



AWARENESS OF ORAL CANCER IN OUT PATIENTS IN VSPMSDCRC

Oral Medicine

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ABSTRACT

Introduction: Oral cavity is the most predominant location in the head and neck region for primary malignant tumors. In India, the extremely popular use of the smokeless tobacco product called gutkha, along with betel quid especially among the youth has led to a greater risk of developing oral cancer. Thus, the objective of the present study is to determine the level of awareness of oral cancer, knowledge about its early signs and the associated risk factors among the general population.

Objectives: To study the awareness of oral cancer amongst Patients visiting dental outpatient Department (OPD)

Material and Methods: The questionnaire consisted of 11 questions regarding knowledge, causes and signs of cancer. One thousand patients attending Oral medicine OPD in the age range of 16-80 years were included in study whereas those with the medical background were excluded.

Results- The result of awareness questionnaire showed that 831 (83.1%) respondents were aware of the term "oral cancer" and 685 (68.5%) knew the causes. 310 (31%) knew the meaning of the crab sign. About 534 (53.4%) of patients had knowledge about the early signs and symptoms of oral cancer. 456 (45.6%) patients had known the treatment modalities used in oral cancer.

Conclusion - This awareness study conducted among dental patients revealed that most of the patients are aware about oral cancer and its causes. This is because of awareness programs shown on television, Cinema and newspaper. Less public knowledge regarding early signs and symptoms and treatment of oral cancer suggest that there is a need to emphasize on this point in public education programmes in future.

KEYWORDS

oral cancer, awareness, habit

INTRODUCTION:

Oral cavity is the most predominant location in the head and neck region for primary malignant tumors¹. Worldwide, oral carcinoma is one of the most prevalent cancers and is one of the 10 most common causes of death. More than one million new cancers diagnosed annually in the United States, cancers of the oral cavity and oropharynx account for approximately 3%. If oral cancers and cancers of the nasopharynx, pharynx, larynx, sinus, and salivary glands are combined, these sites represent more than 5% of total body cancers. In males, oral cancer represents 4% of total body cancers; in females, 2% of all cancers are oral. Oral cancer accounts for 2% of cancer deaths in males and 1% of cancer deaths in females.

Oral cancers, with its widely variable rate of occurrence, has one of the highest incidences in India constituting around 12% of all cancers in men and 8% of all cancers among women. It has been estimated that 83,000 new oral cancer cases occur here each year.²

In India, the extremely popular use of the smokeless tobacco product called gutkha, along with betel quid especially among the youth has led to a greater risk of developing oral submucous fibrosis, a premalignant disease resulting in increased incidence of oral cancer in younger patients^{3,4}. The higher rate of oral cancer in India could also be due to life style, habits, poverty, lack of education and awareness and less access to medical services. With early detection of cancer the treatment becomes less complicated and better functional and esthetic results can be obtained.^{4,5,6,7} Thus, the objective of the present study is to determine the level of awareness of oral cancer, knowledge about its early signs and the associated risk factors in the general population. An attempt will also be made through the questionnaire to increase the awareness of the participants as regards to oral cancer.

MATERIAL AND METHODS:

The study was conducted in the outpatient unit of department of oral medicine and radiology, VSPM Dental College Research Centre Nagpur. Total 1000 patients received the questionnaire after agreeing to participate and giving consent. Questionnaire consisted of 11 questions to assess the awareness about knowledge, causes and signs of cancer. The questionnaire were available in three different language English, Hindi and the local language i.e. Marathi. It was entirely up to

participants to decide which ever language they would select to fill in the questionnaire. For illiterate patients, data collector explained questions to the patients and transferred the answers to the questionnaire.

All the patients attending Oral medicine OPD from 25/11/2015 to 15/1/2016 (1000 patients) in the age range of 16-80 years were included in study, whereas those with the Medical background were excluded from the study.

