RESEARCH ARTICLE

AWARENESS AND KNOWLEDGE OF ORAL CANCER AMONG DENTAL PATIENTS IN KMSDCH, VADODARA: A SURVEY BASED QUESTIONNAIRE STUDY

Dr. Yash Shah, *Dr. Pranay Yajurvedi, Dr. Rakesh Shah, Dr. Siddhanth Jain and Dr. Neel Shah

Post Graduate Student, Department of Oral & Maxillofacial Surgery, K.M. Shah Dental College/ Sumandeep Vidyapeeth, India

ABSTRACT

Oral Cancer is one of the major life threatening diseases of the modern world. However this disease is also preventable through early diagnosis and treatment. One of the ways is to promote health awareness through various campaigns and other such tools. Oral and maxillofacial surgery is a branch that also deals with the diagnosis and the treatment of such a dreadful disease. Hence the motive behind conducting this questionnaire study was to find out the awareness amongst the patients reporting to our department, most of them from the state of Gujarat and Madhya Pradesh, about Oral Cancer, the awareness of the causes and misconceptions about the disease in order to collect a demographic data to help improving the awareness campaigns on this disease.

INTRODUCTION

A malignant growth is characterized by a continuing, purposeless, unwanted, uncontrolled and damaging growth of cells that differ structurally and functionally from the normal cells from which they develop. The commonly used term for a malignant growth is a cancer – cancer is Latin for crab. The condition was called cancer in ancient times because an advanced cancer was thought to resemble a crab, with "claws" reaching out into surrounding tissues. Oral cancer is one of the major public health problems globally. Oral cancer is ranked as the sixth most common cancer (GLOBOCAN). It is most commonly seen in South and South East Asian countries such as India, Bangladesh, Taiwan, and Sri Lanka (World Health Organization, 1984). About 90% of oral cancers are squamous cell carcinomas. Smoking, alcohol use, smokeless tobacco, and human papillomavirus infections are the major risk factors, with an attributable risk of oral cancer due to both tobacco and alcohol of 80%. (Devadiga and Prasad, 2010; Monteiro *et al.*, 2012) The developing parts of the world have been hit superiorly when compared to the developed parts. Most of the cases have been reported from countries like India, Europe and South America. If major cancers such as breast, skin, testis, prostate, uterus and urinary bladder are considered; oral cancer ranks among the ones with the lowest survival rate, with a

mean value of 0.54 for females and 0.41 for males. (Quadri and Saleh, 2014) Oral cancer is mostly preventable. As the mouth is easily accessible for self or clinical examination early diagnosis of the malignancy is possible, and it greatly increases survival rates. The prognosis of oral cancer is poor with lowest survival rates of <50%, within a 5-year period. In spite of advances in the diagnosis and treatment of oral cancer, the proportion of oral cancer cases diagnosed at an early and localized stage is still <50%. Even though, 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 (near 50%). One of the main reasons may be a lack of information about the causes and knowledge of the signs and symptoms of oral cancer among the population. Moreover, most of the oral cancers are preventable if people know which risk factors they must control or eliminate. (Monteiro *et al.*, 2012; Park *et al.*, 2011) Although, it is generally believed that the 5-year survival has not been improved over the years despite the advancement in treatment and rehabilitation. Some recent studies have shown encouraging results with improvement in overall 5-year survival rates. The best 5-year survival has been reported for lip cancers. In general survival rates decline with the Advancement of the stage of the disease in which TNM stages I and II have comparatively higher survival rate than stages II and IV. (Formosa and Jenner, 2015) India is the second largest producer of tobacco and most of the tobacco produced is

Corresponding author: **Dr. Pranay Yajurvedi,**
Post Graduate Student, Department of Oral & Maxillofacial Surgery, K.M. Shah Dental College/ Sumandeep Vidyapeeth, India.

