Profile of oral cancer patients attending tertiary care hospital, Bellary, Karnataka, India

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KEYWORDS	A B S T R A C T
Oral cancer, Demogarphic profile, Tertiary care Hospital	Cancer is among the ten commonest cause of mortality in developing countries including India. Oral cancer is a major problem in India and accounts for 50-70% of all the cancers diagnosed. Objective: To study the profile of patients with Oral cancer attending tertiary care hospital. Methods: Cross -sectional study. Settings: Tertiary care hospital,VIMS, Bellary, Karnataka. Sample size: 120.The study was carried out from 1st March 2012 to March 2013. Study variables: included demographic factors, socioeconomic factors, enquiries regarding modifiable risk factors such as tobacco usage, alcohol consumption. Data entry and statistical analysis: was done using Microsoft excel. Data presented in form of percentages and proportions. Out of the total 120 cases, majority of the subjects were above 40 years age and both males & females were equally affected. characters of oral cancer patients revealed that, 35.8% were illiterate, 23.3% were not working, 81.6% of patients were using smokeless tobacco, 42.5% were using betel nut, 35.8% were smokers and 16.6% were alcoholics. Oral cancer was observed equally among both males and females. Productive age group was more affected and illiteracy, occupation of labour, low income are more commonly associated.

Introduction

Non-communicable diseases including cancer are emerging as major public health problems in India. Cancer usually means malignancy, has become one of the ten leading cause of death in India. The term 'cancer' usually means malignant neoplasm. It may be regarded as a group of diseases characterized by abnormal cell growth, ability to invade adjacent tissues and/or distant organs and the eventual death of the affected patient.

According to the World Cancer Report 2003, approximately 10 million people are diagnosed with cancer annually worldwide and over 22 million people were suffering from cancer in the year 2000[1]. The burden of cancer is growing, and cancer is one of the leading causes of death worldwide.

Oral cancer is more common in developing countries than developed countries[2,3]. The prevalence of oral cancer is particularly high among men. Incidence of oral cancer vary in men from 1 to 10 cases per 1 lakh population in many countries. Cancer of oral cavity ranks among the three most common type of cancer in south asia. In India, incidence of oral cancer is 12.6 per lakh population.

Oral cancer is a highly preventable disease, being caused by the use of tobacco and its products, either with or without alcohol. According to WHO research, 50% increase in oral cancers by the year 2025 is expected. Most of which will be due to tobacco use. In the west, this is mostly due to cigarette smoking combined with alcohol abuse. In India, chewing "Pan" a combination of betel vine leaf, Areca nut, Lime, and usually tobacco and reverse smoking are the major etiological factors. Tobacco present in the betel quid is the major carcinogen, although there seems some relationship to the source of slaked lime and the areca nut itself. Tobacco use and alcohol are known risk factors for cancers of the oral cavity. In India 57% of all men and 11% of women between 15-49 years of age use some form of tobacco[4].

Besides smoking, use of smokeless tobacco is widely prevalent. The use of Betel quid (pan) - consisting of pieces of areca nut, processed or unprocessed tobacco, aqueous calcium hydroxide (slaked lime) and some spices wrapped in the leaf of piper betel vine leaf - is very common and is accepted socially and culturally in many parts of India. Various studies carried out across the country report that at least a third of school students less than 15 years of age have used one form or another of tobacco. However, with improved public health education, the prevalence of these risk factors is decreasing around the globe, including in India[5]

Despite the fact that the oral cavity is accessible for visual examination and those oral cancers and premalignant lesions have well-defined clinical diagnostic features, oral cancers are typically detected in their advanced stages[6]. In fact, in India, 60-80% of patients present with advanced disease as compared to 40% in developed countries. Consistent with patients presenting for medical care with more advanced disease in India compared with developed countries, overall survival is also reduced. Early detection would not only improve the cure rate, but it would also lower the cost and morbidity associated with treatment.

