during diagnosis

Table 1: Duration between onset of symptoms and date of diagnosis. [n=105]

Total no	≤3 months	4-6 months	7-9 months	10-12 months	>12 months
n	%	%	%	%	%
105	45.7 (48)	33.3 (35)	11.4 (12)	06.7 (07)	02.9 (03)

Mean duration of diagnosis was 05 months.

Among 105 patients, 16.19% (17) lost follow up during the study period.

Table 2: Follow up of stomach cancer patients. [n=105]

Total no	Attrition problem		Regular follow up	
n	n	%	n	%
105	17	16.19	88	83.81

Among 88 patients, who were in regular follow up, 35.23% (31) alive and 64.77% (57) expired during the follow up period.

Table 3: Outcome of patients of stomach cancer. [n=88]

Total no	Alive		Expired	
n	n	%	n	%
88	31	35.23	57	64.77

Table 4: Percentages of survival of the stomach cancer patients. [n=57]

Total no	≤3 months	4-6 months	7-9 months	10-12 months	13-24 months	>24 months
n	%	%	%	%	%	%
57	45.6 (26)	15.8 (09)	07.0 (04)	14.0 (08)	10.6 (06)	07.0 (04)

Among 57 patients, 14 got curative treatment and rest of 43 got palliative treatment.

Table 5: Survival trend of stomach cancer patients according to treatment. [n=57]

Survival Time	Curative R _x		Palliative R _x		Overall Median Survival
	n=14	%	n=43	%	
≤3 months	0	0	26	51.5	6 months
4 – 6 months	0	0	9	24.2	
7 – 9 months	0	0	4	12.1	
10 – 12 months	5	36.4	3	09.1	
13 – 24 months	5	45.5	1	03.1	
> 24 months	4	18.1	0	0	

Median Survival of the patients:

Overall: 06 months

For patients with Curative treatment: 16 months

For patients with Palliative treatment: 03 months

Discussion

The total number of stomach cancer patients available for the study within the stipulated time was 105. Among them 69.52% patients were male and 30.48% patients were female. 0.95% patient belonged to age group ≤ 20, 11.43% belonged to age group 21-30, 09.52% belonged to age group

31-40, 23.81% belonged to age group 41-50, 28.57% belonged to age group 51-60, 20.0% belonged to age group 61-70 and 05.72% patients were >70 years of age. Mean age was 54.91 years ± 13.42 SD. SEER report on incidence of gastric cancer in USA: Approximately 0.1% were diagnosed under age 20; 1.6% between 20 and 34; 4.8% between 35 and 44; 11.9% between 45 and

54; 18.1% between 55 and 64; 24.2% between 65 and 74; 27.2% between 75 and 84; and 12.2% 85+ years of age.⁵

The 5-year survival rate was influenced by the tumor size, gross type, serosal invasion, extragastric lymph node metastasis, liver metastasis, peritoneal dissemination, stage of disease.⁵ In our study, we found 09.52% cancer involved in the fundus, 40.00% in the body and 50.48% in the antrum of the stomach. Histopathology showed 99.05% adenocarcinoma and 0.95% GIST [gastric lymphoma was counted under GI lymphoma]. 66.67% patients presented with metastasis (lymph node and other organ) during diagnosis.

Early detection and real curative resection with radical lymph node dissection, followed by immunochemotherapy (particularly in patients with stage III gastric cancer) should be recommended as a standard treatment principle for patients with gastric cancer.⁷ In our study duration between onset of symptoms and date of diagnosis were 45.7% ≤ 3 months, 33.3% 4–6 months, 11.4% 7–9 months, 06.7% 10–12 months and 02.9% >12 months. Mean duration of diagnosis was 05 months. 16.19% lost follow up during the study period and who were in regular follow up, 35.23% was alive and 64.77% expired during the follow up period. 45.6% survived ≤ 3 months, 15.8% 4–6 months, 07.0% 7–9 months, 14.0% 10–12 months, 10.6% 13–24 months and 07.0% >24 months. Among 57 expired patients, 14 got curative treatment and rest of 43 got palliative treatment. Those who got curative treatment, 36.4% survived 10–12 months, 45.5% 13–24 months and 18.1% > 24 months. Those who got palliative treatment 51.5% survived ≤ 3 months, 24.2% 4–6 months, 12.1% 7–9 months, 09.1% 10–12 months and 03.1% 13–24 months. Overall median survival was 06 months, for curative treatment 16 months and for palliative treatment 03 months. In united States 5 years survival rate is 24.7%.⁸ In India 5 years survival for carcinoma stomach is 10.1% and 1 year 25.8%.⁹ In Pakistan, median survival is 7 months¹⁰ and in Iran 1 year and 5 years survival rate for carcinoma stomach are 40.55% and 0.83% respectively and median

survival rate is 11.8 months.¹¹ 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 stomach. The current study identified most of the patients of carcinoma stomach 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.

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