Original Research Article

Clinical profile and socioeconomic status of oral cancer patients attending tertiary care centre in India

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Abstract: India heading towards various types of non-communicable disease, also known as modern epidemic. Oral cancer one of the major problem in India and accounts for 50-70% of all cancer diagnosed.90% oral cancer linked to consumption of tobacco and smoking. What is the clinical and socioeconomic profile of oral cancer patients?The present cross sectional study was conducted in regional cancer hospital of central India to study clinical profile and socioeconomic status of oral cancer patients, from October 2014 - May 2015.The study subjects were histopathologically diagnosed oral cancer patients. Sociodemographic details; presenting complaint, site of lesion, and treatment modality recorded in pre tested pre designed proforma and analyzed. It was observed that mean age was 47.62 with standard deviation of 13.64 and range being 23-83 years. Male to female ratio was 5.2:1. Maximum study participants 24(19.36%) were past smokers. Healing ulcer in mouth was most common presenting complaint. Buccal mucosa is most common site of oral cancer. Most of students were from stage II followed by 24(19.35%) of stage III. Patients received multiple treatment modalities depending on the stage of oral cancer. Oral cancer patients were common in above 40 yrs of age male. Habit of tobacco chewing and smoking was common among oral cancer. Majority of them presented with ulcer in mouth as a presenting complaint with buccal mucosa as a site of lesion. Stage II and stage III were common among all the patients.
Keywords: modern epidemic, oral cancer

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. Oral cancer is more common in developing countries than developed countries. The prevalence of oral cancer is particularly high among men. Incidence of oral cancer varies 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 populations. 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 [1].

The highest incidence and prevalence of oral cancer is found in the Indian subcontinent where the risk of developing cancer increased by the very prevalent habits of chewing tobacco, betel quid and areca-nut. The mutagenic effects of tobacco, alcohol, betel quid or areca-nut are dependent upon dose, upon frequency and upon duration of use, and are accelerated and exaggerated by the concurrent use of two or more of these agents [2]. 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 [1]. 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 stages6. In fact, in India, 60-80%of patients present with advanced disease as compared to 40% developed countries. Consistent with patients presenting for medical care with more advanced disease in India compared with developed countries, overall survival is reduced. Early detection would not only improve the curate, but it would also lower the cost and morbidity associated with treatment [1].

Oral cancers have a multifaceted aetiology. A plethora of lifestyle and environmental factors has been identified as the risk factor for oral cancers. However, smoking, tobacco chewing, and alcohol consumption are widely considered to be major preventable risk factors. In addition, the synergistic effect of tobacco and alcohol compounds the risk. In view of the relative common presentation, delay in diagnosis is also frequent which could be correlated to patient delay (in looking for professional care), professional delay (in reading the diagnosis), or both. Thus, knowledge of the varied presentation and an experienced eye can go a long way in preventing the high morbidity and mortality associated with oral cancers [3]. However, the spectrum of oral malignancy varies from place to place within a country. The prevalence rate of oral cancer is high in Vidarbha region of Central India and patients from surrounding areas come here to the tertiary level referral hospital. This study was planned to study the demographic patterns and clinical profile of patients with oral cancer retrospectively.

METHODOLOGY:
The present cross sectional descriptive study was carried out in regional cancer hospital, Rashtra Saint Tukdoji Regional Cancer Hospital, Nagpur. Study was conducted during from October 2014 - May 2015 and all the patients diagnosed histopathologically were taken. . All the cases of oral cancer were interviewed and examined in a side room during the OPD timing daily. Informed consent was taken from all study subjects. Confidentiality was maintained.

Detailed history regarding age, gender, residence, religion, education, occupation, socioeconomic status, tobacco chewing, smoking, presenting complaint, site of lesion, stage of cancer with staging and treatment received were taken and recorded

in pre tested pre designed proforma. Descriptive analysis was done.

