Socio-Demographic Profile of the Cancer Patients Attending Cancer Treating Institute of South Gujarat

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ABSTRACT

Background: Cancer may be regarded as a group of diseases that occur due to abnormal growth of cells, invasion of adjacent tissue and organs, and that lead to death of affected patient. Cancer occur any organ or tissue of the body. Six decade ago, cancer was sixth leading cause of death in industrialized countries, and today cancer became second leading cause of death. There are wide variations in cancer distribution throughout world.

Aim: To see the Socio-demographic profile of the cancer patients.

Methodology: Cross-sectional Study conducted in newly register Cancer patients at D.B. Tejani Cancer Institute, Surat, in purposively selected 690 patients during December-15 to January-16. It was a descriptive-study about socio-demographic profile of patients.

Results: Out of 2700 cancer-patients newly-registered in hospital, 690 patients of different cancer were interviewed. Male female ratio was 0.99:1. The mean age was *49.17±14.95* years; 50.9% patients were belonging to rural area; 87.1% were Hindu; 81.7% were married; 40.3% were illiterate; 34.9% were homemakers and 85.7% from lower-socioeconomic status.

Conclusion: Cancer trend increasing among females in both urban and rural area at early age.

Keywords: Socio-demographic profile, cancer patients, Gujarat

INTRODUCTION

The burden of Cancer is still increasing worldwide despite various advances available for diagnosis and treatment. In India, the demographic scenario is changing with the declining fertility level and increasing life expectancy. As the life expectancy at birth increases proportionately geriatric population also rises. Higher incidence of non-communicable diseases, especially cancer is positively associated with increase of aged population of a country. Cancer can affect all living cells in the body, at all ages and both genders are affected with Cancer. There is a multifactorial causation and the disease process differs at different sites. The World Cancer Report documents that cancer rates are set to increase at an alarming rate globally. Cancer rates could increase by 50% new cases for the year 2020[1].

According to GLOBOCAN 2012, an estimated 14.1 million new cancer cases and 8.2 million cancer-related deaths occurred in 2012, compared with 12.7 million and 7.6 million, respectively, in 2008. It provides estimates about the predictive increase in new cancer cases to 19.3 million per year by 2025, due to growth and ageing of the global population. More than half of all cancers (56.8%) and cancer deaths (64.9%) in 2012 occurred in less developed regions of the world, and these proportions will increase further by 2025[2].During current years Incidence of childhood cancer also increases in the world populations 1.6 million < 15 years old children every year [3].In India during 2015, Crude Incidence Rate (CIR) and Age Specific Rate for all cancer was 73.6 and 104.2 per 100,000 populations respectively[4].

Surat as a fast growing city increase Industrialization, urbanization, migration of population, overcrowding, change in behavior pattern of people. In South Gujarat, there was no data available regarding burden of different type of cancer, socio-demographic and treatment profile of cancer and risk factor responsible for different type of cancer. In South Gujarat, there is no particular cancer registry, which provides data about the magnitude and pattern of cancer. Based on that, a study was planned at DBTCI to see the socio-demographic profile of the cancer patients who were newly registered at the DBTCI.

METHODOLOGY

It was a Cross Sectional Study conducted in Shri Devarajbhai Bavabhai Tejani Cancer Institute (DBTCI), managed by D. B. Tejani Trust located in the campus of New Civil Hospital, Surat. It provides the Diagnostic and Treatment facility free of cost for almost all types of cancer. There is around 15 – 20 new cancer patients registered at the DBTCI for taking treatment of different types of cancer.

Purposively selection of total 690 Cancer patients newly registered at the OPD of Shri Devarajbhai Bavabhai Tejani Cancer Institute (DBTCI), Surat during Dec 2015 to May 2016 except critically serious patients and who were not giving consent were studied. Pre designed semi structured questionnaire was used for data collection. After the completion of data collection, data was entered into MS Excel data file. Data analysis was done by using software IBM SPSS version 20 (Statistical Package for Social Science).

RESULTS

Out of 690 patients, 50.6% were females and 49.4% were males. Gender wise almost similar distribution seen and similar pattern of mean age distribution was observed. In general Hindu patients were in majority (87.1%).However, More than half (55.1%) of the patients were belongs to general caste, followed by Scheduled Tribe (24.6%), SEBC/OBC (13.2%) and Scheduled caste (7.1%). Gender wise not much differences seen in religion and caste. Majority of patients were married (81.7%), among them male patients were more compare to female patients, whereas more female patients in widows (18.3%) compared to male. (Table 1)

Rural area and urban area distribution was almost similar. Around 40.3% patients were Illiterate and Illiteracy was more in female patients (52.7%) as compared to male patients (27.6%).

