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Research Article

A SOCIO-DEMOGRAPHIC AND CLINICAL PROFILE STUDY OF CANCER PATIENTS: A HOSPITAL BASED CROSS SECTIONAL SURVEY

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A B S T R A C T

Background: Cancer is a major health problem worldwide and has wide variations in distribution according to different socio-demographic conditions throughout world. In the developed world cancer is the second leading cause of death accounting 21% of all mortality. In India in males most frequent cancer is oral cancer and in females cancer cervix.

Aim: To determine the socio-demographic variables of cancer patients.

Materials and Methods: Review of the Cancer patients attending JA Hospitals for treatment and patient interview. Information on socio-demographic profile, medical history, family history and previous treatment, if any, was retrieved from the patient and/or registry. Pretested pre designed performa is used to collect the descriptive data.

Results: It was noticed that out of 155 cancer patients 60.55% were females and 39.45% were males. Majority of patients were Hindus (85.27%) and maximum (64.36%) were illiterates and 72.55% were agriculturist. Most of the cancer patients belonged to social class 4 (low socio economic status). The most frequently reported cancer (ca) in males it was oral ca (67.5%) and ca lung (13.7%). In females most common cancer were ca breast (30.7%) followed by ca reproductive tract (cervix) (24%).

Conclusion: This study gives very important information to say that education and occupation are the fundamental factor among the socio-demographic determinants of cancer patients. Public awareness through education and improvements in living standards can play an important role in reducing the high incidence of cancer in India.

INTRODUCTION

Cancer, one of the most dreaded non-communicable diseases is an important contributor to the global burden of diseases. It is one of the leading causes of death worldwide, second only to cardiovascular disease[1]. The continuing global demographic and epidemiologic changes signal an ever increasing cancer burden over the coming decades, particularly in developing countries like India[2]. The Indian Council of Medical Research (ICMR) has estimated that India will have nearly 17.3 lakh new cases of cancer and over 8.8 lakh deaths due to cancer in the year 2020[3]. Information on cancer trends and patterns is the cornerstone for determining the priorities for cancer prevention in different parts of the world. Moreover, recent studies indicate a change in demographics for various cancers[4, 5]. Cancer incidence and demographic data provide valuable information on the risk factors of different cancers, independent of prognosis. Cancer, one of the most dreaded non-communicable diseases has become an important public health problem contributor to the global burden of diseases. The burden of cancer is growing, and has become one of leading causes of death worldwide[6]. Cancer has become one of the ten leading causes of death in India.

Around, 1.5-2 million cancer cases occur at any given point of time. Over 7 lakh new cases of cancer and 3 lakh deaths occur annually due to cancer. Nearly 15 lakh patients require facilities for diagnosis, treatment and follow up at a given time[7]. Although cancer is a devastating disease but it is largely preventable. If we have the adequate data about cancer patients, then by applying appropriate measures, a great impact on reducing the global cancer burden can be achieved. And one of the instruments for data collection of cancer patients is their registration[8]. Hospital based cancer registry (HBCR) limits its aim to record the particulars of cancer cases seen in a given hospital or group of hospitals irrespective of boundaries of geographical areas. The purpose is to serve the needs of the hospital administration and above all, the individual patient. It also tends to improve the cancer therapy, provides the baseline data for improvement in the treatment modalities and recommends measures for better control of the treatable and curable cancers. It gives an estimate of the number of cancer cases attending the tertiary institute in various disciplines and the exact type of cases diagnosed and classified according to International Classification of Diseases (ICD). In addition, great details of the patient pertaining to socio-demographic

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characteristics are also obtained. It may also form the nucleus for Population based cancer registry (PCBR)[9].

Socioeconomic inequalities and differences relate to incidence rates of cancers, i.e., higher cancer mortality rates among men of lower socioeconomic status. This study is an effort to determine the socio-demographic patterns of cancer patients.

METHODOLOGY

The present study was carried out in a government tertiary care JA group of hospitals (JAH) Gwalior of India.

