

DISTRIBUTION OF CANCER PATIENTS AT NATIONAL INSTITUTE OF CANCER RESEARCH AND HOSPITAL IN 2006

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Abstract

A study on 6492 new cancer patients was done at National Institute of Cancer Research & Hospital (NICRH), Mohakhali, Dhaka from January 2006 to December 2006. Histopathologically confirmed cancer patients; patients having radiological or clinical evidence of malignancy were included in the study. Majority of the patients were from Dhaka division (47.8%) and next from Chittagong division (22.5%). There were 3824 male and 2668 female patients in the study. The male female ratio was 1.4:1. The majority of cancer occurred in middle and old age. In adult male Lung cancer ranked the top (909, 24.1%) followed by cancer of lymph node and lymphatic (264, 7.0%), Laryngeal carcinoma (247, 6.5%) and Oesophageal Carcinoma (199, 5.3%). Breast cancer (24.48) was the major malignancy amongst adult female (633, 23.3%) followed by that of the cervix (583, 21.4%), Lung (153, 5.6%) and Oral cavity (116, 4.3%). In pediatric patients malignancy of lymphatics and lymphoid tissue led the tally while in geriatric group Lung cancer found to be more prevalent.

Introduction

Cancer is one of the major killer diseases through out the world. Once considered the disease of affluent countries cancer now affecting the developing countries as well ¹. In 2002, overall there were 10.9 million new cases, 6.7 million deaths, and 24.6 million people living with cancer ². In industrialized countries it is the second greatest killer next to Cardio-vascular diseases ³. In USA when deaths are aggregated by age, cancer has surpassed heart diseases as the leading cause of death for person younger than 85 years since 1999 ⁴. The most commonly diagnosed cancers are lung cancer (1.35 million), breast (1.15 million), and colorectal cancer (1 million). The most common causes of cancer death are lung cancer (1.18 million deaths), stomach cancer (700000 deaths), and liver cancer (598000 deaths) ⁴. The most prevailing cancer in the world is breast cancer (4.4 million survivors up to 5 years following diagnosis) ⁴. But the scenario is slowly changing. In United States, the

death rates from all cancers combined has decreased by 1.5% per year since 1993 among men and 0.8% per year since 1992 among women. ² Not necessarily the picture would be the same in Bangladesh although it is generally believed that cancer incidence is rising in our country. There is no population based cancer registry in our country to provide reliable data on cancer incidence, prevalence and mortality. This study aims to see the distribution of cancer patients attending the out patient department (OPD) of NICRH, Mohakhali, Dhaka during a whole year of 2006.

Materials and Methods:

Histologically confirmed cancer patients, patients having radiological evidence or clinical evidence of malignancy by referring physician or hospital attending the out patient department of National Institute of Cancer Research and Hospital from January 2006 to December 2006 were included in the study. Every patient fulfilling the above criteria was taken as the study population. A structured questionnaire was used to collect data from the patients. Data were collected in every working day of the above-mentioned period. ICD-O classification was used through out study to record the diagnosis.

Result:

Out of 6492 cancer patients in the study in the study, 3824 were male and 2668 were female with a male female ratio of 1.4:1 (Fig: 1). Majority of patients came from various districts of Dhaka division (47.8%) while only 2.3% patients were from Sylhet division. Most of the patients included in the study were Muslims (92.7%) and married (86.8%). Regarding the educational status 41.5% were illiterate, and 32.2% had primary level education only. Most of the female patients were housewives. Among the male majority were agricultural workers (30.1%). Most of the patients were of low income group. More than 80 % patients earned less than 5000 TK per month. About 73% patients were earning less than taka 5000 per month. (Table:I).

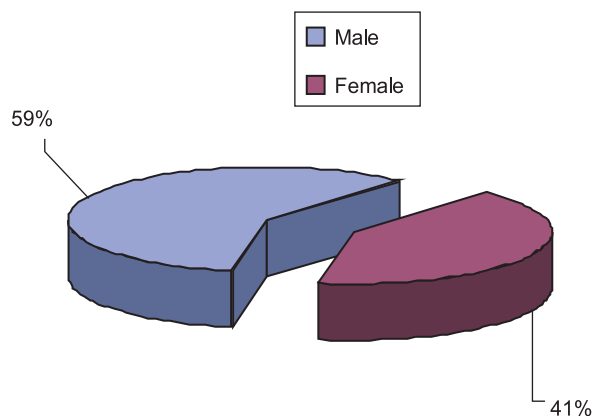


Fig.-1: Male Female distribution

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Table-I: Demographic characteristics of cancer patients

Demography	Male (%)	Female (%)
Religion		
Islam	3600(55.5)	2471 (38.1)
Hinduism	206(3.2)	177(2.7)
Christianity	13(0.2)	19(0.3)
Buddhism	5(0.1)	1(0.0)
Marital status		
Never married	376(5.8)	190(2.9)
Married	3434(52.0)	2236(34.4)
Widow/Widower	11(0.2)	233(3.6)
Divorced	0(0.0)	9(0.1)
Education		
Not applicable (up to 5 years)	61(0.9)	34(0.5)
Illiterate	1406(21.7)	1284(19.8)
Primary	1321(20.3)	896(13.8)
Secondary	595(9.2)	301(4.6)
Higher secondary	213(3.3)	82(1.3)
Graduate and above	228(3.5)	71(1.1)
Occupation		
Not applicable (up to 5 yrs)	61(0.9)	32(0.5)
Service	492(7.6)	102(1.6)
Business	503(7.7)	5(0.1)
Agriculture	1138(17.6)	20(0.3)
Day labourer	281(4.3)	24(0.4)
House wife	-	2280(35.2)
Retired/aged	1054(16.2)	73(1.1)
Industrial worker	75(1.2)	3(0.0)
Student	214(3.3)	129(2.0)
Income		
Mean	4902.3	5074.3
Median	4000.0	4000.0
Standard Deviation	±4981.25	5008.77

There were 1414 (21.78%) respiratory tract cancer, 1123 (17.29%) GIT cancer, 738 (11.36%) female genital tract organ cancer, 693 (10.67%) head & neck cancer, and 645 (9.93%) breast cancer (table II).

