International Surgery Journal
Venukumar R. Int Surg J. 2017 Jan;4(1):200-203
http://www.ijsurgery.com
pISSN 2349-3305 | eISSN 2349-2902

DOI: http://dx.doi.org/10.18203/2349-2902.isj20164394

Original Research Article

Clinical study on oral cancer among adults: a hospital based cross sectional study

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Received: 19 November 2016
Accepted: 23 November 2016

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ABSTRACT

Background: 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.
Methods: 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. Thorough examination of oral cavity was done and site of growth was noted.
Results: Classification of TNM staging found that 56% of patients were in a stage of IVA, 31% were in stage III and remaining 13% were in stage.
Conclusions: Lymph node status varied significantly according to size and depth of infiltration of lesion.

Keywords: Oral cancer, Squamous cell carcinoma, TNM

INTRODUCTION

Oral malignancy is the most common form of malignancy in India and it constitutes a significant cancer burden in India. Each year about 5,00,000 new cases occur globally and in India, about 56,000 new cases are reported each year. Around 300,000 patients are annually estimated to have oral cancer worldwide.[1] India has world's highest number (nearly 20%) of oral cancers with an estimated 1% of the population having oral premalignant lesions.[2]

Oral cancers have a multifaceted etiology.[3] 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 problems. 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.[4]

A pertinent issue for consideration is rich lymphatic supply of the oral cavity, which results in many cases being detected first in the advanced stage itself. Late presentation may be attributed to patients' ignorance of symptoms and lack of concern for the disease.

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.

METHODS

This study conducted at Medical College Hospital for eighteen months. A total of 100 patients having malignant neoplasm of lip, cheek, alveolus, tongue, floor of mouth and hard palate were included using purposive sampling technique.

No specific criteria were used among the oral cancers. 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. Thorough examination of oral cavity was done and site of growth was noted. A through clinical examination of the neck and other parts of the body was also done and staged in TNM staging. Data was analyzed by chi-square test.

Patients with histopathologically diagnosed oral malignant lesion were included in the study. Patients with histopathologically diagnosed benign lesion were excluded from the study.

RESULTS

Table 1: Distribution based on gender.

Gender	Frequency	Percentage
Male	49	49%
Female	51	51%
Total	**100**	**100%**

Patients comprised of both males and females. Males were 49% and females were 51% of total study subjects. There was no much difference in proportion of males and females.

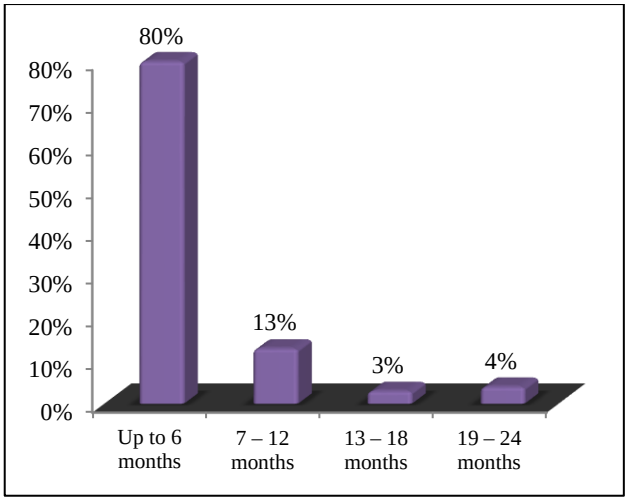

Figure 1: Duration of cancer at presentation.

Table 2: Distribution based on LN status.

LN status	Frequency	Percentage
N0	29	29%
N1	18	18%
N2A	10	10%
N2B	37	37%
N2C	06	06%
Total	**100**	**100%**

Majority of patients had a history of duration of cancer of 6 months i.e 80% and 20% of patients had a history of duration of cancer between 7 - 24 months at presentation.

Table 3: Distribution based on classification of staging.

Staging	Frequency	Percentage
I	13	13%
III	31	31%
IV A	56	56%
Total	**100**	**100%**

Table 4: Relation between age and type of presentation.

Age group (years)	Type of presentation			Total
	Infiltrating	Papillary	Ulcerative	
20 - 29	00	00	06 (100%)	06 (100%)
30 - 39	03 (21.4%)	00	11 (78.6%)	14 (100%)
40 - 49	04 (11.1%)	03 (08.3%)	29 (80.6%)	36 (100%)
50 - 59	17 (54.8%)	00	14 (45.2%)	31 (100%)
60 - 69	00	07 (70%)	03 (30%)	10 (100%)
70 - 79	03 (100%)	00	00	03 (100%)
Total	**27 (27%)**	**10 (10%)**	**63 (63%)**	**100 (100%)**

Chi square value-72.9; df-10; p value-0.001.