Table 1: Distribution of Patients according to their Socio-demographic profile

Socio-Demographic variables	Male (%) n=341 (49.4%)	Female (%) n=349 (50.6%)	Total (%) n=690 (100%)
Age (Years)*	48.6 ± 15.7	49.7 ± 14.2	49.174.95
Area of Residence			
Rural	176 (51.6)	175 (50.1)	351(50.9)
Urban	165 (48.4)	174 (49.9)	339(49.1)
Religion			
Hindu	295 (86.5)	306 (87.7)	601(87.1)
Muslim	44 (12.9)	35 (10.0)	79 (11.4)
Christian	1 (0.3)	5 (1.4)	6 (0.9)
Others	1 (0.3)	3 (0.9)	4 (0.5)
Caste			
General	192 (56.6)	188 (53.6)	380(55.1)
SEBC/OBC	46 (13.4)	45 (13.0)	91 (13.2)
SC	30 (08.7)	19 (05.5)	49 (07.1)
ST	73 (21.3)	97 (28.0)	170(24.6)
Marital status			
Unmarried	028 (08.2)	014 (04.0)	42 (6.1)
Married	297 (87.1)	267 (76.5)	564(81.7)
Widow	14 (04.1)	64 (18.4)	78 (11.3)
Divorced	2 (0.6)	2 (0.6)	4 (0.6)
Separated	0 (0.0)	2 (0.6)	2 (0.3)
Education			
Illiterate	94 (27.6)	184 (52.7)	278 (40.3)
Primary	118 (34.6)	93 (26.6)	211 (30.6)
Secondary	76 (22.2)	45 (13.0)	121 (17.5)
Higher secondary	18 (5.2)	7 (2.0)	25 (3.6)
Graduation	29 (8.5)	14 (4.0)	43 (6.2)
Post-graduation	0 (0.0)	2 (0.6)	2 (0.3)
Pre-school child	6 (1.7)	4 (1.2)	10 (1.4)

* Minimum: 1, Maximum: 85; Median 50 (IQR: 40-60)

Table 2: Age and Gender distribution of subjects

Age groups (Years)	Male (%) (n=341)	Female (%) (n=349)	Total (%) (n=690)
<10	10 (2.9)	6 (1.7)	16 (2.3)
10 – 19	9 (2.6)	5 (1.4)	14 (2.0)
20 – 29	14 (4.1)	11 (3.2)	25 (3.6)
30 – 39	50 (14.6)	45 (13)	95 (13.8)
40 – 49	78 (22.7)	90 (25.9)	168 (24.3)
50 – 59	79 (23.2)	83 (23.8)	162 (23.5)
60 – 69	75 (21.9)	87 (25.1)	162 (23.5)
70 – 79	23 (6.7)	20 (5.7)	43 (6.2)
80 – 89	3 (0.9)	2 (0.6)	5 (0.7)

Table 3: Occupation and Gender wise distribution of study population

Occupation type	Male (%) (n=341)	Female (%) (n=349)	Total (%) (n=690)
Not working	8 (2.3)	8 (2.3)	16 (2.3)
Students	15 (4.4)	10 (2.9)	25 (3.6)
Housewife	0	241 (69.5)	241 (34.9)
Government job	44 (12.9)	14 (4.0)	58 (8.4)
Private job	16 (4.7)	6 (1.7)	22 (3.2)
Business	40 (11.7)	4 (1.2)	44 (6.4)
Labour work	35 (10.2)	25 (7.2)	60 (8.7)
Agricultural	94 (27.4)	38 (11.0)	132 (19.1)
Industry worker	58 (16.9)	3 (0.9)	61 (8.8)
Vehicle driver	31 (9.0)	0	31 (4.5)

This was because many of the rural area patients were belonging to tribal community where literacy rate was very poor. While those who were residing in urban area majority of them were migrated from different part of the country to earn livelihood and this migrated population also had no education. (Table 1)

Commonest age group was 40-69 years old in cancer patient that covers the more than two third patients (71.3%). In this age group, female patients were more (74.7%) compared to male (66.7%). As the cervical cancer and breast cancer commonest female cancer were affecting this age group of females. However, male patients were more common compared to female in age of 20 - 39 years (18.7%), more than 69 years of age (7.9%) andin children and adolescent (5.5%).(Table 2)

One third of the patients (34.9%) were housewives, followed by agriculture worker (19.1%), industry worker (8.8%), labour worker (8.7%), government employee (8.4%), businessman (6.4%), vehicle driver (4.5%), and private employees (3.2%). As in the rural area majority of the females were homemakers or engaged in agricultural activity, while males in rural area engaged in agricultural activity and in urban area engaged in industrial activity. (Table 3)

DISCUSSION

In present study with male female ratio was 0.98:1 indicating female predominance. (Table1) Similar pattern recorded by Cherian et al[6] in Kerala (0.93:1); which was higher than Jabalpur study of Sinha et al[7] (0.66:1), Damodar et al[8] in Warangal (0.65:1) and Kalyani et al[9] in Kolar (0.7:1). Though male predominance recoded by Sharma et al[10] in Jaipur region (1.4:1) and Waniet al[11] in Kashmir valley (3:2). It seems that the sex wise distribution of current study population was almost equal.

