



Original Article

Factors Affecting the Survival Trend in Carcinoma Pancreas- A Hospital Based Study

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Abstract

Carcinoma pancreas is the fourth common cause of the death from cancer in man and women in USA. The condition becomes increasingly common over the age of 70 years. The total number of carcinoma pancreas patients available for the study within the stipulated time was 22. Among them 68.18% patients were male and 31.82% patients were female. 0% belonged to age group ≤ 20 , 9.09% belonged to age group 21-30, 18.18% belonged to age group 31-40, 18.18% belonged to age group 41-50, 13.64% belonged to age group 51-60, 27.27% belonged to age group 61-70 and 13.64% patients were >70 years of age. Mean age was 54.87 years \pm 17.65 SD. In our study, 46.7% survived ≤ 3 months, 33.3% 4-6 months, 13.3% 7-9 months, 06.7% 10-12 months, 0% 13-24 months and >24 months. Among 15 expired patients, 02 got curative treatment and rest of 13 got palliative treatment. Those who got curative treatment, 50% survived 7-9 months and 50% 10-12 months. Those who got palliative treatment 53.8% survived ≤ 3 months, 38.5% 4-6 months and 7.7% 7-9 months. Overall median survival was 04 months, for curative treatment was 09 months and for palliative treatment was 03 months.

Key Words: Carcinoma pancreas, 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 gastrointestinal tract 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. In USA carcinoma of the pancreas is the

fourth common cause of the death from cancer in man and women and incidence are 11.5 per 100,000 people.² In USA the 5 years survival rates for carcinoma pancreas were 5.1%.² But in India the 5 years relative survival rates were 4.1%.³ Over 90% of the pancreatic cancer are ductal adenocarcinomas of the exocrine pancreas.¹

From SEER report on incidence of pancreatic cancer: Approximately 0.0% were diagnosed under age 20; 0.4% between 20 and 34; 2.3% between 35 and 44; 9.7% between 45 and 54;

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19.6% between 55 and 64; 25.6% between 65 and 74; 29.4% between 75 and 84; and 13.0% 85+ years of age.⁴ The overall 5-year relative survival for 1999-2006 from 17 SEER geographic areas was 5.6%. Five-year relative survival by race and sex was: 5.4% for white men; 5.7% for white women; 4.2% for black men; 6.0% for black women.⁴ The overall 5-year survival rate was 23.4% for patients who had pancreatectomy, compared with 5.2% for those who had no cancer-directed treatment.

Objectives

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

Materials 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 pancreatic cancers attending outpatient department of BSMMU.

Results

The total number of cases available for the study within the stipulated time was 22. Among them 15 (68.18%) patients were male and 07 (31.82%) patients were female.

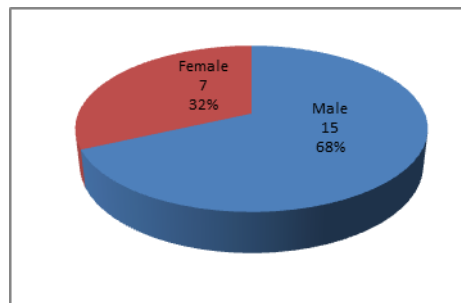


Figure 1: Male and female ratio of carcinoma pancreas patients

Among 22 patients, 0 patient belonged to age group ≤ 20 , 02 belonged to age group 21-30, 04 belonged to age group 31-40, 04 belonged to age group 41-50, 03 belonged to age group 51-60, 06 belonged to age group 61-70 and 03 patients were >70 years of age. Mean age was 54.87 years \pm 17.65 SD.

