



Research article

AWARENESS AND KNOWLEDGE OF ORAL CANCER IN URBAN PUNE POPULATION: A SURVEY BASED QUESTIONNAIRE STUDY

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ABSTRACT

Abstract: A self-administered survey based questionnaire study about oral carcinoma conducted at Bharati hospital, Pune. **Aims:** To assess the awareness and knowledge about oral malignancy, to assess the knowledge about risk factors related to oral malignancy and to assess the awareness about signs/symptoms of oral cancer in urban Pune. **Settings and Design:** A self designed questionnaire-based survey was conducted at the OPD of a tertiary care institute. **Methods and Material:** A self administered questionnaire-based survey. Time period: two months Study Area: OPD of a tertiary care hospital in Pune. Total Participants: 500 persons. **Statistical analysis used:** The collected data were analyzed using SPSS software to assess and associate oral cancer awareness. **Results:** The general awareness, knowledge of signs and risk factors of oral cancer were found to be proportionate to the literacy level with the highest rate of awareness being among health-care workers and post-graduates and lowest among illiterates. It was also observed that on most of these dimensions the younger age groups (<30 years) were significantly more knowledgeable. **Conclusion:** The awareness of oral cancer in the population of Pune was not satisfactory, pointing to a need for further dissemination of information on this issue. This is especially important for the youngsters, as this may possibly help them keep away from indulgence in any form.

Keywords: Oral cancer, Knowledge, awareness, risk factors, Pune

INTRODUCTION

Oral cancer is a major public health problem worldwide.^[1] It has been estimated that Cancer prevalence in India is around 2.5 million, with moreover 8 lakh new cases and 5.5 lakh deaths occur each year due to this disease.^[2] Oral cancer is the eleventh most common cancer in the world with an estimated 267,000 cases and 128,000 deaths in around 2000, two-third of which occurs in developing countries. The Indian subcontinent accounts for one-third of the world burden ^[3] and have 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. India is the second largest producer of tobacco and most of the tobacco produced is consumed within the country only, with approximately 274.9 million tobacco users according to recent data (Global Adult Tobacco Survey-GATS, 2010). As per this report more than one-third (35%) of adults in India use tobacco in some form or the other, 163.7 million are users of only smokeless tobacco, 68.9 million only smokers, and 42.3 million users of both smoking and smokeless tobacco.^[4] Majority of oral cancers arise from longstanding premalignant lesions. Alcohol and tobacco are the most

common risk factors, with age and the amount of substance consumed being synergistically detrimental. Potential carcinogens include marijuana, occupational factors (nickel and textile industry workers), viruses (HPV, EBV), and TP53 gene mutations.^[5]

Delayed presentation of oral cancer is mainly due to lack of awareness of the public about oral cancer and its associated risk factors which also results in increased treatment morbidity and reduced survival rates (Warnakalasuriya et al., 1999). An estimate according to National Cancer Control Program shows that the total cancer burden in India for all sites will increase from 7 lakhs new cases per year to 14 lakhs by 2026^[5]. Moreover, most of oral cancers are preventable if people know which risk factors they must control or eliminate.^[6]

The purpose of this study was to examine the awareness and knowledge of oral cancer in a hospital population of the city of Pune in India which could eventually aid in the planning of appropriate health promotion and health education to reduce the incidence of oral malignancy.^[7]

Aim:

To examine the awareness of oral cancer in general population presenting to the OPD in a tertiary care institute

Objectives:

1. To assess the awareness and knowledge about oral malignancy in the population.
2. To assess the knowledge about risk factors related to oral malignancy.
3. To assess the awareness about signs of oral cancer.

MATERIAL AND METHODOLOGY

Study Type: Cross sectional self designed questionnaire based study.

Study Area: Bharati Hospital, Pune.

Study Period: 2 months (October & November 2015)

Ethics: This study was approved by the ethical committee of our institute

Study Population: 500 random patients or their relatives.