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. Alarmingly high statistics and delayed presentation of patients at time of primary diagnosis underscores the need for an extensive awareness campaign on the issues related to oral cancer. Such campaigns represent potential opportunities to educate people and also help in implementation of effective education strategies targeting the areas where the public knowledge is found lacking. (Agrawal and Pandey, 2012) To reduce the morbidity and mortality associated with oral cancer, the public need to be aware of this condition in terms of its early symptoms and risk factors. Therefore, the aim of this study was to assess the public's awareness about oral cancer, their knowledge about early symptoms and risk factors, their practice regarding early lesions and their attitude towards tobacco cessation in dental care settings as a mean to control and prevent oral cancer occurrence.

MATERIALS AND METHODS

The research was conducted at the Oral and Maxillofacial Surgery Department, K.M. Shah Dental College and Hospital. Ethical approval was obtained from the University Ethics Committee and informed consent was obtained from the individual participating in the study

Inclusion Criteria:

- Patients who came to the OPD of oral and maxillofacial surgery department of KMSDCH, vadodara.
- Patients willing to participate in the study.

Exclusion Criteria:

- Patients below 18 yrs.

The questionnaires were personally given to all the OPD patients of oral and maxillofacial surgery department. The questions were in English and regional language and the questionnaires were collected in person at conclusion of the filled forms. In an attempt to maximize the response rate, form was distributed in person, encouraging them to return their completed questionnaire. The questionnaires were processed and cross-checked for accuracy. Validated questionnaire result was 84.25% for this study.

Validation formula used

Self-prepared questionnaire is validated using chi-square test. Chi-square is the sum of the squared difference between observed (O) and the expected (E) data (or the deviation, D), divided by the expected data in all possible categories and data entered in SPSS 18.0 with the level of significance is 0.05 (5%).

Table 1. Questionnaire Proforma

Questionnaire Proforma
Name:
Age / Sex:
OPD no.:

A) Knowledge & Awareness:

1. Do you know word mouth cancer?
   a. Yes   b. No

2. Does your known suffered from mouth cancer?
   a. Yes   b. No

3. Do you know the cause of mouth cancer?
   a. Yes   b. No

4. Can tobacco cause mouth cancer?
   a. Yes   b. No

5. Can alcohol cause mouth cancer?
   a. Yes   b. No

6. Can smoking cause mouth cancer?
   a. Yes   b. No

7. Is mouth cancer can be treated?
   a. Yes   b. No

B) Habits:-

1. Are you a tobacco chewer?
   a. Yes   b. No

2. Are you a smoker?
   a. Yes   b. No

3. Are you an alcohol drinker?
   a. Yes   b. No

RESULTS

The study was devised to measure the awareness and knowledge of oral cancer among dental patients in kmsdch, vadodara. The patients were asked questions related to the knowledge regarding oral cancer; its causes, their family history, point of view regarding treatment and their habits. The questions in the questionnaire were regarding the knowledge of oral cancer, the causes related and its treatment related questions were asked and even about the adverse habit such as tobacco chewing or bidi smoking or any other habit was asked to the patient. Total 70 patients were included in the study from them 66 patients had heard the term oral cancer, 62 patients had basic knowledge of the different causes of oral cancer. Graphs representing the "Questionnoire performa" in sequential order.
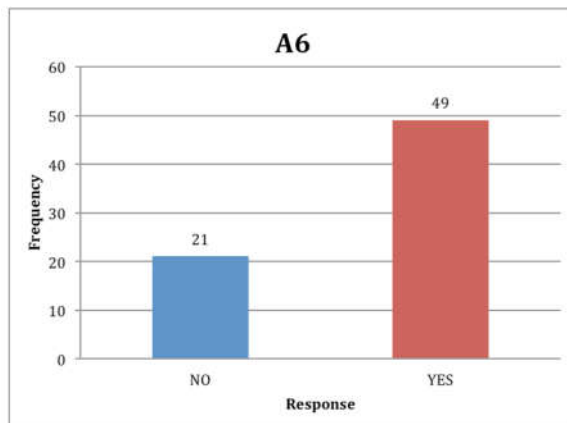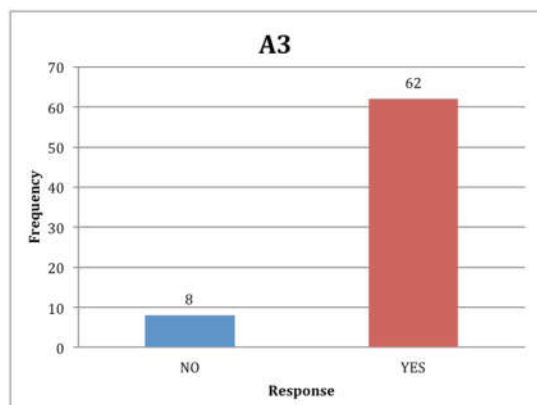
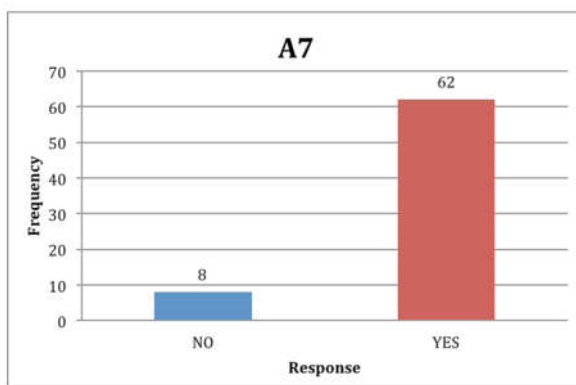**Graph 4. A4(question no. 4)**
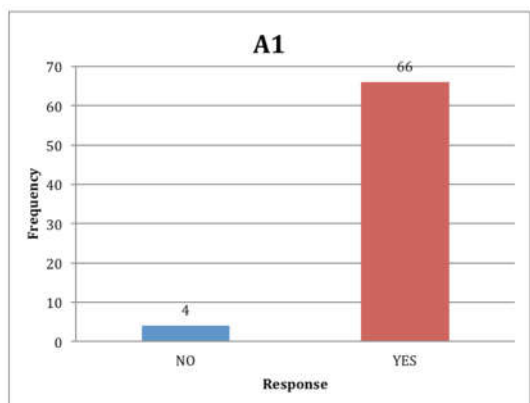
Graph 1. A1(question no. 1)
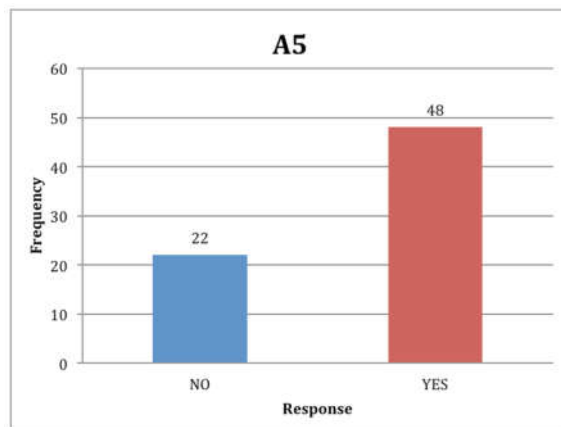
Graph 5. A5(question no. 5)
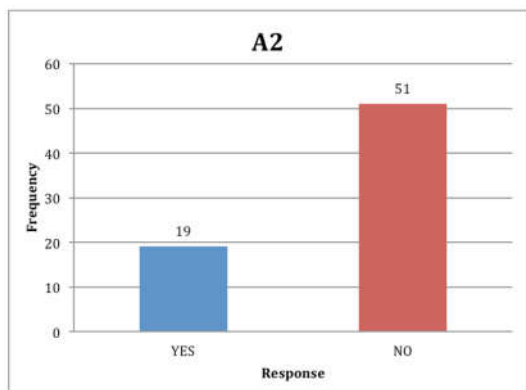
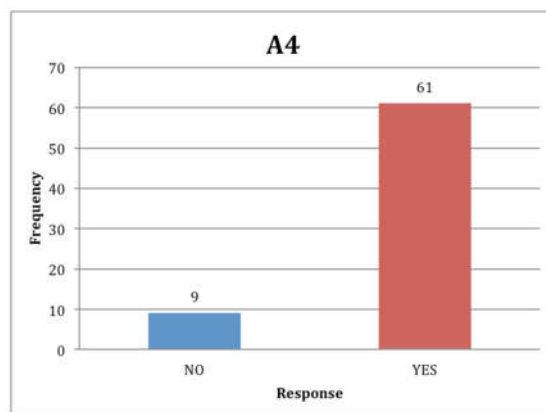**Graph 2. A2(question no. 2)**
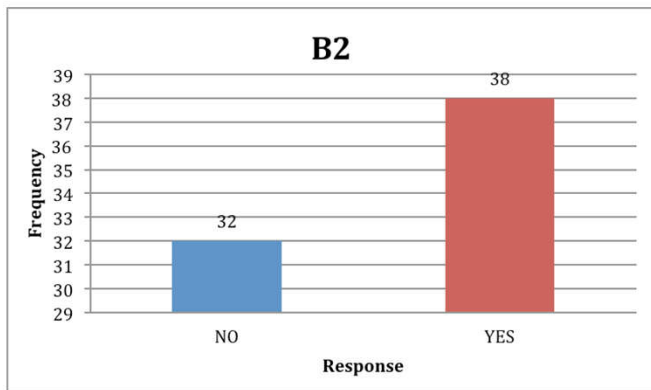
Graph 6. A6(question no. 6)
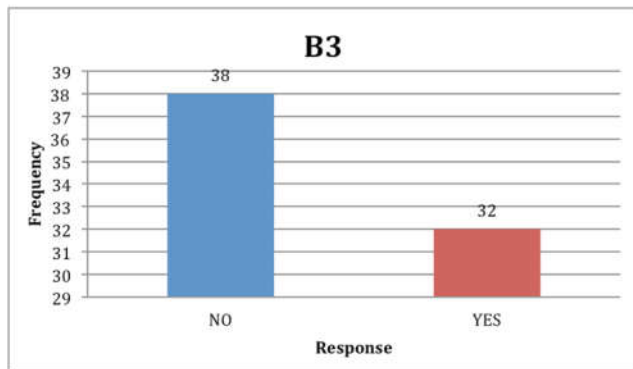
Graph 3. A3(question no. 3)