RESULTS:
**Table 1: Sociodemographic details of study participants**

Variable	No. of study participants	Percentage
Age (years)		
<25	1	0.8
25-44	55	44.35
45-64	52	41.93
>65	16	12.90
Gender		
Male	104	83.88
Female	20	16.12
Residence		
Urban	60	48.38
Rural	64	51.62
Religion		
Hindu	86	69.37
Buddha	32	25.80
Muslim	6	4.83
Education status		
Graduate and above	13	10.48
HSC	18	14.52
Up to SSC	47	37.90
Illiterate	27	21.78
Occupation status		
Professional	7	5.70
Semi Professional	00	00.00
Clerk, Shop Owner, Farm Owner	24	19.35
Skilled Worker	11	8.80
Semi-Skilled Worker	00	00.00
Unskilled	66	53.25
Homemaker	16	12.90
Socioeconomic status		
I/upper	3	2.42
II/upper middle	16	12.90
III/lower middle	19	15.32
IV/upper lower	53	42.74
V/lower	33	26.62

Table No. 2: Distribution of study subjects according to history; staging and treatment modality

Variable	No. of study participants	Percentage
History of Chewing tobacco		
Past chewer	98	79.04
Current chewer	00	00
Non-chewer	26	20.96
History of smoking		
Past smoker	24	19.36
Current smoker	00	00
Non-smoker	100	80.64
Staging of cancer		
0	00	00.00
I	00	00.00
II	100	80.65
III	24	19.35
IV	00	00.00
Treatment modality		
Only Chemotherapy	00	00.00
Only Radiotherapy	3	2.41
Only Surgery	21	16.93
Radiotherapy and Chemotherapy	1	0.80
Radiotherapy and Surgery	78	62.90
Chemotherapy Radiotherapy &Surgery	21	16.93

Maximum number 55(44.35%)were from age group 25-44yrs of age with mean of 47.62 and standard deviation of 13.64 and range being 23-83 yrs of age. Males outnumbered females 104(83.88%) and females were 20 (16.12%). Majority of 64(51.62%) of study subjects were from rural area. Most of study participant's i.e. 86(69.37%) were Hindus religion followed by Buddha and Muslim. Maximum number 31(25%) educated upto high school completion followed by 27(21.78%) illiterate. Mmaximum number 66(53.25%) were unskilled workers, followed by 24(19.35%) were Clerk, Shop Owner, Farm Owner. Maximum number belonged to upper lower/IV 53(42.74%) socioeconomic status group.

Table 2 shows distribution of study subjects according to history of chewing tobacco and history of smoking. Maximum 100(80.65%) were from stage II followed by 24(19.35%) of stage III. Patients received multiple treatment modalities depending on the stage of oral cancer. Radiotherapy and surgery were treatment modality needed by majority of patients followed by Chemotherapy Radiotherapy &Surgery only surgery and only radiotherapy. Study subjects were having multiple complaints. Buccal mucosa (63) is most common site for oral cancer lesion followed by tongue(29), lower alveolus(17),upper alveolus(9),lower lip(3), hard palate(2) and floor of mouth(1).
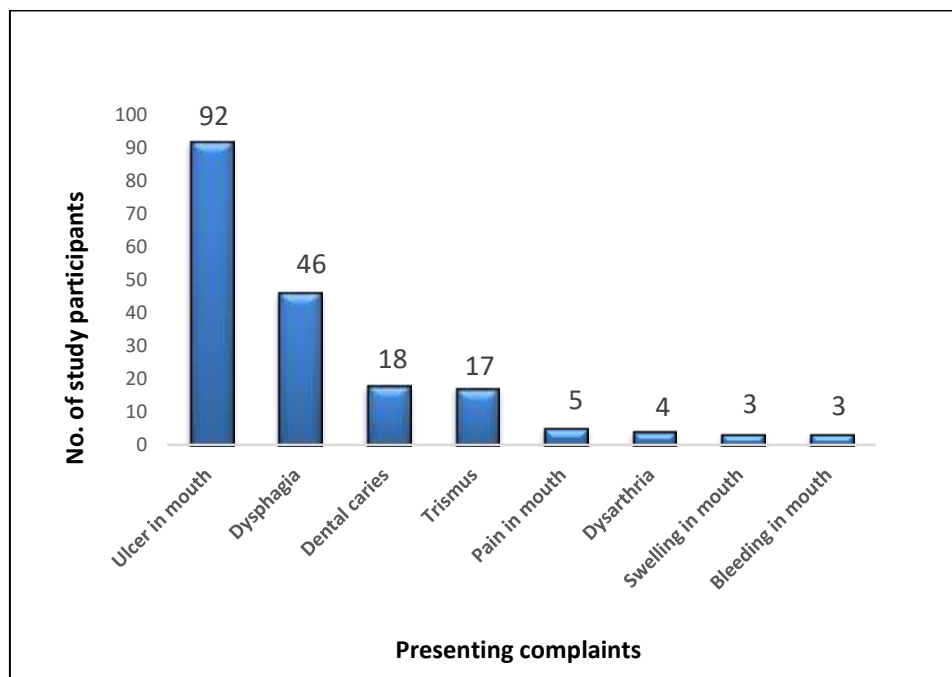
Graph 1: Symptoms among study participants
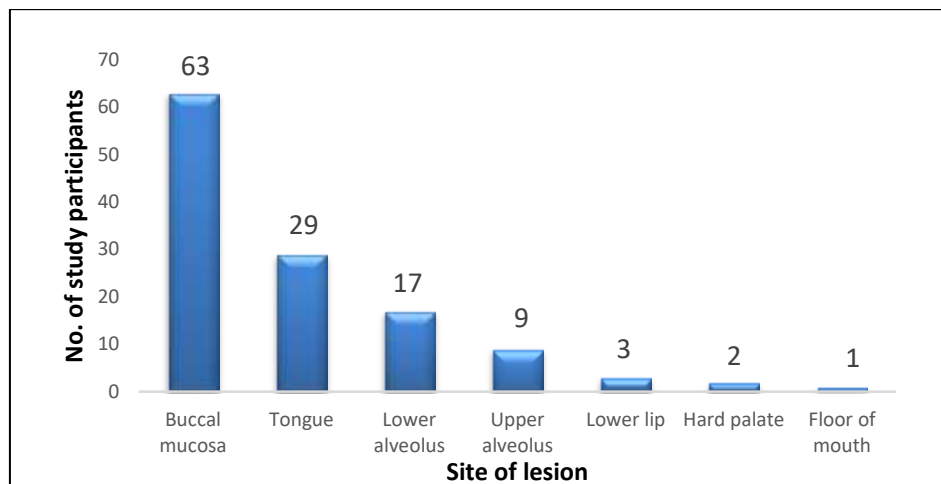
Graph 2: Study participants according to site of lesion