Inclusion criteria: People above the age of 18 years. People willing to participate in the survey came for hospital for cancer diagnosis and their relatives

Exclusion criteria: <18 years of age

Methodology:

The study was conducted in the outpatient unit of the Bharati hospital and Research Center, Pune. After Ethical committee approval, all people above the age of 18, who were willing to participate, were included in the study. Information on the demographic characteristics, habits, along with the extent of knowledge about the risk factors and signs of oral cancer of the surveyed subjects was collected using a close ended questionnaire formatted both in English and the local language- Marathi. The questions consisted of queries related to demographic factors (age, gender, level of education), awareness of oral cancer, and knowledge of the risk factors, signs and symptoms of oral cancer. Responses to knowledge questions were assessed as correct or incorrect and knowledge scores were calculated for each respondent. After the survey the respondents were provided an educational broacher with description of the risk factors, signs and symptoms of oral cancer, and the importance of detecting the disease in its early stages.

Data analysis:

The collected data was coded and entered in Microsoft Excel sheet. The data was analysed using SPSS (Statistical Package for social sciences) software.

RESULT

The study covered a total of 500 subjects. Of these, 44% were males while 56% were females (Table 1). 7.6 % of the subjects were less than 20 years of age, 30.4 % had their age between 21-30 years, 24.2% were in the age between 31-40 years, 14.6% were between the age of 41-50 years, 8.8% were between 51-60years, 11.2% were between 61-70 years and 3.2% were above 70 years of age (Table 1). 29.2% were illiterate, 5.6% had primary education level, 23.4% had secondary level education, 21.2% were graduates, 11.2% were post-graduates and 9.4% were health care workers (doctors, nurses) (Table 1). Respondent's level of general awareness, symptoms and risk factor scores were assessed and treated statistically in terms of Mean SD and comparative analysis (as a function of age, sex and education)(Table 2.). Results have been interpreted in preceding sections.

General Awareness about Oral cancer: The general awareness of oral cancer (OC) was assessed via Six close ended questions (have you heard of oral cancer, can you prevent oral cancer, can you seek suggestions

regarding OC, getting OC is a matter of luck, can early diagnosis increase the success of treatment, can changes in lifestyle reduce the risk of oral cancer.) The awareness seemed reasonable good with 70.6% respondents having heard about oral cancer. However only 35.2% of the people believed that oral cancer is preventable. 71.2% respondents knew that they can ask their doctor/ dentist regarding oral cancer and get evaluated for it. 50.6% had the misconception that getting oral cancer was a matter of luck. 51.2% believed that early detection of oral cancer affected the success of treatment and 59.6% people believed that lifestyle modification can lower the risk of oral cancer.

Awareness about risk factors: Awareness about risk factors for oral cancer was assessed by nine close ended questions. 71.2% recognized smoking as a risk factor and 80.4% knew smokeless tobacco as a cause for oral cancer. Awareness regarding other risk factors was relatively low with 57.2% respondents knowing alcohol as a risk factor, while sedentary lifestyle and family history of cancer was believed to be a risk factor by 32.4% and 37.8% respondents respectively. Only 28.6% believed that regular intake of hot beverages was a risk factor for oral cancer and repeated trauma due to sharp tooth as a risk factor was known to 32.2% people. 44.6% people knew that consumption of spicy food was linked to oral cancer and 64.2% firmly believed that food stuff like beetle nut, pan masala were risk factors for oral cancer.

Table 1: Distribution of Respondents by Socio-Demographic Profile

Socio-Demographic Profile		No. (n=500)	%
Gender	F	280	56.0
	M	220	44.0
Age in years	≤ 20	38	7.6
	21 – 30	152	30.4
	31 – 40	121	24.2
	41 – 50	73	14.6
	51 – 60	44	8.8
	61 – 70	56	11.2
	> 70	16	3.2
Education	Illiterate	146	29.2
	Primary	28	5.6
	Secondary	117	23.4
	Graduate	106	21.2
	Post-graduate	56	11.2
	healthcare-professional	47	9.4

Table 2: Mean Knowledge Scores, SD and % of Correct Responses for Individual Questions for the whole Sample (n=500)