Methodology

A case series study was conducted at a tertiary care hospital, Bellary, Karnataka from March 2012 to March 2013. Sample size of the study was based on number of oral cancer patients attending hospital during the study period. A total of 120 patients having malignant neoplasm of lip, cheek, alveolus, tongue, floor of mouth and hard palate were included using purposive sampling technique. Patients not willing to participate in study were excluded. After explaining the purpose of the study, informed written consent was taken and data was collected using a pre tested semi structured questionnaire. Detailed history was recorded in a proforma, regarding age, sex, presenting complaints, habits of chewing tobacco, pan and gutkha, habit of smoking and consumption of alcohol.

Data was entered in Microsoft excel and presented as proportions. After gathering the information, health education on risk factors of cancer more emphasising on oral cancer was given to patients.

Result and Discussion

Among 120 oral cancer patients, 32.5% of patients were in the age group of 40 – 49 years followed by 26.6% in 50 – 59 years, 15.8% in 60 – 69 years, 15% in 30 – 39 years and 6.6% in 20 – 29 years. Only 3.3% were in the age group of 70 – 79 years.

Study subjects included both males and females, males constituted 51% (n=62) and female constituted 49% (n=58).

Socio demographic characters of oral cancer patients revealed that, 35.8% were illiterate and only 12.5% had education of college and above. Occupation status revealed that, 23.3% were not working, 46.6% were unskilled labors and only 1.6% was skilled workers.

Majority of patients had monthly income of less than 10,000 Rs (83.3%)

History of substance abuse revealed that 81.6% of patients were using smokeless tobacco, 42.5% were using betel nut, 35.8% were smokers and 16.6% were alcoholics Majority of patients had a history of duration of cancer of 6 months i.e 65% and 35% of patients had a history of duration of cancer between 7 – 24 months at presentation.

Age

In this study, oral cavity lesion was more commonly found in the age group of 40 – 49 years, followed by 50 – 59 years, , 60 - 69 years and 30 – 39 years . It was observed that age group 40 – 59 years comprised of 59% of total cases. Similar to this, a study by Patel MM et al7 reported 12.9% of oral and oropharyngeal malignancies below 35 years age, 23.8% between 35 and 45, and 63.3% cases over 45 years of age. In a study by Mehrotra Ravi et al8, the maximum incidence was in 50-59 years age range. Iype EM et al9 found 2.8% of oral cancer in young patients below 35 years of age. Dhar PK et al10 reported maximum incidence (35.7%) in the age range of 51-60 years. According to Dias et al11, the average age of diagnosis of oral malignancy was 62 years, with a standard deviation of 12 years.

Sex

This study comprised both males and females almost in equal proportion i.e Males were 49% and females were 51% of total study subjects. But contradicting to this, other studies have difference in gender with oral cancer.

In a study by Patel MM et al7 75% of patients were males. Mehrotra Ravi et al8 from Allahabad, India reported a male: female ratio of 3.27:1. Iype EM et al9 from Trivendrum, Kerala found a higher preponderance in males (70%) compared to females (30%). Dhar PK et al10, in their study reported that 68.3% of patients were males. . In a hospital based study by Khandekar SP et al12 61.3% of patients were males. Durazzo MD et al13 from Brazil reported 31.8% cases were females. Dias et al11 from Portugal reported a male: female ratio of 4:1. Brandizzi D et al14 from Argentina reported 55% oral malignancies in males

The above mentioned studies show a male preponderance of oral and oropharyngeal malignancies. The fact that oral cancer

affects many more men than women may be observed in all of the studies conducted in India as well as other countries.

Substance abuse

In our study, 81.6% of patients were using smokeless tobacco, 42.5% were using betel nut, 22% were smokers and 16.6% were alcoholics

In the study of Khandekar SP et al12, 71.3% of patients were chewing tobacco. 63.3% were smoking tobacco in the form of cigarettes or bidis.