Procedure & Sample size

All the patients suffering from cancer, registered in JA group of hospitals (JAH) Gwalior in the study time period (Sep 2020 to March 2021) were enrolled. Total 155 patients comprised our study sample those were registered in the department of oncology. A pre-tested, semi-structured case study form was used to collect the patient information. As per WHO standardized guidelines on patient information for Hospital based cancer registry, detailed information was taken of the patient. The case study form has four parts: a) Demographic details: It includes the age, sex, socio-economic status and the residential address of the patients. Confirmed cancer cases in all age groups were included MP state. Socioeconomic status of the patients was classified according to the Social Classification update by Agarwal[10]. The residential address of patients was noted. b) Type of cancer: The cancer cases were divided into 14 broad types based on the site. c) Stage of cancer: It includes the clinical extent of disease of presentation at the time of registering. d) Treatment modality: type of therapy- chemotherapy, radiotherapy and/or surgery will be analysed, 'others' refers to other treatment modalities.

Statistical analysis

The data was collected, compiled and summarized using percentages, proportions. A chi square test was used to compare proportions. A result yielding a *P* value less than 5% was considered statistically significant.

Ethical consideration

Subjects were explained the purpose of study and those who gave consent to participate in the study were interviewed to collect the desired information on the pretested questionnaire. In case of respondents below 18 years of age, assent was taken from parents. The data were void of personal identifiers and the patient confidentiality was maintained. The Institutional Human Ethics Committee approval was obtained before starting the study (No. 0128/2018).

RESULTS

Out of 155 patients, 48.4% were females and 51.6% were males. Gender wise almost similar distribution seen and similar pattern of mean age distribution was observed in both sex. In general Hindu patients were in majority (87.1%).However, More than half (52.2%) of the patients were belongs to general caste, followed by OBC (Other backward class) (26.4%) & Scheduled Tribe/Scheduled Caste (ST/SC) (21.3%). Gender wise not much differences seen in caste. Majority of patients were married (86.5%), among them male patients& female patients were more or less same. (Table 1) Urban slum area had more cases than the urban and rural area had the least cases only 5.8%. Around 38.8% patients were Illiterate and Illiterate cases were more in female patients (41.3%) as compared to male patients (28.7%) This was because many of the urban area patients were belonging to urban slum & peripheral area community where literacy rate was very poor. (Table 1) Most (49.0%) patients were in the age group 40- 60 years. In this age group, male patients and female more or less were same (50.0%) vs (48.0%) respectively. 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 >60 years (25.0%.(Table 1) Out of 155 cancer patients, 42.6% belonged to the lower middle socioeconomic status(SES) , while 8.4% belonged to the high SES. The present study shows that 126 (81.3%) of study subjects were belonging to the single family and was more or less same in both groups. In our study it was found that most cases 88(56.8) have more dependants (>2) and it may be the interesting cause of cancer due to high social pressure on the person. Study revealed that majority of cases 135(87.1) had no family history of cancer but it was not significant statistically. Majority of cases 85(54.84) in the study were found with low BMI (<18) and in which females were found more than the males (Table1).

Table 1 Socio-Demographic profile of cancer patients (N=155)

	Male [N=80] No(%)	**Female [N= 75] No(%)**	**Total No (%)**	**P value**
Age Group (Years)				
<25	1(1.2)	2(2.7)	3(1.9)	
25-40	19(23.7)	20(26.7)	39(25.2)	0.81
40-60	40(50.0	36(48.0)	76 (49.0)	
>60	20(25.0%)	17(22.7)	37(23.9)	
Mean age (SD)	49.05(13.9)	46.9(13.3)	48.0(13.6)	0.32
Education				
Illiterate	23(28.7)	31(41.3)	54(34.8)	
Up to Middle	29(36.3)	23(30.7)	52(33.5)	
Secondary	24(30.0)	19(25.3)	43(27.7)	0.39
≥Graduate	4(5.0)	2(2.7)	6(3.9)	
Caste				
Upper Caste	46(57.5)	35(46.7)	81(52.2)	
OBC	19(23.7)	22(29.3)	41(26.4)	0.40
SC/ST	15(18.7)	18(24.0)	33(21.3)	
Socio-Economic status				
Class I[Upper]	7(8.7)	6(8.0)	13(8.4)	
Class II[Upper Middle]	19(23.7)	14(18.7)	33(21.3)	0.61
Class III[Lower Middle]	30(37.5)	36(48.0)	66(42.6)	
Class IV [Lower	24(30.0)	19(25.3)	43(27.7)	
Marital status				
Unmarried	7(8.7)	3(4.0)	10(6.4)	
Married	68(85.0)	66(88.0)	134(86.5)	0.46
Widow/Widower/ Divorced/	5(6.2)	6(8.0)	11(7.1)	
Type of family				
Joint	16(20.0)	13(17.3)	29(18.7)	0.67
Single	64(80.0)	62(82.7)	126(81.3)	
No of Dependants				
0	3(3.7)	0(0)	3(1.9)	
≤2	29(36.2)	35(46.7)	64(41.3)	0.13
>2	48(60.0)	40(53.3)	88(56.8)	
Area of residence				
Urban	29(36.2)	30(40)	59(38.1)	
Urban slums	45(56.2)	42(56)	87(**56.1**)	0.62
Rural	6(7.5)	3(4)	**9(5.8)**	
Family History of Cancer				
No	70(87.5)	65(86.7)	135(87.1)	0.88
Yes	10(12.5)	10(13.3)	20.0(12.9)	
BMI(Kg/M^2)				
≤18.5	39(48.7)	46(61.3)	85(54.84)	0.007