Statistical Analysis

The demographic and oral cancer related awareness data were obtained through structured questionnaire on 1000 respondents. The description of participant characteristics and of various aspects related to oral cancer was obtained in numbers and percentages. Awareness index (AI) as a measure of awareness of oral cancer was obtained for each participant based on six dichotomous questions. Index was quantified as the ratio of number of positive responses to the total number of questions. The awareness index was summarized for various levels of participant characteristics in terms of mean and median. The statistical comparison across levels was performed either using *Wilcoxon rank sum test* (for two independent groups) or *Kruskall-Wallis test* (for more than two groups). The analysis was performed using SPSS – 20 (SPSS Inc.) and statistical significance was tested at 5% level.

RESULTS

Table 1 shows the general description of participant characteristics included in the study. There were 61.9% males and 38.1% females; and amongst these 59.5% participants belonged to age group 25 – 50 years, followed by 26.1% patients in the age group < 25 years. As regards socio-economic status (SES) according to Kuppuswamy's modified scale, 39.2% respondents were from upper lower category, followed by 30.1% from the middle and 26.6% from the middle category. Further, 83.1% respondents had heard about oral cancer, but crab sign as a symbol of cancer was known to only 31% of individuals. There were 63.7% respondents who believed that oral cancer is curable if detected at early stages; and 45.6% had knowledge about the type of treatment given to such patients. Nearly 62.5% knew whom to consult first if symptoms occur. There were 46.2% cases who believed that oral

cancer is contagious. (Table 2 and Figure 1,2,3)

(Table 3) As regards age, the median awareness index was higher for respondents below 50 years, while beyond this age, the median index reduced significantly as indicated by P -value < 0.0001 . In males, the mean awareness level was (0.51) higher than that of females (0.45), although the median levels were same. Despite the difference was statistically significant with P -value 0.011. The comparison of awareness index across socio-economic status revealed significant difference across SES strata with P -value < 0.0001 . The awareness in lower SES strata mainly contributed to statistical significance. Those respondents who knew about oral cancer had significantly higher awareness related to various aspects of oral cancer (0.7) with P -value < 0.0001 . **Further, those having habits were also aware about the different aspects of oral cancer with median index of 0.7, which was significantly higher than those unaware about oral cancer (P -value < 0.0001).** Figure 4 shows different sources through which information about oral cancer is reaching the population.

DISCUSSION-

The early diagnosis and prevention is must in the general population for awareness and knowledge of the diseases. To improve the awareness regarding the oral health, this study was a helpful step, to make them think and evaluate regarding oral cancer and its prevention. While doing this study after receiving their questionnaire we also tried to educate them about the causes, sign and symptoms and importance of early diagnosis. This will help to clear their vision and fend off of their myth.

Most of the oral cancers arise from premalignant lesions and is usually asymptomatic and therefore, routine dental screening is essential for early diagnosis. 43% of cancer death is due to tobacco, unhealthy diet, physical inactivity and infection. Tobacco, betel nut, pan and alcohol consumption have been estimated to account for about 90% of cancer in the oral cavity. India is second largest producer of tobacco with approximately 274.9 million tobacco users.²

The most common risk factors linked with oral cancers in India are tobacco and alcohol which are consumed in a variety of forms. Tobacco paste or powder, gutkha, pan masala, betel quid and mixture of betel nut, catechu, tobacco, lime, flavouring and colouring agents are those products placed in the mouth, cheek or lip and either sucked or chewed by the patients. Tobacco pastes and powders are also applied on the gums or teeth.

Gutkha and Bidi are the cheapest tobacco containing products sold in India. Gutkha is a preparation of crushed betel nut, tobacco, and sweet or savory flavorings. It is sold in colourful packets and targeted mainly at the young and middle aged persons. Tendu leaf with dried tobacco leaves inside (Bidi) usually consumed by people of the low socioeconomic strata.

Present study data showed although 756 patients out of 1000 knew the cause of oral cancer, even then 456 (45.6%) had habit of betel nut, pan tobacco alcohol, smoking, kharra. (Table 3). In a study done by S P Shah revealed that only 14.57% patients had known to causes of oral cancer. In a study conducted by **Kalavathy Jayapal Elango**⁸ found majority of the study population identified smoking, alcohol and gutka (sachets containing areca nut) (95%), pan chewing (96%) and tobacco chewing (97%) as causes of oral cancer.

