RESEARCH ARTICLE

SOCIO-DEMOGRAPHIC PROFILE AND ASSOCIATED RISK FACTORS IN CANCER PATIENTS ATTENDING THE ONCOLOGY OPD OF A TERTIARY CARE TEACHING HOSPITAL IN WESTERN MAHARASHTRA, INDIA

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ABSTRACT

Background: Cancer has become one of the ten leading causes of deaths in India. The common sites of cancer have close association with certain risk factors. The leading sites of cancer have varied in different geographical distribution.

Aims & Objectives: The present study was carried out to determine the socio-demographic profile and associated risk factors in cancer patients at a tertiary care teaching hospital in western Maharashtra.

Materials and Methods: A hospital record based retrospective study was carried out in Oncology OPD of Pravara Rural Hospital, Loni, Maharashtra. Data was collected for socio-demographic profile of 205 cancer patients, who attended oncology OPD during 1st April to 31st May 2013, with a pretested and validated structured format. Data was analyzed in the form of percentage and proportions.

Results: Out of total 205 cancer patients, 46.8% were males and 53.2% were females. Majority of them belonged to lower socio-economic status. Majority (59%) of the patients were illiterate. The commonest site for cancer in male was lung, followed by floor of mouth, while it was cervix followed by breast in females. Majority of risk factors were related to addictions like tobacco chewing in the forms of guthka, smoking and consumption of alcohol.

Conclusion: Health education, cancer awareness and preventive screening will help in reduction of incidence, morbidity and mortality related to cancers in rural population.

Key Words: Cancer Patients; Socio-Demographic Profile; Risk Factors; Rural India

Introduction

Cancer prevention has been a major concern all over of the world. The burden of cancer cases is increasing worldwide, despite advances for diagnosis and treatment. Globally, cancers in all forms, are responsible for 12% of all deaths. In developed countries, cancer is the second leading cause of death accounting for 21% of mortality, and in developing countries, it ranks third, accounting for 9.5% of all deaths.[1] According to the WHO guided National Cancer Control Program, cancer affects 9 million people, and causes 5 million deaths annually. It is likely that in next 25 years, cancer would be a rising global threat, with the addition of 300 million new cases and 200 million deaths.[2] It is known that the disease principally arises as a consequence of certain conditions, like exposure to carcinogenic agents, personal habits, such as use of tobacco, alcohol, smoking, and biological factors such as hepatitis B and human papilloma virus infections. There is a proven association between development of some of the commonly observed cancers, certain life styles and addictions.[3] Lack of awareness about the risk factors causing the disease play major role. One-third of all cancers are preventable.[4] Majority of rural population in India is unaware about the health problems arising out of unhealthy lifestyle and addiction. Cancer is one of the most dreadful diseases associated with such lifestyle. In view of the above, it was thought prudent to take up a study to know various socio-demographic elements in patients suffering from different types of cancer, and also to note associated risk factors in commonly observed cancers. This may help in identifying the target group for improvising cancer awareness among rural population.

Materials and Methods

A hospital record based retrospective study was carried out in Oncology OPD of Pravara Rural Hospital, Loni, Maharashtra. The relevant data was collected related to socio-demographic profile, and associated risk factors in 205 cancer patients, who attended the hospital during 1st April to 31st May 2013, with a pretested and validated structured format. Information regarding socio-demographic details, like age, sex, religion, marital status, socio-economic status, education, occupation, residence,

and associated risk factors like addictions, heredity, family history, were recorded. Socio-economic status was evaluated by using the modified BG Prasad classification.[5] Institutional Ethical clearance was obtained from the research and ethical committee for data collection. Data was entered in MS Excel and analyzed by using percentage and proportion.

Results

The information was gathered for a total of 205 patients in the study. The socio-demographic characteristics of the study population are shown in Table 1. The study sample consisted of 96 (46.8%) males and 109 (53.2%) females. Most (71, 34.6%) of the patients were in the age group > 60 years followed by 50 (24.3%) in the age group of 51-60 years. Only 6 (2.9%) patients were aged <10 years, and 35 (17.2%) were of age group of 41-50 years. Majority of patients (59.0%) were illiterate, and only 4 (1.9%) were educated till graduation. Maximum percentage (186, 90.7%) of the patients belonged to Hindu religion, followed by Muslim 15 (7.3%). Almost 188 (91.7%) patients were married and 168 (81.9%) were from rural residents. According to the modified BG. Prasad classification, 114 (55.7%) belonged to the low socioeconomic status followed by 49 (23.9%) lower middle class. Out of 205 cancer patients, 168 (81.9%) were from rural area, while only 37 (18.1%) were from urban background.

Table-1: Socio-demographic characteristics of the study population (n=205)

Particulars		No. of cases	%
Gender	Male	96	46.8
	Female	109	53.2
Age (in years)	≤ 10	6	2.9
	11 – 20	4	1.9
	21 – 30	8	3.9
	31 – 40	31	15.2
	41 – 50	35	17.2
	51 – 60	50	24.3
	>60	71	34.6
Education	Illiterate	121	59
	Primary	52	25.4
	Secondary	18	8.8
	High. Secondary	10	4.9
	Graduate	4	1.9
Socio-economic status	Upper	3	1.4
	Upper middle	12	5.8
	Middle	27	13.2
	Lower middle	49	23.9
	Lower	114	55.7
Religion	Hindu	186	90.7
	Muslims	15	7.3
	Christian	4	2
Marital status	Married	188	91.7
	Unmarried	17	8.3
Residence	Rural	168	81.9
	Urban	37	18.1