18.5 <25	41(51.3)	24(32.0)	65(41.94)
≥25	0(0)	5(6.7)	5(3.23)

Table 2 shows the distribution pattern of cancers in patients. Most males had ca oral 54(67.5), followed by ca lung (13.7%), ca colorectal (6.2%) & ca prostate (5.0%). Meanwhile, most females had, ca breast 23(30.7), followed by ca female reproductive tract 18(24.0) and ca oral 13(17.3) and that distribution pattern was significant statistically (P<0.001).

Table 2 Distribution of Cancer patients according to site and sex

Site of cancer	Male (N=80) No (%)	Female(N=75), No (%)	Total (N=155), No (%)
Breast cancer	NA	23(30.7)	23(14.8)
Oral*	54(67.5)	13(17.3)	67(43.2)
Eyelid	0(0)	2(2.7)	2(1.3)
Lung	11(13.7)	4(5.3)	15(9.7)
Female reproductive tract**	NA	18(24.0)	18(11.6)
Blood	4(5.0)	6(8.0)	14(9.0)
Colorectal cancer	5(6.2)	5(6.7)	10(6.4)
Esophagus	0(0)	2(2.7)	2(1.3)
Gallbladder	1(1.2)	0(0)	1(0.6)
Gastric	1(1.2)	0(0)	1(0.6)
Hepatocellular	0(0)	1(1.3)	1(0.6)
Pancreas	0(0)	1(1.3)	1(0.6)
Prostate	4(5.0)	NA	4(2.6)

*[including Head & neck]
**Female reproductive include cervix, ovary,
P =0.001 (Significant Statistically

Our findings showed that Risk factor for cancer was found to be 89(57.4%) of the total patients had the habit of tobacco use including cigarettes and smokeless tobacco while 46(29.7%) had the habit of alcohol consumption followed with Unhealthy diet with low fruit and vegetable that were 80(51.6) but the defined frequency has limitation due to exposure of multiple risk factors in most of the cancer patients (Table3).

The present study showed that around 82(52.9%) of cancer patients were free from any co-morbidities followed by 21(13.5%) suffering from hypertension, 20(12.9%) with tuberculosis and 18(11.6%) were suffering from diabetes while more differ cases were suffering from multiple co-morbidities i.e., were suffering conjugate with diabetes as well as hypertension etc. More males had diabetes mellitus (DM) (12.5%), hypertension (HT) (15.0%) as co morbidity than females.Table4

Table 3 Distribution of cancer patient according to Risk Factors (N=155)

Risk of Cancer	No (%)* (Frequency %)
tobacco use including cigarettes and smokeless tobacco	89(57.4)
Being overweight/obese	24(15.5)
Unhealthy diet with low fruit and vegetable	80(51.6)
Lack of physical activity	35(22.6)
Alcohol use	46(29.7)
Sexually transmitted disease	8(5.2)
Infection by hepatitis, carcinogenic infections	6(3.9)
Radiations	5(3.2)
Factory smoke	45(29.0)
Indoor Smoke from Household	78(50.3)

** Multiple risk factors were present in each patient*

Table 4 Distribution of Co-morbidities among cancer patients

Co-existing Disease	Male (N=80), No. (%)	Female (N=75), No.(%)	Total (155) No(%)
DIABETES	10(12.5)	8(10.7)	18(11.6)
HYPERTENSION	12(15.0)	9(12.0)	21(13.5)
HEPATITIS	3(3.7)	1(1.3)	4(2.6)
H. PYLORI	1(1.3)	0(0)	1(0.6)
HIV	0(0)	2(2.7)	2(1.3)
HPV	3(3.7)	0(0)	3(1.9)
PLEURAL EFFUSION	1(1.3)	1(1.3)	2(1.3)
TUBERCULOSIS	10(12.3)	10(13.3)	20(12.9)
ULCERATIVE COLITIS	1(1.3)	0(0)	1(0.6)
URINARY TRACT INFECTIONS	0(0)	1(1.3)	1(0.6)
NO COMORBIDITIES	39(48.7)	43(57.3)	82(52.9)