Even with the increased knowledge and awareness of oral cancer and their risk factors, more than one third of the subjects in this survey had one or more high-risk habits.

Study data shows predominance of male individuals in the survey (61.9%) is not in accordance with other reports and may be explained by random variation or by the fact that there are a greater proportion of men attending hospitals as compare to women.

Within this survey, 83.10% had heard of oral cancer is highly significant (Table 1), but this percentage is less when compared to Kalavathy Jayapal Elango et al, he found 98% in his study. This could be because of less awareness in low socioeconomic status. According to the mean awareness index patients belonging to age group of 20-50 showed more awareness regarding oral cancer as compared to other age groups similarly Mamta Agrawal² et al found that awareness regarding oral cancer to be more in the younger age group. She

observed that for increased level of education, there was increased awareness. Whereas Crab sign as a symbol of cancer was known to only 31% of individuals.

Most effective source of information among the public to spread oral cancer awareness are TV followed by cinema, advertisement, newspaper. Health education through mass media both visual and print can be effectively used in communities with high-literacy level. They contain information on oral cancer, risk factors, detailed harm caused by tobacco use, pan, alcohol, early warning signs of oral cancer knowledge. (Figure 4) **K Saraswathi Gopal**¹ revealed in his study that respondents yielded knowledge and awareness of oral cancer from mass media 63.2%, followed by a dentist 23.4%, and rest 7.8% from others.

Association of oral cancer awareness with demographic variables and risk factor prevalence revealed that there was significant difference amongst the different educational groups.

According to AI index, people who belonged to upper and middle Socio-economic status have more awareness as compared to lower class (Table 3), it is in accordance with **Prasad L.K**¹⁰ in his study he **explained physical, psychological, social and economic state of an individual, stance a massive constrain in reaching out to the affected strata.** The data from this study has confirmed that the awareness about oral cancer and the knowledge of risk factors sign, proper knowledge of treatment modalities are proportional to the Socio-economic status of the subjects.

K Saraswathi Gopal¹ and **Asma Shakoor**¹¹ found 60.2% and 48% of patients respectively to have knowledge about the signs, symptoms of oral cancer whereas in this study 534 (53.4%) patients had knowledge of early indication of oral cancer which is in the mid range of above studies. The lack of knowledge in identifying early signs of oral cancer may result in ignoring early pre-cancerous lesions and misconception about risk factors decreases the chance of making quick decisions to leave personal habits.²

According to 637 (63.7%) patients oral cancer is a curable disease 456 (45.6%) and 462 (46.2) patients said that this was a Contagious disease whereas 34.8% and 59.6% respectively were found by **Gopinath Thilak P.S.** in his study.

Data showed 456(45.6) patients having Knowledge of treatment modalities used in oral cancer and 625 (62.5) patients had knowledge regarding the person to be consulted for treatment. **S P Shah** revealed in his study that 147 patients (31.61%) know whom to consult regarding queries of oral cancer. Whereas 96% respondent opted that they would visit the dentist in case of a painless, non-healing ulcer in a study done by **K Saraswathi Gopal**.

CONCLUSION -

This awareness study conducted among dental patients revealed that most of the patients are aware about oral cancer and its causes. This is because of awareness programs shown on television, Cinema and newspaper. Less public knowledge regarding early signs and symptoms and treatment of oral cancer suggest that there is a need to emphasize on public education programmes in future. Health education should be carried out to bridge the gap between the knowledge and awareness of oral cancer and their risk habits and the practice of these habits. This should be done in collaboration with Government, local agencies, professionals; NGO's to run together awareness campaign and medical monitoring centers to make sure that people who belong to the rural areas are also made aware of the hazards of oral cancer. This leads to early dictation, better prognosis and long-term survival rate for cancer patients.