Table-2: Distribution of cancer patients according to type of cancer (n=205)

Type of cancer		No. of patients	%
Oral Cavity	Ca Tongue	13	6.3
	Ca Floor of mouth	15	7.3
	Ca buccal mucosa	07	3.4
GIT	Ca esophagus	09	4.3
	Ca stomach	08	3.9
	Ca colon	05	2.4
	Ca rectum	03	1.4
	Ca liver	03	1.4
	Ca Pancreas	02	0.9
	Ca Gall bladder	02	0.9
Respiratory System	Ca Pharynx	06	2.9
	Ca Larynx	09	4.3
	Ca Trachea	02	0.9
	Ca Lung	20	9.7
Reproductive System	Ca Cervix	40	19.5
	Ca Breast	21	10.2
	Ca Prostate	05	2.4
	Ca Ovary	05	2.4
	Ca Endometrium	03	1.4
Neck	Ca Pyriform fossa	06	2.9
	Ca neck	02	0.9
	Ca thyroid	01	0.4
CNS (glioblastoma, brain tumour, meningioma, astrocytoma)		07	3.4
Hematology	Hodgkin lymphoma	02	0.9
	Non Hodgkin lymphoma	01	0.4
	Acute Lymphatic Leukaemia	02	0.9
	Chronic Myeloid Leukaemia	02	0.9
	Multiple myeloma	02	0.9
Sarcoma	Osteoma sarcoma	07	3.4
	Rhabdomyosarcoma	05	2.4
Renal System	Wilms tumour	02	0.9
	Renal cell carcinoma	01	0.4
	Urinary bladder	03	1.4
Glands	Submanibular	01	0.4
	Parotid	01	0.4

Table-3: Distribution of cancer patients according to risk factors (n=205)

Habit		No. of patients	%
Yes	Smoking	66	42.1
	Cigarette	31	19.7
	Bidi	25	15.9
	Combination of both	10	6.3
	Alcohol	32	20.4
	Tobacco chewing	75	47.7
	Betel nut chewing	55	35.1
	Total	157 *	76.6
No		48	23.4

** Multiple responses*

The distribution of cancer patients as per site of cancer is depicted in Table 2. Cancer cervix was the commonest site (19.5%), followed by cancer breast (10.2%), cancer of lung (9.7%) and cancer of floor of mouth (7.3%). In males, commonest site for cancer was lung (9.7%), followed by floor of mouth (7.3%), while in females; cancer cervix (19.5%) predominated, followed by cancer breast (10.2%) and cancer ovary (2.4%).

As detailed in Table 3, out of the 205 cancer patients, majority (76.6%) had either one or more high risk

factors responsible for development of cancer. Most of the patients (47.7%) gave a history of tobacco chewing, followed by 42.1% smoking (either cigarette, bidi, or both), and 35.1% were betel nut chewing, while 20.4% had a history of alcohol consumption.

Discussion

A similar study done by Giri PA et al[6] revealed that, out of the 207 cancer patients, 41.54% were in the age group of >60 years, followed by 30.43% in the age group of 50-60 years, with the lowest 9.17% in the age group of <40 years. As per the modified BG Prasad classification, 28.5% of the patients belonged to lower class, followed by 24.15% lower middle class. Education level of the study population indicated that 30.91% were illiterates and only 12.07% were graduates.

A study done by Puri S et al[7] in 684 patients showed that there were 47.5% males and 52.5% were females. About 32.3% patients were in the age group 60-69 years. Majority (42.7%) of the patients were illiterate. Hindu patients were maximum (63.3%). Almost 3/4th patients were married (74.4%) and (33.4%) belonged to the low socioeconomic status.

A study done by Rajarao P et al[8] also showed that majority of patients was in the age group of 65 yrs. About 91.2% of study subjects were married. Almost 57.0% of study subjects were lower socioeconomic status and 67.9% of study subjects were from rural residence. Studies done by Khandekar SP et al[9] and Ganesh R et al[10] also found that majority of the subjects belonged to 51 - 60 years age group, and from lower middle and upper lower socio-economic status and 48.5% from rural area.

In the present study, overall, carcinoma cervix was maximum (19.5%) followed by ca breast (10.2%) and ca floor of mouth (7.3%) and ca lung (6.8%), which is similar to the findings by Puri S et al.[7] In the present study, the incidence of oral cavity cancer was 17.1%. This finding correlates well with the findings (10.7%) shown in a study by Giri PA et al.[11] In our study, most of the patients (47.7%) gave a history of tobacco chewing followed by 42.1% smoking (either cigarette, bidi, or both) and 35.1% betel nut chewing, while 20.4% had a history of alcohol consumption. Similar findings were evident in research done by Giri PA et al[6], Puri S et al[7], and Murthy NS et al[12], which too showed that the major risk factors for all cancer patients were tobacco, smoking, habits of betel nut chewing, alcohol consumption, and dietary habits.

LIMITATIONS

As the duration of study was short (only 2 months period), so exact pattern of cancers prevalent in the region and neighboring areas couldn't be estimated. Owing to the study period being less, complete data from patients pertaining to follow up and outcome couldn't be retrieved.

Conclusion

Socio demographic profile revealed that advancing age, illiteracy, low socio economic status and rural background were frequent observations with cancer patients. Morbidity pattern was significant in cancers of reproductive system, oral cavity, gastrointestinal and respiratory systems. Majority of cancers was related to addictions of alcohol and consumption of tobacco in different forms including guthka and smoking. These cancers could have been prevented by adopting healthy life styles.

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