It was observed that majority of cancer 104(67.1%) were diagnosed in stage II, while at stage I minimum cases 10(6.4%) were diagnosed followed with stage IV 14(9.0) and in stage III were 27(17.4). That diagnostic difference in total were found significant statistically (P<0.001) but the difference in between male and female was not found significant (p>0.05) [Table5].

In the study it showed that majority of cancer patients 82(52.9%) were treating by chemotherapy followed by surgery & chemotherapy 45(29.0%). Chemotherapy in male patient 49(61.2) were more than female 33(44.0) while treating with surgery & chemotherapy were found more in female 34(45.3) than the male 11(13.7) and that difference was found significant statistically (P<0.002) [Table 6].

Table 5 Distribution of cancer patients according to the TNM staging with gender (N=155)

TNM staging	Male(N=80) n(%)	Female(N=75) n(%)	Total(N=155) n(%)	P value
I	7(8.7)	3(4.0)	10(6.4)	X^2=150, P<0.001 (Significant)
II	53(66.2)	51(68.0)	104(67.1)	
III	15(18.7)	12(16.0)	27(17.4)	
IV	5(6.2)	9(12.0)	14(9.0)	
X^2=2.9, P<0.39 (Not Significant)				

Table 6 Distribution of cancer patients according to the treatment and sex wise

Type of Treatment advised	Male(N=80) n (%)	Female (N=75) n (%)	Total (N=155) n(%)
Surgery	11(13.7)	2(2.7)	13(8.4)
Chemotherapy	49(61.2)	33(44.0)	82(52.9)
Radiotherapy	1(1.2)	0(0)	1(0.6)
Surgery& Chemo	11(13.7)	34(45.3)	45(29.0)
Surgery & Radio	2(2.5)	0(0)	2(1.3)
Surgery, Chemo& Radio	6(7.5)	6(8.0)	12(7.7)
x^2= 23.9, P<0.002 [Significant]			

DISCUSSION

Understanding the epidemiology and the risk factors for Cancer incidence and mortality data forms the basis for cancer control in any country and can help early identification and prompt treatment of patients with oral cancers. Early diagnosis of cancer is an important as it leads to early institution of therapy that translates in a better prognosis[11].These study data not only establish the magnitude of disease, but may also indicate the etiology, the impact of socio-demographic changes, and point towards certain specific cancer types which will form the priorities for cancer control. The current study analysed the cancer pattern of patients attending a tertiary care hospital in Gwalior. Among the cancer cases, nearly 80 (51.6%) were males and 75 (48.4%) were female. The sex ratio percent (number of male patients per 100 female patients) is approximately 106. Similar results were seen in the cancer pattern of the world (110), in India (99) and Coimbatore study (104)[2,12,13]. The age group of 40-60 years had the maximum