	Mean ± SD	%
Do you know about oral cancer	1.67 ± 0.54	70.6
Causes/risk factors of oral cancer:		
Smoking	1.71 ± 0.47	71.2
Alcohol	1.51 ± 0.61	57.2
Smokeless tobacco	1.79 ± 0.43	80.4
Sedentary lifestyle	1.16 ± 0.68	32.4
Family history of cancer	1.19 ± 0.70	37.8
Intake of hot beverage	1.04 ± 0.73	28.6
Repeated trauma due to sharp tooth	1.07 ± 0.76	32.2
Diet including regular consumption of spicy foods	1.32 ± 0.68	44.6
Spices: beetel nut, Pan, gutka, pan masala	1.60 ± 0.56	64.2
Signs/Symptoms of oral cancer:		
Growth of abnormal tissue	1.24 ± 0.69	38.6
Non healing wound	1.55 ± 0.54	56.6
White or red patch	1.56 ± 0.53	57.0
Reduced mouth opening	1.50 ± 0.55	52.2
Undue falling of teeth	1.48 ± 0.56	50.8
Continuous pain in jaw	1.54 ± 0.56	56.8
Can you prevent oral cancer	1.16 ± 0.72	35.2
Can you ask for suggestion, indications, conformation and treatment of oral cancer to your physician/dentist	1.70 ± 0.48	71.2
Getting oral cancer is a matter of luck and we cannot do anything to prevent it	1.31 ± 0.78	50.4
The early discovery of this cancer can increase the success of your treatment	1.43 ± 0.64	51.2
Do you think we can change our lives to reduce the risk of cancer of the mouth	1.54 ± 0.59	59.6

Awareness regarding signs and symptoms of oral cancer: Six close ended questions were asked to assess the awareness regarding the signs of oral cancer. 38.6% people recognized growth of abnormal tissue as a sign of oral cancer. 56.6% and 57.0% believed that a non healing wound and a white or red patch was a sign of oral cancer. 52.2% believed that reduced mouth opening was a symptom of oral cancer. Undue falling of teeth was considered as a cancerous symptom by 50.8% while 56.8% were aware that continuous pain in jaw was a sign of oral cancer.

It was observed that the mean knowledge score gradually improved with education level (Table 3) with least score of 22.34 for the illiterate population to 33.82 for post-graduates and a maximum of 39.13 for healthcare professionals (Max score – 42). It was noteworthy to observe that there was significant difference (F value) in the mean scores for males (30.46) was higher than that of the females (29.76).

Table 3: Mean knowledge scores and SD for various education levels

Education level	Mean±SD
illiterate	22.14 ± 2.30
primary	30.93 ± 7.24
secondary	32.24 ± 5.77
Graduate	32.35 ± 5.92
Post-graduate	33.82 ± 5.75
healthcare- professional	39.13 ± 4.32

DISCUSSION

Oral cancer in most of the cases is a preventable disease and mass public education and information may help in reducing the oral cancer burden on the society[8]. According to National Cancer Registry Programme (PBCR 2012-14), Oral cancer is the leading site with 10.6% incidence rate in males and had an incidence rate of 4.4% in females in pune[9]. It is well known that knowledge regarding a disease is directly proportional to its prognosis. This is because knowledge regarding the disease will lead to early recognition of the symptoms and thus lead to early diagnosis and a better prognosis. This study was carried out at a tertiary hospital and the results indicate poor level of awareness among the people and the level of superstitions and misconception regarding the disease is quite high in the masses. It was observed that the knowledge scores across most dimensions among the various education groups was significantly more for those respondents whose education level was high school or more and lower among respondents who were illiterate or had only primary education. calls the need for awareness programs in the targeted population. Overall, a higher awareness was seen in the younger population and it is noteworthy that higher level of education was related to increased awareness. Awareness in males was significantly more than females.

There is a clear need to inform and educate the public in matters relating to the known risk factors associated with

oral cancer. A media campaign informing the public about oral cancer is clearly required[10].Health education through mass media both print and visual should be effectively utilized in communities with high-literacy. Brochures containing information on oral cancer, risk factors, detailed harm caused by tobacco use, pan, alcohol, early warning signs of oral cancer, methods to perform oral self-examination may be distributed to the public and similar approach may be undertaken through other mass media.[11]

CONCLUSION

The present study revealed several aspects of public uncertainty and ignorance with regard to the causation of oral cancer which need to be emphasized in future public education programs, particularly using mass media. We suggest that to initiate intensive public education program for recognition of early warning signs of oral cancer and facilitate early detection by mouth self-examination through audio-visual aids.

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Conflicting Interest: NIL

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