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The Sociodemographic Status of Biliary Tract Carcinoma Patients Getting Chemotherapy in a Day Care Center of Tertiary Care Hospital of Bangladesh

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Abstract **Original Research Article**

Back ground: Biliary tract cancers refer to as group of cancers that arise from epithelial lining of the gall bladder and bile ducts peri-hilar and extra hepatic biliary tree and peri-ampullary tumors. Though biliary tract cancer is a rare entity. ***Objective:*** In this study our main goal is to evaluate the sociodemographic status of biliary tract carcinoma patients. ***Method:*** This cross-sectional study was conducted in Department of Oncology Bangabandhu Sheikh Mujib Medical University, Dhaka Medical College and National Institute of Cancer Research and Hospital, Dhaka from January 2018 to June 2019. 78patients with advanced biliary tract carcinoma (Stage IV), attending the out-Patient department were selected as sample where 39 patients received - Oral Capecitabine plus injectable Cisplatin (Arm-A) and 39 patients received injection Gemcitabine plus Cisplatin (Arm-B). Purposive sampling was done and data were analyzed by SSPS 21. ***Results:*** In this study, the majority of the patients were in the 50 to 59 years age groups in both the arms, range from 37 -70 years. Most of the patients were in the group 2 in both the arms. It was 51.29% and 56.41% in arm A & B respectively. 53.85% and 43.59% patients from Arm A and B had the primary tumor in the Gall Bladder respectively. 35.89% and 43.58% patients from Arm A and B respectively had the primary tumor in the Cholangiocarcinoma (CCA). On the other hand, 10.26% and 12.83% patients from Arm A and B had the primary tumor in the Periampullary Carcinoma respectively. Most of the patients (66.66% in Arm A and 66.66% in Arm B) had liver metastasis. ***Conclusion:*** In conclusion we can say that, this study demonstrated that, biliary tract cancers are a highly aggressive human malignancy that is difficult to diagnose. Most of the cases site of metastasis increase gradually which compare from similar studies in the literature.

Keywords: Sociodemographic status, biliary tract, carcinoma.

INTRODUCTION

Biliary tract cancers refer to as group of cancers that arise from epithelial lining of the gall bladder and bile ducts perihilar and extra hepatic biliary tree and periampullary tumors [1].

Though biliary tract cancers are considered as rare tumors, they account 3% of all gastrointestinal cancers worldwide with geographic variations. Biliary tract cancers are uncommon in Western countries, but are relatively common in Central America, Northern India, and Asian countries [2]. The reported incidence is highest in Southeast Asia, Israel & Japan [3]. In Bangladesh, it is the 6th most common cancer and annually 7,272 new cases are diagnosed as well as accounts 33% cases of cancer death. [4]Biliary tract cancer ranks 21st among all cancer worldwide with an estimated incidence of 2, 19,420 number in the year of 2018 which is 1.2 % of total cancer incidence. Among all age groups high incidence rate present in female which is estimated as 5,261 death (approximately 5.7%) in the year of 2018. Though Bangladesh has a lacking of a definite population-based statistic for cancer. In this study our main goal is to evaluate the sociodemographic status of biliary tract carcinoma patients.

OBJECTIVE

General objective

- To evaluate the sociodemographic status of biliary tract carcinoma patients.

Specific objective

- To identify risk factors of biliary tract carcinoma in patients.
- To detect site of the primary tumors in patients.

METHODOLOGY

Types of study

- It was a quasi-experimental study.

Place and period of the study

- The study was conducted in Department of Oncology Bangabandhu Sheikh Mujib Medical University, Dhaka Medical College and National Institute of Cancer Research and Hospital, Dhaka from January 2018 to June 2019.

Sample size and population

- 78patients with advanced biliary tract carcinoma (Stage IV), attending the out-Patient department were selected as sample *sample where 39 patients received - Oral Capecitabine plus injectable Cisplatin (Arm-A) and 39 patients received injection Gemcitabine plus Cisplatin (Arm-B).*

Sampling technique

- Convenientt type of purposive sampling.

Inclusion criteria

- Clinically diagnosed and histopathologically proved advanced biliary tract carcinoma (AJCC Stage IV).

Data analysis

- The information that emerged was interpreted. Thereafter the conclusion and recommendation were drawn, in order to address the objectives of the study. The possibility of bias in the study was acknowledged and limited as much as possible. The data were tabulated in separate tables for both Arm A and B. Thereafter, they were checked, edited, coded manually. Data analysis was done according to the objectives of the study by using the SPSS (Statistical Package for Social Science) software program for Windows, Version 24.0 available in the institute. The statistical data were analyzed by Chi-square test, Fishers exact test and by T-test, where applicable. The p-value, less than 0.05, was taken significant.