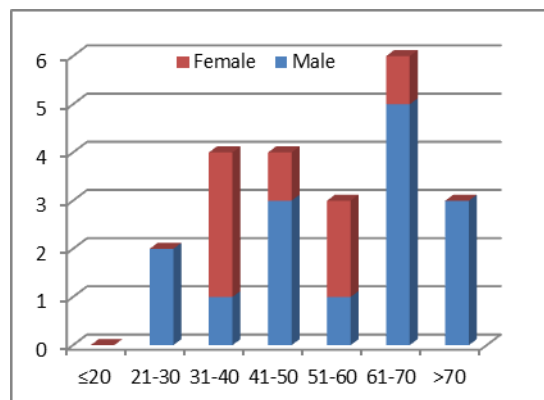


Figure 2: Age distribution and male/female distribution according to age

Among 22 patients of carcinoma pancreas, 77.27% (17) involved in the head region, 18.18% (04) involved in the body and 04.55% (01) involved in the tail region.

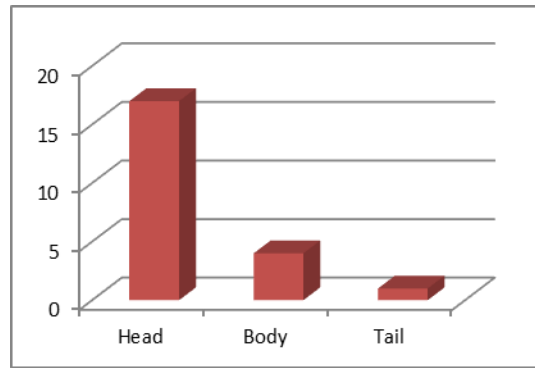


Figure 3: Involvement of cancer in different parts of the pancreas

Among 22 patients of carcinoma pancreas, histopathology showed 100% (22) adenocarcinoma.

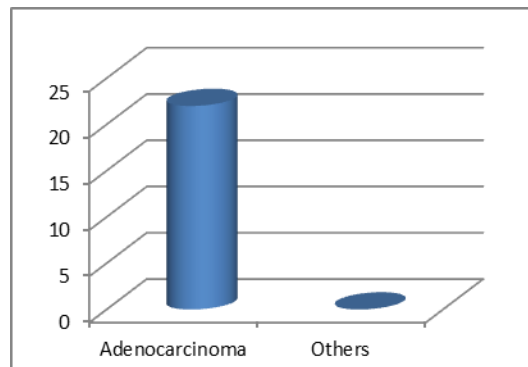


Figure 4: Histopathological pattern of carcinoma pancreas

Among 22 patients, 77.27% (17) patients presented with metastasis (lymph node and other organ) during diagnosis.

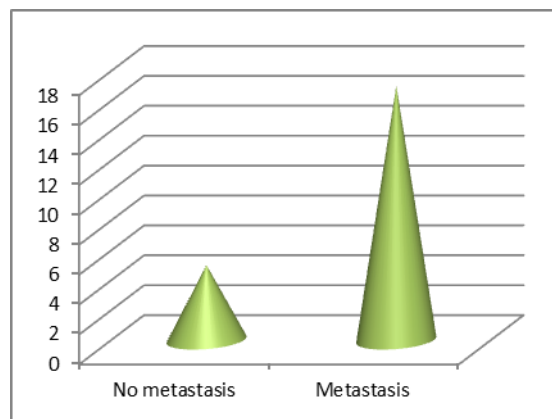


Figure 5: Presence of metastasis during diagnosis

Table 1: Duration between onset of symptoms and date of diagnosis [n=22]

Total no	≤3 months	4–6 months	7–9 months	10–12 months	>12 months
n	%	%	%	%	%
22	63.6 (14)	22.7 (05)	09.1 (02)	04.6 (01)	0 (0)

Mean duration of diagnosis was 04 months.

Among 22 patients, 22.72% (05) lost follow up during the study period.

Table 2: Follow up of carcinoma pancreas patients. [n=22]

Total no	Attrition problem		Regular follow up	
n	n	%	n	%
22	05	22.72	17	77.28

Among 17 patients, who were in regular follow up, 11.76% (02) alive and 88.24% (15) expired during the follow up period.