DISCUSSION:

In the present study mean age of oral cancer patients was 47.62 yrs and standard deviation was 13.64 and range was 23-83 yrs of age. In the study by Pawar H *et al.;* the mean age of the study subjects was 51.07 years ± 14.53. In the study by Munde A *et al.;* mean age at diagnosis was 36.9 yrs and peak of age frequency distribution was third decade of life. This difference in age at diagnosis may be due to ignorance and delay in decision making. Male outnumbered female in present study. Similar findings were noted by Agarwal K H *et al.;* Pawar H J *et al.;* Munde A *et al.;* This difference in gender is due to the fact that males are highly involved in consumption of tobacco in all forms compared with females. Maximum number 64(51.62%) of study subjects were from rural area. In the study by Khandekar SP *et al.;* it was found that the 57 (71.3%) subjects consumed tobacco. It is clear from this cross sectional study that tobacco consumption is highly prevalent in predominantly rural India. Majority of study participants were 31(25%) educated up to high school completion. Study by Pawar H J *et al.;* shows low degree of educational status among patients of oral cancer. Educated patients may be more aware and more concern about their health compared with less educated patients .Maximum number 66(53.25%) were unskilled workers. Similar findings noted by Pawar H J *et al.;* Majority of study participants belonged to upper lower/IV 53(42.74%) socioeconomic status. Similar findings were noted by Agarwal K H *et al.;* the study thus, suggests that the risk of oral cancer is inversely proportional to increasing level of education and economic status [1, 2, 4–7].

Tobacco chewing and past smoking was most common habit among study participants. Similar findings that are near about 22% were smokers in the study by Rajesh N *et al.;* [1]. Higher proportion of males were smokers 31 (63.3%) in the form of cigarettes and bidis in the study by khandekar s p *et al.;* [4].

Mostly study participants 100(80.65%) present in stage II. Agarwal K H *et al.;* showed similar results in their study. In the study by Khandekar S P *et al.;* maximum oral cancer subjects were in the advanced stages i.e. stage III and IV. This may be due to less knowledge or less availability of diagnostic and treatment facilities. Buccal mucosa is most common site for oral cancer. Similar findings noted by Munde A *et al.;* In the study by Malhotra A *et al.;* On the basis of primary site of involvement mandibular alveolus(42.62%) was most frequently involved followed by Buccal mucosa (23.01%).This difference in site of oral cancer is may be the fact that subjects used to keep the tobacco product at these sites for long duration of time before development of oral cancer [1,4,7].

CONCLUSION:

Oral cancer was more common in male above 40 yrs of age. It was also common among rural patients from lower socioeconomic class. Most of patients were having habit of tobacco chewing and smoking. Majority of them presented with ulcer in mouth as a presenting complaint with buccal mucosa as a most common site of lesion. Most of the patients present in Stage II and stage III.

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