In the study of Durazzo MD et al13 tobacco smoking was identified in 80.8% patients. Alcohol consumption history was retrieved in 56.6% patients

Dias et al11 reported history of tobacco use in 57.8% of patients with oral cancer.

Alcohol consumers were 50% of the total number of cases. 43.8% of the patients were both alcoholics and smokers.

In the study of Balaram et al15 53% of patients were smokers. Drinkers of alcoholic beverage s were 32%. Pan chewing habit was found in 59% men and 90% of women.

Shedd et al (1968)16 commented that there is strong evidence available from India that use of local agents such as betel nut and tobacco can play an important role in the production of cancer of the buccal mucosa. Jussawalla et al (1968)17believed that the high incidence of buccal cavity and pharyngeal cancer throughout India is believed to be associated with the habit of chewing betel nut with tobacco, like other ingredients.

Table.1 Age distribution of oral cancer patients		
Age group	Frequency	Percentage
20 – 29 years	08	6.6%
30 – 39 years	18	15.0%
40 – 49 years	39	32.5%
50 – 59 years	32	26.6%
60 – 69 years	19	15.8%
70 – 79 years	04	3.3%
Total	120	100%

Fig.1 Gender distribution of oral cancer patients
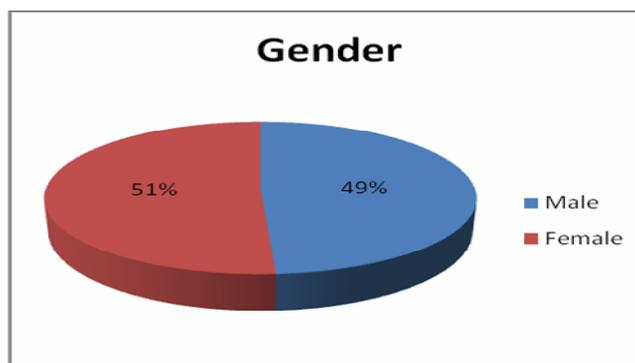
Table.2 Socio Demographic factors of oral cancer patients		
Socio demographic factors	Frequency	Percentage
a. Education		
1. Illiterate	43	35.8%
2. Primary	36	30.0%
3. Secondary	26	21.6%
4. College and above	15	12.5%
b. Occupation		
1. Unemployed	28	23.3%
2. Unskilled	56	46.6%
3. Semiskilled	32	26.6%
4. Skilled	02	01.6%
5. Others	02	01.6%
c. Income		
1. < 5000 Rs/month	46	38.3%
2. 5000 – 10000 Rs/month	54	45.0%
3. >10000 Rs/month	20	16.7%

Table.3 Distribution based on habits		
Habits	Frequency	Percentage
Alcohol	20	16.6%
Smokeless tobacco	98	81.6%
Smoking	43	35.8%
Betel nut	51	42.5%

Table.4 Distribution based on duration of oral cancer		
Duration	Frequency	Percentage
Up to 6 months	78	65.0%
7 – 12 months	15	12.5%
13 – 18 months	13	10.8%
19 – 24 months	14	11.6%
Total	120	100%

Duration

The delay in diagnosis of oral carcinoma could be correlated to patient delay (in looking for professional care), professional delay (in reading a diagnosis), or both and presumably has some bearing on the size of the tumor presented. The time interval between the onset of symptoms and the start of treatment depends on various factors such as patient behavior, clinical course of the illness and the quality of the health services[18]. A study in Cordoba, Argentina, reported that, both patients and professionals were responsible for the delay in diagnosis. The study indicated that the professional delay was the most associated variable to the stage of tumor[19]. In our study maximum number, i.e., 65% presented within 6 months of onset of symptoms. This can be attributed to the fact

that because of poverty, illiteracy, and possibly resorting to home remedies, all leading to delay by the patients. Most of the patients have to earn their living by daily wages and the loss of working day's means a loss of wages. Hence, these patients refer late as compared to western data[20].

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