Table 1 :General description of subject characteristics

Characteristics	Levels	No. (%)
Age (years)	< 25	261 (26.10)
	25-50	595 (59.50)
	50 - 75	138 (13.80)
	>75	6 (0.60)
Gender	Male	619 (61.90)
	Female	381 (38.10)

Socio-economic status	Upper	25 (2.50)
	Upper middle	266 (26.60)
	Middle	301 (30.10)
	Upper lower	392 (39.20)
	Lower	16 (1.60)
Awareness about word oral cancer	Yes	831 (83.10)
	No	169 (16.00)

Table2 ::General description about various aspects of oral cancer amongst studied individuals

Aspects	Levels	No. (%)
Crab sign	Yes	310 (31)
	No	690 (69)
Curability	Yes	637 (63.7)
	No	363 (36.3)
Contagious disease	Yes	462 (46.2)
	No	538 (53.8)
Knowledge of treatment	Yes	456 (45.6)
	No	544 (54.4)
Proper consultation	Yes	625 (62.5)
	No	375 (37.5)

Table3 : Descriptive statistics for awareness index (AI)according to individual characteristics

Characteristics	Levels	n	Mean AI	Median AI	P-value
Age (years)	< 25	261	0.51	0.5	< 0.0001 (HS)†
	25-50	595	0.50	0.5	
	50 - 75	138	0.38	0.3	
	>75	6	0.24	0	
Gender	Male	619	0.51	0.5	0.0011 (S)*
	Female	381	0.45	0.5	
Socio-economic status	Upper	25	0.56	0.5	< 0.0001 (HS)†
	Upper middle	266	0.54	0.5	
	Middle	301	0.44	0.5	
	Upper lower	392	0.49	0.5	
	Lower	16	0.32	0.4	
Overall awareness	Yes	831	0.57	0.7	< 0.0001 (HS)*
	No	169	0.08	0	
Know the Cause	Yes	756	0.61	0.7	< 0.0001 (HS)*
	No	244	0.11	0	

*Obtained using Wilcoxon rank sum test; †Obtained using Kruskal-Wallis test; HS: Highly significant; S: Significant

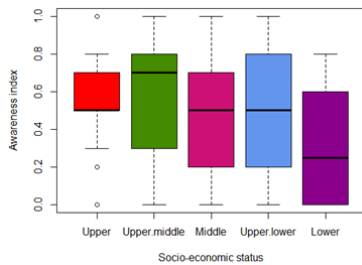


Figure1: Boxplot showing median values for awareness index according to socio-economic status

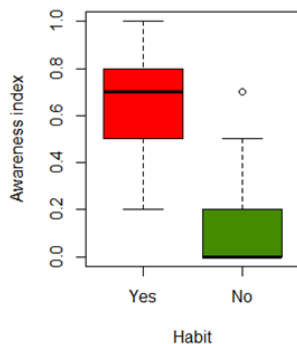


Figure 2 :Boxplot showing median values for awareness index according to habit

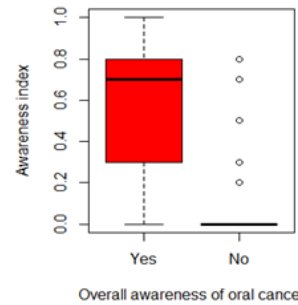


Figure 3: Boxplot showing median values for awareness index according to overall awareness about word 'oral cancer'

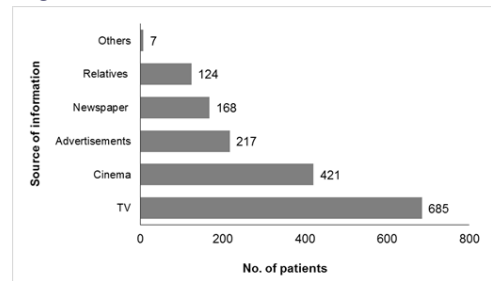


Figure 4: Bar chart shows no. of patients heard about oral cancer from given sources

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