percentage of cancer cases 76 (49.0%), followed by the age group of 25-40 years 39(25.2%). Our results are in accordance with the studies done by Ferlay *et al*[2], Yancik *et al*[14], Puri S *et al*[9].and Kalyani *et al*[15] study in Kolar. Mean age of patients in current study was 48.0±13.6*years* with minor differences in mean age of male (49.05±13.9*years)* and female (46.9±13.3*years).* Similar mean age distribution recorded by Sinha *et al*[16] in male (50.7 years), female (47.3 years) and total (48.7 years). Current study found more patients 87(56.1%) from urban slum area and least patients 9(5.8%) were admitted from rural areas,(Table 1) it may be due to less awareness in rural areas about cancer while high in urban slum areas were due to malpractices and high risk exposure. Similar pattern were found in study of Patel[17] and Puri S at PGI Chandigarh[9]. Though Rutuja *et al*[18] in Loni (81.9%), Wani *et al*[19] in Kashmir (70%) and Damodar *et al*[20] in Warangal (77.9%) had found more rural patients compared to urban. Mahavir and Babita[21] also found more rural patients (56.3%). It has been seen that illiteracy has direct relation with the prevalence of certain cancers. The reason may be owing to observing of harmful practices. Even in this study more than 54(34.8%) patients were illiterate, followed by those who had middle & secondary schooling. The study was done by Manoharan[22] showed that cancer was more prevalent in illiterate as they were less aware of the risk factors. Similarly in our registry too, maximum cancer patients were illiterate. This could be ascribed to the fact that awareness pertaining to risk factors is less in illiterate people hence, were succumbing to cancer. The results of study done by Swaminathan[23] and Puri S also corroborated that men and women who were illiterate had a higher overall cancer incidence rates compared to the educated population. Caste wise distribution in current study had found that patients belonging to upper caste 81(52.2%) were more compared to others. A study done by Patel in Gujrat[17], Mahavir and Babita[21] in Haryana found that (55.1%) and 68.8% patients belongs to general caste. while in Nellore maximum patients belongs to backward classes (44.8%), followed by open category (34.4%) and scheduled caste (20%)[24].This study shows that out of 155 cancer patients maximum 66(42.6%) were belonging to social class III (Lower Middle Class) and minimum 13(8.4%) were belonging to social class I (Upper Class). Similar study conducted by Meenakshi *et al*[25], Kulkarni *et al*[26] shows that majority 137(67.16%) were belong to social class IV and 282 (51.27%) patients were belonging to social class V (Low socio economic) and minimum 4 (0.73%) were belonging to social class-I, but in contrary to study of Antony[13] where 45.9% cases were found in upper class. In current study married patients were in majority 134(86.5%) compare to widow/widower 11(7.1%) & unmarried (Table1).As the cancer affects 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 Gujarat (81.7%)[17], Chandigarh (74.4%)[9], Warangal (77.9%)[20] and Loni (91.7%)[19]. Social behavior, such as drinking, as well as those relating to family types also holds importance in the effectiveness of medical treatments on cancer. Studies on the effects of these behaviors, however, are completely ignored. This is especially true when considering whether the person lives in a nuclear or joint family. In our study also revealed that majority of cases 126(81.3%) were found from single family. Similarly Koirala[27] study found that living in a joint family lowers the odds of having cancer. The results indicate that living in a joint family reduces the probability of being diagnosed by 7.23 percentage points and is significant at a 5% level. Family caregivers often feel overloaded with the additional obligations and roles they have to pick up. And their life style had been distorted due to more dependent in the family. In this study also revealed that more dependency is directly proportional to the no of cancer patient where majority of cases 88(56.8) were found in the family were dependency ratio was >2 followed with <2 & 0 in decreased manner. Similarly Gaston told that increased family responsibilities may influence disruption in coping strategies as social interactions which have stress reduction roles are limited [28]. Some people have an increased risk of particular types of cancer because they have inherited a faulty gene. In our study some cases 20.0(12.9%) had family history of cancer. Genetic specialists estimate that between 5 and 10 in every 100 cancers (5 to 10%) diagnosed are linked to inherited faulty gene. Family history and inherited cancer genes[29]. Weight loss is common among people with cancer. It may be the first visible sign of the disease. In our study more than 50%, 85(54.84) cancer patients loosed their weight in a significant way (P<0.007). Studies also showed that up to 80% of people with moderate & advanced cancer have cachexia. Cachexia is also called wasting. Wasting is when a person has both weight loss and muscle loss[30]. The breast cancer and cancer of reproductive tract including cervix alone constituted more than 50% of the total cancers in females; while in male prominent type of cancer was oral cancer found in 54(67.5%). Indigenous habits of chewing and smoking seem to be primarily responsible for the high incidence of these cancers in men. Similarly In hospital based cancer registry report of PGIMER (Postgraduate Institute of Medical and Research) during 1984-1993 ca cervix and ca breast in females and ca bronchus in males were the leading sites of cancer[9] Another study in Maharashtra by Bangal *et al*[18] showed that the Cancer cervix was the commonest site (19.5%), followed by cancer breast (10.2%), in the females and in males, the commonest site for cancer was lung (9.7%), followed by the floor of mouth (7.3%), while in females; cancer cervix (19.5%) predominated, followed by cancer breast (10.2%) and cancer ovary (2.4%). Similar study in Kolar by Kalyani *et al*[15] showed that Cancer of oral cavity predominated in both genders. Another study[31] showed that cancers of the upper alimentary and respiratory tracts (oral cavity, pharynx, larynx, oesophagus, and lung) contribute more than half of the cancers in men and about a quarter in women. Indigenous habits of chewing and smoking seem to be primarily responsible for the high incidence of these cancers in men. Smoking in males was more as compared to that in females (Table3).Similar findings were evident in research done by Puri S[9], Murthy[32] which too showed that the major risk factors for cancer were tobacco, alcohol consumption, infections, dietary habits and behavioral risk factors. This offers the prospect for initiating primary and secondary prevention measures for control and prevention of cancers. Tobacco consumption remains the most important avoidable cancer risk. Between 25 and 30% of all cancers in developed countries is tobacco-related[33]. Another study of Trivandrum too had emphasized that smoking increased the risk of oral cancer in men by as much as 90%[33]. Alcoholic male cancer patients were also more as compared to females (Table3).Relation of alcohol and cancer has been well established in many studies. A new global study by Cancela *et a.l*[34] has shown that people who consume large quantities of alcohol (seven drinks per week) have a 60 per cent greater risk