Table-II: System wise distribution of all cancers

Primary site	Number	Percentage
Respiratory tract	1414	21.78
GIT	1123	17.29
Female genital organs	738	11.36
Head & Neck	693	10.67
Breast	645	9.93
Lymphatic & lymph node	372	5.73
Kidney & related organs	175	2.69
Eye, brain & CNS	169	2.60
Bones	165	2.54
Connective tissue	159	2.44
Skin	158	2.43
Male genital organs	134	2.06
Endocrine glands	57	0.87
Leukemia	41	0.63
Non specific organs	25	0.38
Unknown primary site	424	6.53
Total	6492	100

Lung was the main leading site of cancer in both sexes (16.4%). Out of 1062 total lung cancer patients 909 were male. Breast 645 (9.9%) and Carcinoma of cervix 583 (9.0%) were in second and third position (table II).

Five leading sites of malignancy found among male were lung (24.1%), lymphatic organ (7.0%) larynx (6.5%), oral cavity (4.3%), skin (3.0%) and connective tissue (2.4).

Among Female, breast cancer (23.3%), topped the list of common cancers followed by carcinoma cervix (21.4%), lung cancer (5.6%) oral cavity cancer (4.3%) & carcinoma of lymphatic organ (3.9%) (Table:II) .

Only 3.9% (254) cancer patients were of pediatric age group (0-15 yr) and among them 165 were boys and 89 were girls. Retinoblastoma happened to be leading cause of cancer in this group (20.1%) followed by lymphoma (16.5%) & bone cancer (13.8%).

Patients of 65 years and above were considered as geriatric patients. About 19.1% of all cancer patients were from this age group. Most of them, however, were male (77.6%). Only 22.4% were female. Lung (29.9%) was predominate site of cancer among geriatric patients followed by Oesophagus (6.9%) and larynx (6.2%).

Table-III: Top 10 malignancies in both sexes

Male (%)	Site	Position	Site	Female (%)
909 (24.1)	Lungs	1	Breast	633 (23.3)
264 (7.0)	Lymph node & lymphatic	2	Cervix	853 (21.4)
247 (6.54)	Larynx	3	Lung	153 (5.6)
148 (4.3)	Oral cavity	4	Oral cavity	116 (4.3)
117 (3.0)	Skin	5	Lymph node & lymphatic	106 (3.9)
93 (2.4)	Connective tissue	6	Ovary	81 (3.0)
73 (1.9)	Prostate	7	Gall bladder	78 (2.9)
61 (1.6)	U.Bladder	8	Oesophagus	69 (2.6)
54 (1.3)	Brain	9	Stomach	61 (2.3)
48 (1.3)	Testes	10	Liver	31 (1.2)

Discussion:

In this study 6492 cancer patients were included with a male female ratio of 1.4:1. A similar study was done at the same institute in 2002⁵. In that study a total of 3719 cancer patients were included with a male female ratio of 1.17:1. In present study the patients' number increase & difference between male female reduced. This could indicate an absolute or a relative increase in the number of female patient. However these findings are consistent with another study in 2005 at NICRH⁶. To find out the real scenario a population-based survey is necessary.

Globally the three most common cancers are lung, breast & colorectal³. In our study we also find lung as the leading cancer. But the 2nd & 3rd cancers (breast cancer & Cancer cervix respectively) differ. This observation is slightly different from the study conducted in 2005⁶ where cervical cancer was in the 2nd position. Different geographic & socio-economic condition could be underlying cause for variation between global and local findings.

In 2005 study⁶ it has been found that among male the highest no of cancer was in lung (24.1%) followed by carcinoma of lymph nodes and lymphatic (7.0%), larynx (6.5%). In female it was ca breast (23.7%) followed by ca cervix (21.4%). The main difference between these two studies is the emergence of breast cancer as the leading cancer in female. The underlying causes for this are not clear. Developed reporting system or increased consciousness to seek cancer treatment could be the cause.

Nearly 70% all new cases of lung cancer in the world occur in the developed countries⁷. In a population-based study at Kolkata in 1998-1999 lung cancer (16.3%) emerged as the leading cancer among both sex⁸. These findings are consistent with the findings of the present study.

In the present study it was revealed that only 3.9% patients of pediatric age group (0-15yrs) are suffering from any sort cancer. This result supports the facts that mainly cancer is a disease of adult & old age⁹.

According to the present study people of most productive age (20-47) are suffering more from respiratory track malignancy (21.78%). This could be attributable to the use of tobacco in any form by that population group.

There have been some similarity and some dissimilarity between the findings of the present study and similar study held in our country and abroad¹⁰. The findings of this study may not reflect the real cancer scenario totally but will definitely provide some idea about possible prevalence of different type of malignancy amongst the population of Bangladesh.

According to present study majority of cancer patients came from Dhaka division and least number of patients reported from Sylhet division. The long distance and poor communication network across the country could be the cause of this difference.

Conclusion:

Cancer is a major killer disease worldwide; Bangladesh is no exception. Its economic, personal and social consequences are huge. People of productive age group are suffering more from different kind of cancer mainly from those of respiratory tract. By discouraging the use of all sorts of tobacco majority of this cancer incidence could be stopped. To develop an effective cancer control plan more in-depth study and initiation of population based cancer registry is necessary.

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