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RESEARCH ARTICLE

AWARENESS OF ORAL CANCER AMONG DENTAL STUDENTS AND GENERAL PUBLIC

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ABSTRACT

Aim: To assess the awareness of dental students and general public about oral cancer.
Background: Oral cancer is one of the most common malignancy seen in head and neck region. The common causes for oral cancer include tobacco consumption (smoke and smokeless), areca nut, betel nut and others.
Materials and Methods: 2 groups were formed with 150 participants in each group. The groups included dental students (final year BDS students and Interns) and general public from Chennai. Awareness of etiology, clinical features and management of oral cancer was assessed by means of a questionnaire.
Reason: Though oral cancer is the most commonly encountered malignancy in head and neck region, there is poor awareness regarding its etiology, clinical features and management. An early diagnosis can lead to improved survival rate and better prognosis in many cases. Therefore awareness among the dental students and general population is essential for prevention, early diagnosis, improved prognosis and follow up.

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INTRODUCTION

Oral cancer is one of the most fatal health problems faced by the mankind today. In India, because of cultural, ethnic, geographic factors and the popularity of addictive habits, the frequency of oral cancer is high. It is a major problem in the Indian subcontinent and ranks among the top three types of cancer in the country (Elango *et al*., 2006). Rate of oral cancer in India is high, which is, 20 per 100,000 population and accounts for over 30% of all cancers in the country (Sankaranarayanan *et al*., 2005). The variation in incidence and pattern of the disease can be attributed to the combined effect of ageing of the population, as well as regional differences in the prevalence of disease-specific risk factors (Manoharan *et al*., 2010). It has been estimated that 83,000 new oral cancer cases occur here each year. Moreover, in India, the extremely popular use of the smokeless tobacco product called gutkha, renders its population and especially its youth to a greater risk of developing oral submucous fibrosis, a premalignant disease resulting in increased incidence of oral cancer in younger patients. Several factors like tobacco and tobacco related products, alcohol, genetic predisposition and hormonal factors are suspected as possible causative factors. (Byakodi, 2012) The contribution of each of these risk factors to the oral cancer burden varies across regions. Smokeless tobacco products and betel quid with or without tobacco are the major risk factors for oral cavity cancer in India and other neighbouring countries (Jemal *et al*., 2011). Oral cancer is largely preventable by avoiding known risk factors and national and international guidelines stress the importance of early detection (Lumerman *et al*., 1995; Llewellyn *et al*., 2004). 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) Despite recent advances in the detection and treatment of cancer, visual accessibility of the oral mucosa and the scientific knowledge on cancer risk factors, oral cancer carries a low survival rate. Early diagnosis greatly increases the patient's chances of survival as the Oral cavity is very accessible for clinical or self- examination. However, oral cancer is still frequently diagnosed in advanced stages. One of the main reasons may be the lack of awareness about the causes and knowledge of signs and symptoms of oral cancer among the population. The purpose of this study was to evaluate the awareness and access the knowledge in the rural public and Dental studentsregarding oral cancer with the help of a questionnaire and to educate them. The study was done in and around 6 dental colleges in Chennai as well as the rural areas of Avadi (Chennai district).

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MATERIALS AND METHODS

This was a survey-based study carried out in Dental Colleges in Chennai, Tamil Nadu. A total of 300 people participated in

this survey, which included 150 patients who came seeking dental treatment at different dental colleges in Chennai and 150 students who were interning with the same colleges. A questionnaire based survey was carried out which contained 15 questions regarding oral cancer, signs and symptoms, diagnosis and treatment. Excluded from the study were those with precancerous conditions or lesions, patients suffering from oral cancer and those who were not willing to participate. The data was analysed and the statistics were calculated and the level of cancer awareness was studied.

RESULTS

The general public was divided into 5 groups according to the age (20-30 years, 30-40 years, 40-50 years, 50-60 years and 60 years above). Each group consisted of 30 subjects. Level of general awareness, symptoms and risk factor scores were assessed and treated statistically in terms of Mean SD and comparative analysis. Results have been interpreted in preceding sections.

Table 1.

Age group	20-30	30-40	40-50	50-60	60 ABOVE
General awareness of oral cancer	52.1%	68.2%	70.5%	73.3%	77.2%
Causes	33.3%	45.5%	50.4%	52.3%	60.2%
Diagnosis	37.1%	54.2%	62.8%	71.7%	73.1%
Management	43.6%	52.4%	59.2%	63.3%	65.1.4%

Table 2.

	General public	Students
General awareness	68.2%	96%
Causes	48.34%	93.8%
Diagnosis	59.6%	82.7%
Management	56.7%	93%

Table 3.

	Male	Female
General awareness	74%	72.8%

Table 4.