of developing the cancer, compared to others. Various studies[35] have substantiated enough evidence that alcoholism is associated with varied cancers like ca oral cavity, oesophagus, liver, pancreas, colon and rectal cancer substantiated in many studies. It has been proven that alcohol consumption in female's leads to increase incidence of breast cancer. Hence, awareness has to be generated in masses for the association of alcohol and cancer[36]. Around 25% of participants were diabetic (DM) and hypertensive (HT) and almost similar per cent of subjects were suffering of both DM and HT [Table4]. Association of DM and HT with cancer has been depicted in many studies. Puri[9] DM has been found to be associated with pancreatic cancer, non-Hodgkin's lymphoma, and colorectal, prostate, endometrial, liver, breast, and renal cell cancers[37].The strongest hypothesis to explain the association is hyperinsulinemia, the high blood levels of insulin characteristic of diabetes. The putative link of antihypertensive drugs and cancer has been illustrated in many studies[38]. Linkage has been shown of antihypertensive drugs and cancer, with diuretics being the most frequently cited culprit. The most common cancers in hypertensive patients are renal carcinoma and ca breast[39]. The TNM Classification of Malignant Tumours (TNM) is a globally recognised standard for classifying the extent of spread of cancer. Stage-wise distribution of cancer patients shows that a very small percentage of patients 10(6.4%) were diagnosed at early stage. Majority of the patients were diagnosed with Stage II 104(67.1%)[Table5]. Similar stage-wise distribution has been reported by Jain A *et al*[40] in their Socio-demographic and Clinical Profile of Cervical Cancer Patients study in Mumbai, Nandakumar *et al*.[41] in their population cancer registry-based study conducted in Bangalore and Shrivastava *et al*.[42] in their retrospective study of 6234 patients. Some people with cancer will have only one treatment. But most people have a combination of treatments, such as surgery with chemotherapy and/or radiation therapy. Treatment options and recommendations depend on several factors, including the type and stage of cancer, possible side effects, and the patient's preferences and overall health. At the time of the study 82(52.9%) patients were undergoing chemotherapy, 13(8.4%) surgery therapy followed with 12(7.7%) overlapping treatment modalities including chemotherapy, radiation therapy and surgical intervention [Table6]. Similarly in study by Gupta A *et al*[43] described that chemotherapy is a treatment of choice meant fewer serious cognitive side-effects than radiotherapy, and that patients treated with chemotherapy would have a higher quality of life than those treated with radiation.

CONCLUSION

In almost all studies precise and validity of cancer frequency according to different socio-demographic variables was not similar and there was difference in precision as well as in validity of cancer patient frequency according to socio demographic variables. Epidemiological information on cancer including the pattern and socio-demographic factors is fundamental in determining the priorities for cancer control in the given population group. The cancer registries in India take into account only a representative sample of the whole country. This study shows that there is marked difference in the cancer pattern of our hospital in comparison with the national statistics. oral cavity cancer in our study, almost shows double the percent of cases compared with national statistics. Hence factors leading to such high incidence should be analysed and steps towards prevention of this type of cancer should be taken to reduce the morbidity and mortality of cancer. Further, more such research can be conducted all over the country to find the cancer pattern of different areas and thus pave the way for effective preventive measures.

Limitation

This study is a hospital-based short time span (6 months) study so it cannot generalize to the population and exact pattern of cancers prevalent in the region and neighboring areas couldn't be estimated. Complete data from patients pertaining to follow up and the outcome couldn't be retrieved owing to the study period being less.

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