ORIGINAL ARTICLE

KNOWLEDGE AND AWARENESS OF ORAL CANCER IN PATIENTS ATTENDING DENTAL O.P.D. OF A DENTAL COLLEGE IN BILASPUR, INDIA

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ABSTRACT:

Aim: To determine the level of knowledge and awareness of oral cancer amongst the patients referred to the Department of Oral Medicine and Radiology in Triveni Institute of Dental Sciences Hospital and Research Centre, Bodri, Bilaspur. **Methodology:** The study was conducted with 1,125 patients who came for routine dental examinations. The authors collected information with a 20-item questionnaire from the patients about oral cancer risk factors, epidemiology, etiology, and signs and symptoms. **Results:** Descriptive statistics of demographic variables and other data were reported as means and percentages. Statistical analysis was performed by means of SPSS +11.0 statistical package. Overall, only 48.9% of all patients showed awareness of oral cancer, with awareness especially poor among lower socioeconomic groups. Awareness of oral cancer risk factors and signs and symptoms did not vary significantly between men and women ($P > 0.5$); however, older participants (aged 40-64 years) were more familiar with oral cancer signs than younger participants. More than half of all participants (56.8%) were unaware of the common clinical presentations of oral cancer. **Conclusion**: The results of this survey showed knowledge regarding oral cancer to be quite low. Thus, educational programs are needed to increase public awareness about oral cancer, and also the need for dentists to motivate suspected patients to undergo screening for oral cancer to ensure early detection.

Keywords: Oral cancer, oral cancer knowledge, oral cancer education

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INTRODUCTION

Oral cancer is a global health problem with an increasing incidence and mortality rate and also has one of the lowest survival rates that remain unaffected despite recent therapeutic advances.[1] Dentists have critical tasks in the early diagnosis of these tumors when they are asymptomatic. With the early diagnosis, morbidity and mortality from these cancers would be reduced. Oral cancers can occur on lip, tongue, floor of the mouth, and other sites of the mouth and pharynx.[2-6] Most oropharyngeal cancers are oral squamous cell carcinomas (OSCCs), which account for 90-94% of all oral cancers (including malignancies such as salivary gland malignancies, soft and hard-tissue carcinomas, and metastatic cancers).[4,6] Although oral and pharyngeal cancers are curable when diagnosed and treated in early stages, unfortunately, more than half of all oral and pharyngeal cancers are not diagnosed until the final stages.[7-9] The primary risk factors for oral cancers include the use of alcohol and tobacco products, age, lack of fruits and vegetables in the diet, and exposure to sunlight.[4,8,10] However, some patients

develop OSCCs without exposure to these risk factors, which suggests that additional factors, such as genetic predisposition or oncogenic viruses, may help cells escape the physiological mechanisms of proliferation control.[11-13] Presence of human papilloma viruses (HPVs) in variable proportions in the oral or oropharyngeal squamous cell carcinoma tissues, especially those genotypes with known high oncogenic potential (such as HPV 16 and 18), has been demonstrated by several worldwide studies.[14-16] Oral cancer is often preceded by particular lesions and conditions described as precancerous.[17-19] OSCCs are known to develop mainly from premalignant lesions, making early diagnosis of these lesions an important step toward reducing cancer mortality. The present study sought to identify knowledge of risk factors for oral cancer, knowledge of signs and symptoms of oral cancers, and factors associated with oral cancer examination among a study population of 1,125 dental patients aged 18 years and older.

METHODOLOGY

The study was done on 1,125 patients aged 18 years and over who had came to the Department of Oral Medicine and Radiology in Triveni Institute of Dental Sciences and Research Centre, Bodri, Bilaspur,India for routine dental examination. The majority of participants were female (59.5%, *n* = 669; male: 40.5%, *n* = 456). The ages of participants ranged from 18 to 82 years (males: 22-58, mean age: 40.54 ± 13.43; females: 18-67, mean age: 45.14 ± 17.43). Written informed consent was received from all study participants (patients), and the study was approved by the Institutional Review Board. An interviewer-administered questionnaire was given to the participants. The first section of the questionnaire collected sociodemographic information, including age, sex, marital status, education level, alcohol consumption, and smoking status (current, past, or non-smoker) of participants. Oral hygiene practices were also assessed through questions on frequency of tooth brushing, tongue cleaning, use of dental floss and use of mouth rinse, and dentition status as well as regularity of dental visits were noted. The second section of the questionnaire examined participants' knowledge of risk factors and signs and symptoms of oral cancer. Participants were asked whether specific clinical signs (white or red patches in the mouth, non-healing sores or lesions, bleeding) were possible indicators of oral cancer and whether or not certain behaviors (excessive exposure to sunlight, eating spicy foods, regular alcohol consumption, tobacco use in any form and frequent cheek or lip biting) or aging (+50) increased the risk of developing mouth or lip cancer. Participants were also asked whether they had heard of certain types of cancer (e.g., breast cancer, lung cancer, intestinal cancer), whether or not early detection of some cancers could improve the chance of successful treatment, and about how they got the information about oral cancer.

