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Radiotherapy

The Demographic Status and Cancer Types of Patients in Northern Area of Bangladesh

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Abstract	Original Research Article

Background: Cancer is one of the leading of human mortality. Developing country like Bangladesh cancer cases has been commonly seen in both men and women. Which right now gradually increasing. *Objective*: In this study our goal is to evaluate the demographic status and cancer types of patients in northern area of Bangladesh. *Method*: This cross-sectional study was carried at tertiary hospital in northern area from January 2019 to December 2019. Where 296 cancer patients who admitted in oncology department in hospital were included in study. The study was conducted in the form of face-to-face interviews of patients using a standard questionnaire format and histopathological report. From interviews, information was obtained about demographic characteristics and detail history of histopathological report. *Results*: During the study, majority were belong to 41-60 years age group and 60.81% were female. In addition, there was significant correlation was observed between age and gender of patient where in 60-80 years age group, 53.8% were male and 46.2% were female followed by 41-60 years age group 37.9% were male and 62.1% were female, 21-40 years age group 23.6% were male and 76.4% were female. According to cancer types in female, 46.8% had breast cancer, followed by 11.4% had cervical and 10.7% ovarian cancer, 9.1% had lung cancer, 8% were head and neck cancer, 6.6% had stomach cancer and 3.3% had rectal cancer. Whereas in male 54% had lung cancer, 18 % were head and neck cancer, 15% had prostate cancer, 5% had stomach cancer, 3% had colon cancer, 2% had liver cancer, 2% had urinary bladder cancer, 1% had Hodgkin's diseases. *Conclusion*: The overall cancer trend revealed that cancer cases in both gender were gradually increasing. Moreover, females were more likely to be affected than males. In the absence of population-based registries, incidence and mortality numbers, investigations like this one can give important leads for health planning and future research.
Keywords: Cervical cancer, ovarian cancer, carcinoma, tumor.

INTRODUCTION

Cancer is a disease that affects the elderly. It is uncommon in childhood, increases in frequency during maturity, and is most common in the elderly. The increased incidence of cancer in the elderly is consistent with the multistage nature of carcinogenesis, which often takes decades after exposure to etiological factors for cancer to emerge [1-4].

Tobacco use, exposure to pathogenic microbes, poor food, and inherited genetic changes, hormones, and immune suppressive circumstances are all known to cause cancer. Cancer start has long been recognized to need only a single exposure to a carcinogen, which causes DNA damage [5].

There were an estimated 14.1 million cancer cases around the world in 2012, of which 8.2 million went dead. Among these, lung cancer was responsible for 17.8% cases, stomach cancer for 10.4% cases and liver cancer for 8.8% of all cancer originated deaths [6].

Since Bangladesh is a developing country with high density population accompanied with limitations in disease diagnosis and subsequent mitigation, the Bangladeshi community suffers from varieties of diseases. Specially in small city and rural due to adequate facility there is a less chance to evaluate the cancer types among people [7].

In this study our main goal is to evaluate the demographic status and cancer types in northern area of Bangladesh

Objective
- To evaluate the demographic status and cancer types in northern area of Bangladesh.

METHODOLOGY

This cross-sectional study was carried at tertiary hospital in norther area of Bangladesh from January 2019 to December 2019. Where 296 cancer patients who admitted in oncology department in hospital were included in study. The study was conducted in the form of face-to-face interviews of patients using a standard questionnaire format and histopathological report. From interviews, information was obtained about demographic characteristics and

detail history of histopathological report. The data was entered in MS excel and analyzed using SPSS V 21. The continuous variables were represented using Mean and Standard deviation and categorical data was represented in the form of frequencies and proportions and chi square test will be used to check for association between quantitative data. P value less than 0.05 is considered to be statistically significant.