Mean age of patients in current study was *49.17 ± 14.95 years* with minor differences in mean age of male (*48.6 ± 15.7 years)* and female (*49.7 ± 14.2 years).* Similar mean age distribution recorded by Sinha et al[7] in male (50.7 years), female (47.3 years) and total (48.7 years).In current study maximum patients were in 40-49 years' age groups (24.3%) (Table2), which was early age groups than the study done by Puri et al[12] in Chandigarh (32.3%) and Kalyani et al[9] study in Kolar where it was in 60-69 years age groups (12.14%). In current study two third (71.3%) of patients were in 40-69 years old age groups which was higher than study done in Kashmir[11] where it was 61.6%.

Female patients in this study were Maximum in 40-49 years' age (25.9%) as compared to male patients who were Maximum in 50-59 years' age (23.2%). (Table2) Sharma et al[10] found similarly maximum female in 41-50 years (25.3%) and males in 51-60 years age (23%). While Kalyani et al[9] recorded similar maximum female in 40-49 years age group (26.9%) but older age group for male patients (60-69 years – 27.8%). In present study 4.3% cancer patients were Children and adolescent which was higher than recorded by Cherian et al[6] (3.4%) and Puri et al[12] (2.9%) but lower than the study of Wani et al[11] (5.69%) and Sharma et al[10] (15.2%).

Current study found nearly equal distribution in rural area (50.9%) and urban area (49.1%), (Table 1) though Rutuja et al[13] in Loni (81.9%), Wani et al[11] in Kashmir (70%) and Damodar et al[8] in Warangal (77.9%) had found more rural patients compared to urban. Mahavir and Babita[14] also found more Rural patients (56.3%).

Present study had found majority of the patients were belonging to Hindu (87.1%) and Muslim (11.4%) community (Table1). Similarly Puri et al[12] in Chandigarh found maximum patients were Hindu (63.3%), followed by Sikhs (26.5%), Muslim (2.7%) and Christian (4.5%) While in Kerala[6] Christian (40%) patients were maximum. In Nellore, Andhra Pradesh Jyothi et al[15] had studied profile of 125 cancer patients, out of them Hindu patients in majority (85.6%), followed by Muslims (8%). It seems that the visit of Hindu patients were compare to Muslim patients in DBTCI hospital or there may be lower risk of cancer among Muslim patients or they visit other hospital for cancer treatment.

Caste wise distribution in current study had found that patients belonging to General Caste (55.1%) were more compared to others. A study done by Mahavir and Babita[14] in Haryana found that 68.8% patients belongs to general caste. 16.4% patients to backward class and 14.8% patients from Scheduled caste while in Nellore[15]maximum patients belongs to backward classes (44.8%), followed by open category (34.4%) and scheduled caste (20%).

In current study married patients were in majority (81.7%), compare to widow/widower (11.3%), unmarried (6.1%), divorced (0.6%) and separated (0.3%). (Table 1) As the cancer affecting the majority of the people after thirty years of age, during this time most of them getting married. Similarly maximum married patients were recorded in Chandigarh (74.4%)[12], Warangal (77.9%)[8] and Loni (91.7%)[13]. In current study, more male patients were married (87.1%) as compared to female patients (76.5%) whereas more female patients were widows (18.3%) compared to male (4.1%). (Table 1) Similarly Puri et al[12] had seen maximum married

patients were male (78.7%) and maximum widow patients were females (16.9%).

Majority of the patients were illiterate (40.3%) in this study(Table 1).In Chandigarh Puri et al[12]had also found maximum patients (42.6%) were illiterate. In Tamil Nadu also Swami Nathan et al[16] had corroborated that men and women who were illiterate had a higher overall cancer incidence rates compared to the educated population. Illiteracy was the one of the reason for higher prevalence of cervical cancer and tobacco related cancer.

Current study had seen majority of patients were housewives (34.9%) and Agriculture worker (19.1%) (Table3). In Kashmir[11], majority of patients were farmers from a rural background followed by housewives who also had rural back ground with farming as main occupation. While in Warangal[8], most of the patients (51%) were on daily wages and housewives.

CONCLUSION

Gender and Area wise nearly equal distribution of patients in study. Majority of females were in fifth decade while majority of males in six decades. Less than nineteen years old patients were also higher in this study compared to other studies. Maximum patients were Hindu and majority of patients belongs to General caste. More married persons were cancer patients mainly because of cancer affect mainly after third or fourth decade. Maximum patients were illiterates and illiteracy was more in female patients. Most of the female patients were housewives and most of the male patients were agriculture worker.

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