	Tobacco users	Non tobacco users
General awareness	63%	91%

General awareness of oral cancer

The general awareness of oral cancer was assessed via close-ended questions. The general awareness of oral cancer on various dimensions varied significantly across various age groups, with the younger age groups being a little less aware 52.1%. As given in Table 1, the age groups above 30 years had significantly good knowledge showing awareness among the general public (30-40 years-68.2%, 40-50 years- 70.5%, 50 to 60 years-73.3%, above 60-77.2%) The dental student population was found to have far better knowledge and understanding (96%) about oral cancer than the general public. The differences were statistically significant across all dimensions. (Table 2) No significant statistical difference was observed between the general awareness of oral cancer among males (74%) and females (72.8%) (Table 3)

Awareness regarding diagnosis of oral cancer

The questionnaire consisted of questions assessing knowledge of subjects pertaining to signs/symptoms of oral cancer (abnormal tissue growth inside mouth, non healing oral ulcers/sores, white or red patches, pain in mouth etc). The level of awareness seemed to be increasing with age and literacy, which had a similar pattern as seen for general awareness of oral cancer; higher mean scored by the higher age group (above 60 years-73.1%) and dental students (82.7%). The younger population showed lack of awareness (20-30 years-37.1%) regarding the signs and symptoms of oral cancer which can be a major concern. (Table 1)

Awareness pertaining to its risk factors

The questionnaire consisted of questions assessing knowledge of subjects pertaining to causes for oral cancer (Smoking, alcohol, smokeless tobacco, sedentary life style, family history of cancer). While the students were well aware of the causes of oral cancer (93.8%), here was a significant lack of awareness observed in the general population when it came to causes of oral cancer (48.3%). The total score difference between various age groups was statistically insignificant, but increased from younger generation (20-30 years-33.3%) to older (above 60 years-60.2%).

Awareness regarding treatment of oral cancer

It was observed that there is a major lack of awareness regarding treatment options of oral cancer in general public of all age groups. (Table 1) The students were well informed (93%) about the various treatment options available.

DISCUSSION

Oral cancer is one of the easily diagnosed disease when compared to the other cancers developing in the body, yet the awareness among the general public specially the rural population is minimal leading to the presentation of oral cancer in their terminal stages hence making it very difficult to cure without a surgery. It is understandable that knowledge of oral cancer in a given population is directly related to the prognosis of the cases identified therein and experience. Older adults are more aware as compared to the younger generation. There is a need to enhance awareness on oral cancer in general and specifically in relation to its symptoms and risk factors that can possibly lead to early clinical presentation. The lack of knowledge in identifying early signs of oral cancer may result in ignoring early pre-cancerous lesions whereas misconception about risk factors reduces the chance of making intelligent decisions regarding personal habits. Previous studies have shown that the public is not aware of an oral cancer examination and hence do not ask for it. Once the patients were educated regarding the oral cancer examination, they requested for an examination followed by periodic check ups. (Horowitz *et al*., 1998) This may be an indication that the dentists are carrying out oral cancer examination without educating the patients about it. (Horowitz *et al*., 2001) Dental students had a significantly higher knowledge (96%) about the risk factors of oral cancer, a finding consistent with the results of other studies (Mignogna and Fedele, 2005; Patton *et al*., 2004) Dentist play a very important role in offering oral cancer and anti tobacco counselling to the patients. Also patients who are visiting a dental clinic for treatment unrelated to oral cancer can be incorporated into a preventiverecall schedule if they are observed to be in the risk risk category (Davis, 2005). As observed in our survey, about 63% of the tobacco users are aware about the causes, risk factors etc of oral cancer, yet they

continue the habit due to lack of motivation. This indicates lack of motivational programmes, seminars, talks, follow ups etc. (Stahl *et al*., 2004) In spite of improvements in treatment modalities over past decades, a significant change in the prognosis of oral cancer has not achieved. This is possibly due to the failure to identify small and potentially malignant lesions early, which precludes successful treatment. Therefore, early detection is the key to improve survival rate in oral cancer patients. The mortality associated with oral cancer can be reduced by clinical examination. One study described a 32% decline in mortality in high risk individuals, thus implying that about 40000 deaths can be prevented by oral examination worldwide. (Warnakulasuriya and Tilakaratne, 2014) It is very important to spread awareness among the general public, specially younger generation regarding the risk factors and cause of oral cancer. (Hobdell *et al*., 2003) With the social media and public media like television, newpaper etc, it is now easy to reach to a larger audience and spread awareness regarding oral cancer and continuing professional development for oral health professionalsabout early detection and diagnosis must also be emphasized. Primary preventive initiatives should similarly be initiated to reduce exposure to these risk factors while every dental visit should be an opportunity to provide information about oral cancer and to do a thorough mouth examination.

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