Table 1: Demographics of the patients

DEMOGRAPHICS	NUMBER	PERCENTAGE
Sex		
Male	456	40.5
Female	669	59.5
Age		
18-24	339	30.1
25-34	268	23.8
35-44	230	20.4
45-54	174	15.5
55-64	82	7.3
65^{+}	32	2.8
Marital status		
Married	666	59.2
Single	436	38.8
Widowed/Separated/Divorced	23	2
Education		
Up to Grade 5	245	21.8
Up to Grade 8	114	10.1
Up to Grade 11	357	31.7
University	375	33.3
Masters PhD	34	3

Participants were also given a description of what an oral cancer examination entails and were then asked if they had ever received such an examination. Descriptive statistics of demographic variables and other data were reported as means and percentages. Statistical analysis was performed by means of SPSS +11.0 statistical package (SPSS, Inc., IL, US).

RESULTS

Overall, 48.9% of participants had heard about oral cancer, whereas 96.2% had heard about lung cancer, 73.9% about prostate cancer and 71.0% about skin cancer. Awareness was especially poor among individuals with low socioeconomic status. Knowledge of oral cancer risk factors and signs was not found to differ between men and women ($P > 0.5$); however, age was found to affect awareness, with older participants (aged 40-64) more likely to know of at least one sign of oral cancer than younger participants (aged 18-39). Demographic information is provided in Table 1.Knowledge of different risk factors varied greatly. Whereas the majority of participants knew tobacco (86.5%, $n = 973$) and alcohol (63.6%,$n = 716$) to be risk factors for oral cancer, only 17.9% ($n = 201$) knew excessive sunlight to be a risk factor for lip cancer, and only 36.8% ($n= 414$) and 24% ($n = 295$), respectively, knew frequent cheek-or lip-biting and consumption of spicy foods were not risk factors for oral cancer. More than half (56.8%) of participants were unaware of common clinical presentations of oral cancer, although 25.2% identified non-healing sores or lesions as early signs of oral cancer. White lesions (7.3%) and red lesions (6.4%) were also mentioned as early signs of oral cancer. Despite the fact that 96.1% of participants agreed that early detection could improve treatment outcomes, only 3.5% had had an oral cancer examination.

Table 2: Source of Oral Cancer Knowledge

Source Of Oral Cancer Knowledge	Number	Percentage
School	45	4
Newspapers	18	1.6
Television/Radio	185	16.4
Posters/Banners/Leaflet/ Pamphlet	193	17.2
Various combinations of the above	131	11.6

DISCUSSION

Of the many diseases in which dental professionals play a role in diagnosis and management, oral cancer has some of the highest morbidity and mortality rates.[5] Since 1915 an increase has occurred in both the incidence of oral cancer and in behavior that exposes individuals to environmental carcinogens. The majority of oral cancer diagnosed in individuals above age 45 has been found to be largely related to alcohol and tobacco usage, and the current study found the majority of participants were aware of the carcinogenic effects of tobacco and alcohol (86.5% and 63.6%, respectively).[20] Other risk factors for oral cancer include exposure to sunlight, increased age, gender (male), genetic factors, and various syndromes and viral infections. However, only 17.9% of participants knew excessive sunlight to be a risk factor for oral cancer. Cruz *et al*., (2002) reported that the patients participating in cancer screenings to be insufficiently aware of oral cancer risk factors, examinations and the importance of early detection.[7]

In the present study we found that the awareness of oral cancer symptoms and risk factors did not vary significantly between men and women. Güneri *et al*., (2005) has noted that since the 1990s, the social gradient for premalignant and malignant oropharynx lesions has been disappearing.[22] There is a widespread agreement regarding the need for better knowledge and programs to screen for oral cancer as well as need for arousing awareness about the effects of early detection on survival rates. Awareness and knowledge of oral cancer and associated risk factors was poor among this study population, indicating an urgent need to implement public oral health education aids and prevention strategies, including TV, newspaper and radio advertisements as well as posters, booklets, or leaflets explaining the early signs, symptoms and etiology of oral cancer and the importance of regular oral examinations for the early diagnosis. As described in Table 2 the need to use more structured teaching programs is also necessary. Cancer is responsible for about 20% of all deaths in high-income countries and 10% in low-income countries. It is projected that by 2020, there will be 15 million new cancer cases and 10 million cancer deaths every year.[20] Lack of awareness about oral cancer, both among the general population and among some healthcare professionals, appears to be an important factor behind the high mortality rate. According to researchers, early diagnosis of oral cancers greatly increases cure and survival rates while minimizes the impairments and deformities associated with it. However, less than 50% of oral cancer is diagnosed

at an early, localized stage. Considering that at least two-thirds of all cases are a result of lifestyle factors such as tobacco and alcohol abuse, effective primary prevention programs to change behaviors are also needed. [22]

CONCLUSION

The results of the present study showed knowledge regarding oral cancer to be quite low in Bilaspur population. Thus, continuing educational programs at the national level are needed to increase public knowledge and awareness about oral cancer. Additionally oral healthcare professionals should request patients undergo oral cancer examinations to ensure early detection.

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