Table 3: Outcome of carcinoma pancreas patients [n=17]

Total no	Alive		Expired	
n	n	%	n	%
17	02	11.76	15	88.24

Table 4: Percentages of survival of the expired patients of carcinoma pancreas [n=15]

Total no	≤3 months	4–6 months	7–9 months	10–12 months	13–24 months	>24 months
n	%	%	%	%	%	%
15	46.7 (07)	33.3 (05)	13.3 (02)	06.7 (01)	0 (0)	0 (0)

Among 15 patients, 02 got curative treatment and rest of 13 got palliative treatment.

Table 5: Survival trend of carcinoma pancreas patients according to treatment [n=15]

Survival Time	Curative R _x		Palliative R _x		Overall Median Survival
	n=02	%	n=13	%	
≤3 months	0	0	7	53.8	5 months
4 – 6 months	0	0	5	38.5	
7 – 9 months	1	50.0	1	07.7	
10 – 12 months	1	50.0	0	0	
13 – 24 months	0	0	0	0	
> 24 months	0	0	0	0	

Median Survival of the patients:

Overall: 05 months

For patients with Curative treatment: 09 months

For patients with Palliative treatment: 03 months

Discussion

The total number of pancreatic cancer patients available for the study within the stipulated time was 22. Among them 15 (68.18%) patients were male and 07 (31.82%) patients were female. 0 patient belonged to age group ≤ 20 , 02 belonged to age group 21-30, 04 belonged to age group 31-40, 04 belonged to age group 41-50, 03 belonged to age group 51-60, 06 belonged to age group 61-70 and 03 patients were >70 years of age. Mean age was 54.87 years \pm 17.65 SD. From SEER report on incidence of pancreatic cancer: Approximately 0.0% were diagnosed under age 20; 0.4% between 20 and 34; 2.3% between 35 and 44; 9.7% between 45 and 54; 19.6% between 55 and 64; 25.6% between 65 and 74; 29.4% between 75 and 84; and 13.0% 85+ years of age.⁴

In our study, we found 77.27% involved in the head region, 18.18% involved in the body and 04.55% involved in the tail region. Histopathology showed 100.0% adenocarcinoma. 77.27% patients presented with metastasis (lymph node and other organ) during diagnosis. Duration between onset of symptoms and date of confirmatory diagnosis were 63.6% ≤ 3 months, 22.7% 4-6 months, 09.1% 7-9 months, 04.6% 10-12 months and 0% >12 months. Mean duration of diagnosis was 04 months. 22.72% lost follow up during the study period and who were in regular follow up, 11.76% was alive and 88.24% expired during the follow up period. 46.7% survived ≤ 3 months, 33.3% 4-6 months, 13.3% 7-9 months, 06.7% 10-12 months, 0% 13-24 months and >24 months. Among 15 expired patients, 02 got curative treatment and rest of 13 got palliative treatment. Those who got curative treatment, 50% survived 7-9 months and 50% 10-12 months. Those who got palliative treatment 53.8% survived ≤ 3 months, 38.5% 4-6 months and 7.7% 7-9 months. Overall median survival was 05 months, for curative treatment 09 months and for palliative treatment 03 months. In USA, the overall 5-year survival rate was 23.4% for patients who had pancreatectomy, compared with 5.2% for those who had no cancer-directed treatment.⁵ In India 1 year and 5 years survival for pancreatic carcinoma are 14.2% and 4.1% respectively. The prognosis in pancreatic

carcinoma is considerably determined by the treatment such as interventional and/or using antineoplastic agents.⁶ Actual survival of patients with pancreatic adenocarcinoma is disappointing compared with the actuarial survival rates reported in the literature. The independent prognostic factors for survival of patients who underwent surgical treatment for pancreatic adenocarcinoma are tumour-related.⁷ The most important determinant of long-term survival after pancreaticoduodenectomy for pancreatic cancer is biology of the tumor (lymph node status, blood vessel invasion). However, performance of the resection (units of blood transfused) also appears to be an important factor influencing survival.⁸ 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 pancreas. The current study identified most of the patients of carcinoma pancreas 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 carcinoma pancreas patients.

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