RESULTS

In table-1 shows age distribution of the patients where majority were belong to 41-60 years age group, 47.3%. The following table is given below in detail:

Table-1: Age distribution of the patients

Age Group	Percentage (%)
1 month - 20 years	2.0
21-40 years	24.3
41-60 years	47.3
61-80 years	26.4

In Figure-1 shows gender distribution where 60.81% were female. The following figure is given below in detail:
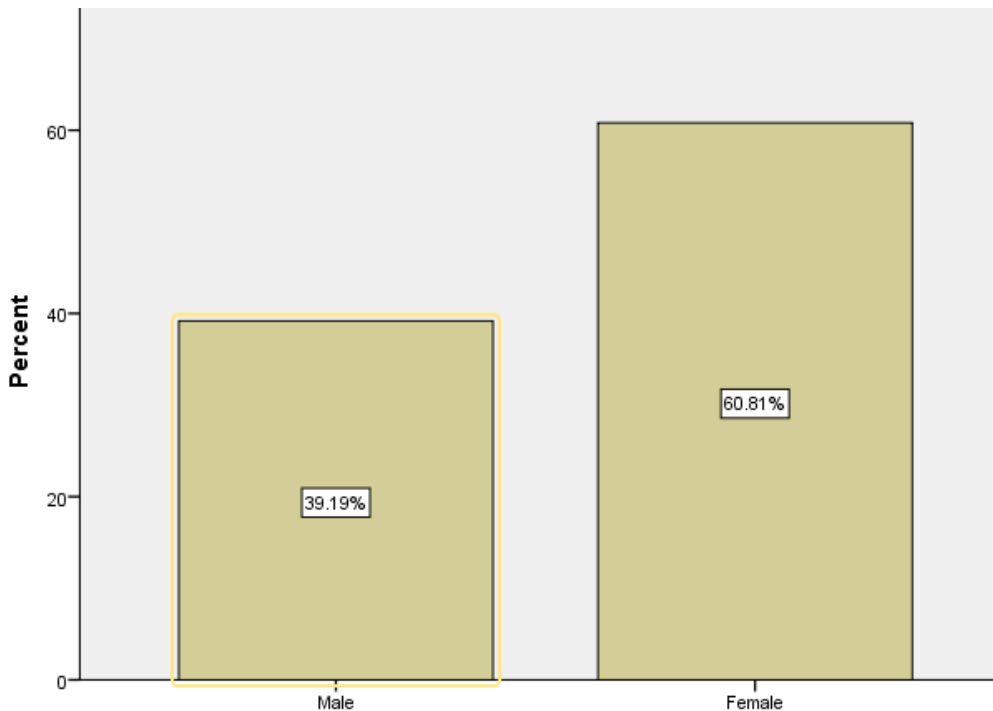

Figure-1: Gender Distribution

In Table-2 shows correlation patients age with gender where in 61-80 years age group, 53.8% were male and 46.2% were female followed by 41-60 years age group 37.9% were male and 62.1% were female, 21-40 years age group 23.6% were male and 76.4%

were female and in 1 month to 20 years age group 66.7% were male and 33.3% were female. In addition, there was significant correlation was observed between age and gender of patient. The following table is given below in detail:

Table-2: Correlation of patients age with gender

Age group	Male	Female	Total	P value
1 month to 20 years	66.7%	33.3%	100.0%	0.001
21 to 40 years	23.6%	76.4%	100.0%	
41 to 60 years	37.9%	62.1%	100.0%	
61 to 80 years	53.8%	46.2%	100.0%	
Total	39.2%	60.8%	100.0%	

In Table-3 shows cancer types in female patients where 46.8% had breast cancer, followed by 11.4% had cervical and 10.7% ovarian cancer, 9.1% had lung cancer, 8% had head and neck cancer, 6.6% had stomach cancer, 3.3% had rectal cancer and 1.7% had colon cancer. Besides that, cases like Metastatic malignant melanoma of trunk has been noticed. The following table is given below in detail:

Table-3: Cancer types in female patients

Caner types	Percentage (%)
Breast cancer	**46.8**
Cervical cancer	**11.4**
Ovarian cancer	**10.7**
Lung cancer	**9.1**
Head and neck cancer	**8**
Stomach cancer	**6.6**
Rectal cancer	**3.3**
Colon cancer	**1.7**
Kidney cancer	**.8**
Gall bladder cancer	**.8**
Hodgkin's Lymphoma	**.8**

In table-4 shows cancer types in male patients where 54% had lung cancer, 18% had head and neck cancer, 15% had prostate cancer, 5% had stomach cancer, 3% had colon cancer, 2% had liver cancer, 2% had urinary bladder cancer, 1% had Hodgkin's diseases. The following table is given below in detail:

Table-4: Cancer types in male patients

Cancer types	Percentage (%)
Lung cancer	54
Head and neck cancer	18
Prostate cancer	15
Stomach cancer	5
Colon cancer	3
Liver cancer	2
Urinary Bladder cancer	2
Hodgkin's diseases	1

DISCUSSION

In one study, the proportion of male patients was more than females and the mean age of male patients were 10 years higher. The study revealed that maximum frequency observed in males (27.1%) in 51 to 60 years' age group and in females (29.1%) in 41 to 50 years' age group [8].

This age group was supported by our study where majority were belong to 41-60 years age group, 47.3% and 60.81% were female.

Besides that, there was significant correlation was observed between age and gender of patient where in 60-80 years age group, 53.8% were male and 46.2% were female followed by 41-60 years age group 37.9% were male and 62.1% were female, 21-40 years age group 23.6% were male and 76.4% were female. Which was supported by other studies where 60-80 years age group, 60% were male and 40% were female followed by 41-60 years age group 44% were male and 54% were female [9].

Moreover, in one study it was observed that males developed tobacco related cancers and females developed breast and cervical cancer in higher proportion in those age groups [10].

In another study around one fourth proportion of all male cases were diagnosed as lung cancer (C33-C34) and it was five percent in females. It ranked as a leading cancer site in males and third position in females [11]. Worldwide, lung cancer also remained as the most frequent cancer site which comprises more

than 1.8 million new cases and almost 1.6 million deaths, as estimated in 2012 [12].

In India, it accounts for 3.9% of global new cases and 4% of estimated global death [6]. The observed variations in lung cancer rates and trends across countries or between males and females within each country largely reflect differences in the stage and degree of the tobacco epidemic [13, 14].

In a survey of tobacco use in Bangladesh, overall prevalence of smoking, chewing tobacco and gul (tobacco dust) usage were 20.5%, 20.6% and 1.8%, respectively [15].

Current smoking and gul usage were significantly higher in males (42.2% and 2.2%, respectively) than females (2.3% and 1.5%, respectively) [9]. These factors might be responsible for higher proportion of lung cancer in males. The second most common organ cancer among males was larynx "C32" (eight percent of all male cases). Globally laryngeal cancer is the fourteenth most common cancer among men, but it is relatively rare in women [6].

Highest number of cases reported (24.1%) in 2006 then gradually fall to its lower limit (15.7%) in 2009. This can be attributed to higher prevalence of smoking among males compared to females [9].

Breast cancer (C50) is the most frequently diagnosed cancer and the leading cause of cancer death in females worldwide, accounting for 1.7 [15].

In this study according to cancer types in female, 46.8% had breast cancer, followed by 11.4% had cervical and ovarian cancer, 9.1% had lung cancer, 8% had head and neck cancer, 6.6% had stomach cancer, 3.3% had rectal cancer. Whereas in male 54% had lung cancer, 18% had head and neck cancer, 5% had prostate cancer, 5% had stomach cancer, 3% had colon cancer, 2% had liver cancer, 2% had urinary bladder cancer, 1% had Hodgkin's diseases.

CONCLUSION
The overall cancer trend revealed that cancer cases in both gender were gradually increasing. Moreover, females were more likely to be affected than males. In the absence of population-based registries, incidence and mortality numbers, investigations like this one can give important leads for health planning and future research.

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