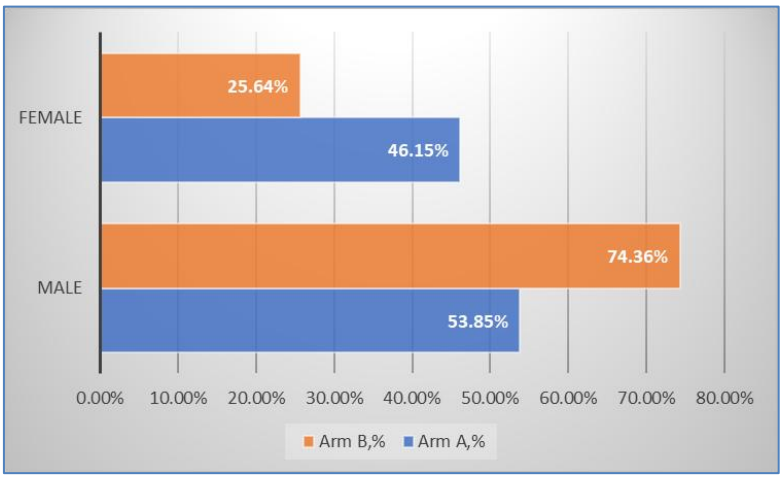
RESULTS

In table-1 shows distribution of the patients in relation to age.The majority of the patients were in the 50 to 59 years age groups in both the arms. Range 37 - 70 years. Average, Mean age 52 years and standard deviation ± 8.2 and P –value > 0.05Arm A, Mean age = 51 year and Standard deviation = ± 8.2Arm B, Mean age = 53 year and Standard deviation = ± 8.2. The following table is given below in detail:

Table-1: Distribution of the patients in relation to age

Age group	Arm A, %	Arm B, %
30-39 years	2.56%	2.56%
40-49 years	35.89%	20.51%
50-59 years	38.47%	56.42%
60-69 years	23.08%	20.51%

In figure-1 shows gender distribution of the patients.53.85% of patients from Arm A and 74.36% of patients from Arm B were males. On the other hand, 46.15% of patients from Arm A and 25.64% of patients from Arm B were female. The following figure is given below in detail:



Fg-1: Gender distribution of the patients.

In figure-2 shows distribution of the patients in relation to economic condition. Results shows that the majority of the patients were in the group 2 in both the arms. It was 51.29% and 56.41% in arm A & B respectively.

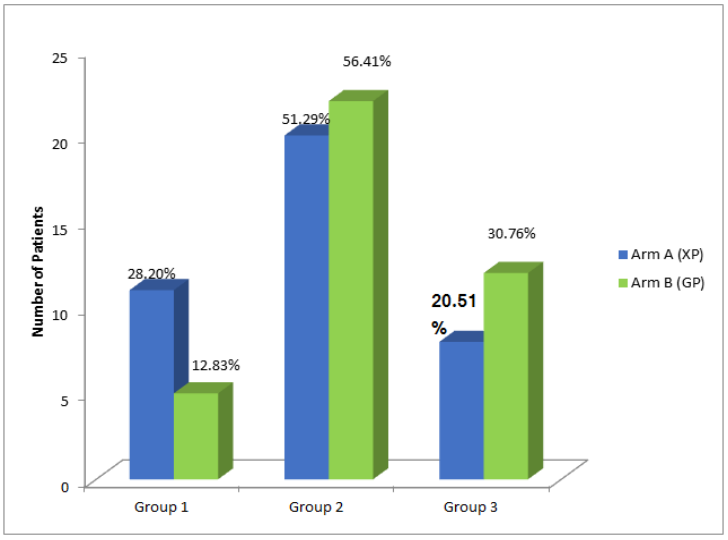


Fig-2: Distribution of the patients in relation to Economic condition

In table-2 shows distribution of patients participated in the study according to presence of risk factors. Majority of patients in both the arms, risk factorwas gallstone. They were 48.71% and 64.10% patients from the Arm A and B respectively. Second risk factor was Smoking, they were 51.28% and 58.98% patients from Arm A and B respectively, and chronic infection (Hepatitis B & C, Typhoid Carrier) was also risk factor, they were 35.89% and 43.58% patients from Arm A and B respectively. Small number of patients of both Arms had history of taking less vegetable. The following table is given below in detail:

Table-2: Distribution of patients participated in the study according to presence of risk factors

Risk factor	Arm A, %	Arm B, %
Smoking	53.85%	74.36%
Chronic Infection	46.15%	25.64%
Gall stone	38.47%	56.42%
Lack of vegetable	7.69%	0.00%

In figure-3 distribution of the patients according to the site of the primary tumors.53.85% and 43.59% patients from Arm A and B had the primary tumor in the Gall Bladder respectively. 35.89% and 43.58% patients from Arm A and B respectively had the primary tumor in the Cholangiocarcinoma (CCA). On the other hand, 10.26% and 12.83% patients from Arm A and B had the primary tumor in the Periampullary Carcinoma respectively. The following figure is given below in detail:

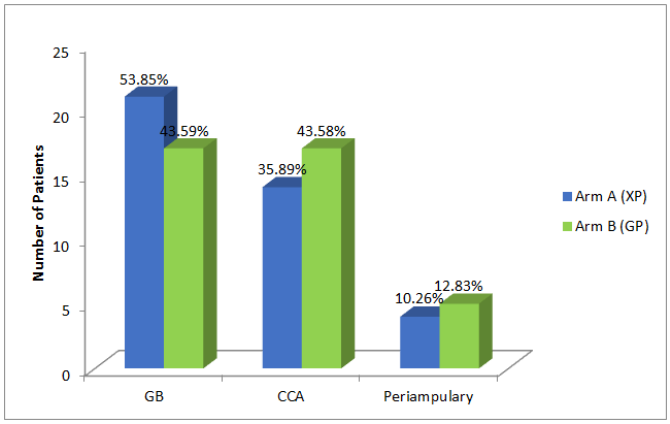


Fig-3: Distribution of the patients according to the site of the primary tumors

In figure-4 shows distribution of the patients according to the site ofmetastasis. Most of the patients (66.66% in Arm A and 66.66% in Arm B) had liver metastasis. The second most common (46.15% and 43.59%) metastatic site in the arm A and B was peritoneum. Lung was the 3rd most common metastatic site for biliary carcinoma with 17.94% cases. An interesting observation was, more than half of these lung metastasis cases had liver metastasis too. The following figure is given below in detail:

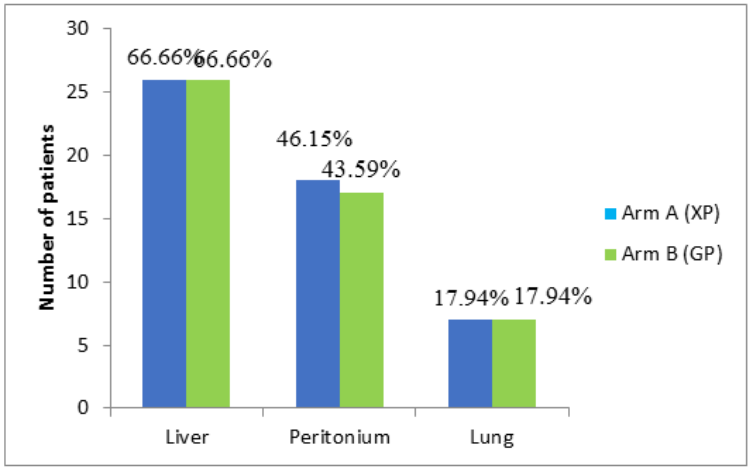


Fig-4: Distribution of the patients according to the site of metastasis

In table-3 shows distribution of the patients on the basis of anemia. Most of the patients in both the arms suffered from Grade1 and 2 anemias. It was 41.02% in Arm A and 51.28% in Arm B. Grade 2 anemia was experienced by 12.83% of the Arm A and 28.20% of the Arm B patients. Grade 3 anemia was experienced by 7.69% of the Arm B patients. 43.59% of the Arm A and 12.83% of the Arm B patients did not have anemia during the treatment period. The following table is given below in detail:

Table-3: Distribution of the patients on the basis of Anemia

Anaemia Toxicity Grade	Arm				Total	
	Arm A (XP)		Arm B (GP)			
	n (39)	%	n (39)	%	n (78)	%
No Toxicity	17	43.59	5	12.83	22	28.21
Grade 1	16	41.02	20	51.28	36	46.15
Grade 2	5	12.83	11	28.20	16	20.52
Grade 3	1	2.56	3	7.69	4	5.12
Total	39	100.00		100.00	78	100.00
Chi Square test	10.2399					
p-value	*0.016633*					

DISCUSSION

The mean age of the patients at diagnosis was 52±1 years and P value = 0.0589. The youngest patient was 37 years old and the oldest one was 75 years. Most of the patients were in 50-59 years age group.

Regarding the economic condition 28.20% patients of arm a came from the back ground of less than 12,260-taka monthly income group people. 51.29% of the total cases had a monthly income between 12,260 to 31,640-taka, Rest of them had more than 31,640 takas.

In arm B, 12.83% of the patients came from the back ground of less than 12,260-taka monthly income group. 56.41% of the total cases had monthly income between 12,260 to 31,640-taka, Rest of them more than 31,640 takas. It implies that the economic condition has no specific influence on the occurrence of biliary tract carcinoma. Which was quite similar to other studies [5, 6]?

Most of the patients (66.66% in Arm A and 66.66% in Arm B) had liver metastasis. The second most common (46.15% and 43.58%) metastatic site in the arm A and B was peritoneum. Lung was the 3rd most common metastatic site for biliary carcinoma with 17.94% cases. An interesting observation was, more than half of these lung metastasis cases had liver metastasis too.

It was implied that most of the patients in both the arms suffered from Grade1 and 2 anemias. It was 41.02% in Arm A and 51.28% in Arm B. Grade 2 anemia was experienced by 12.83% of the Arm A and 28.20% of the Arm B patients. Grade 3 anemia was

experienced by 7.69% of the Arm B patients. 43.59% of the Arm A and 12.83% of the Arm B patients did not have anemia during the treatment period. Which was similar to other literature [7]?

CONCLUSION

In conclusion we can say that, this study demonstrated that, biliary tract cancers are a highly aggressive human malignancy that is difficult to diagnose. Most of the cases site of metastasis increase gradually which compare from similar studies in the literature. Therefore, further study is needed for better outcome.

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