The above table depicts on lymph node status and found that 37% of patients had a status of N2B followed by N0 (29%), N1 (18%), N2A (10%) and N2C (6%). Classification of TNM staging found that 56% of patients were in a stage of IVA, 31% were in stage III and remaining 13% were in stage I. Infiltrating type of lesions were common among 50 - 59 years of age group (n = 17) papillary type of lesions were common among 60 - 69 years of age group (n=7) ulcerative type of lesions were common among 40 - 49 years of age group (n = 29). This above difference in type of lesions among different age group is found to be statistically significant.

Squamous cell carcinoma was more common in 40 - 49 years (n = 34) and adenoid cystic carcinoma was also more common in 40 - 49 years (n = 2). All the lesion present in age of above 50 years was of squmous cell carcinoma. This relation between age and type of cancer is found to be statistically significant. In the age group of 20 -29 years, all the lesions were well differentiated (100%). In the age group of 30 -39 years, 64.3% of lesions were well differentiated and 35.7% were moderately differentiated.

Table.5: Relation between age and type of cancer.

Age group (years)	Type		Total
	ACC	SCC	
20 - 29	01 (16.7%)	05 (83.3%)	06 (100%)
30 - 39	00	14 (100%)	14 (100%)
40 - 49	02 (05.5%)	34 (94.5%)	36 (100%)
50 - 59	00	31 (100%)	31 (100%)
60 - 69	00	10 (100%)	10 (100%)
70 - 79	00	03 (100%)	03 (100%)
Total	**03 (03%)**	**97 (97%)**	**100 (100%)**

Chi square value -20.6; df- 5; p value-0.001.

Table 6: Relation between age and histopathological grade.

Age group (years)	Histopathological grade			Total
	Well differentiated	Moderately differentiated	Poorly differentiated	
20 - 29	06 (100%)	00	00	06 (100%)
30 - 39	09 (64.3%)	05 (35.7%)	00	14 (100%)
40 - 49	16 (44.4%)	13 (36.1%)	07 (19.4%)	36 (100%)
50 - 59	03 (09.7%)	19 (61.3%)	09 (29.0%)	31 (100%)
60 - 69	06 (60%)	04 (40%)	00	10 (100%)
70 - 79	03 (100%)	00	00	03 (100%)
Total	**43 (43%)**	**41 (41%)**	**16 (16%)**	**100 (100%)**

Chi square value - 32.9, df- 10, p value-0.001

In the age group of 40 - 49 years, 44.4% of lesions were well differentiated, 36.1% were moderately differentiated and 19.4% were poorly differentiated.

In the age group of 50 - 59 years, 9.7%% of lesions were well differentiated, 61.3% were moderately differentiated and 29% were poorly differentiated.

In the age group of 60 -69 years, 60% of lesions were well differentiated and 40% were moderately differentiated. In the age group of 70 - 79 years, all the lesions were well differentiated (100%). The relation between age and histopathological grading is found to be statistically significant.

DISCUSSION

The delay in diagnosis of oral squamous cell 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.[5] 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.[6]

In this study maximum number, i.e., 80 patients (80%) 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.[7]

The current TNM classification is the widely used system for predicting the clinical result of oral SCC. In our study, TNM staging revealed that 27% of patients had moderately advanced local disease (T4a), Bundgaard et al demonstrated that up to 25% of patients with T1 could show poor prognosis at follow-up.[8] Thus, the TNM system includes acceptable prognostic parameters but the biological properties of the tumor cannot be predicted.

In this study, TNM staging found that 56% of patients were in a stage of IVA, 31% were in stage III and remaining 13% were in stage I but a study by Shenoi R et

al found Majority of patients, i.e., 243 (82.37%) were presented in stage III, 34 patients (11.53%) presented in Stage II and 18 patients (6.1%) in stage IV. None of the patients had presented in stage I.[9]

CONCLUSION

Clinical presentation varied according to the age group and is found to be significant. Differentiation of tumour varied according to age and is found to be significant.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the institutional ethics committee

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Cite this article as: Venukumar R. Clinical study on oral cancer among adults: a hospital based cross sectional study. Int Surg J 2017;4:200-3.