Graph 7. A7(question no. 7)
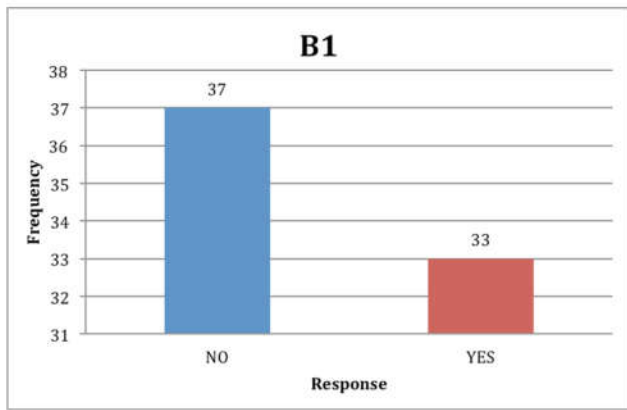
Graph 8. B1(question no. 1)

Graph 9. B2(question no. 2)

Graph 10. B3(question no. 3)

DISCUSSION

Oral cancer accounts for approximately 200,000 deaths annually worldwide and 46,000 deaths occurring particularly in India). (Muthu Laakshmi, 2016) There is evidence that this cancer is more common in the developing countries in contrast to the developed ones, with the highest oral cavity cancer rates being found in Melanesia, South-Central Asia, and Central and Eastern Europe and the lowest in Africa, Central America, and Eastern Asia for both males and females. (Ahmedin Jemal *et al.*, 2011) 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. 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. (Agrawal and Pandey, 2012) Risk factors for oral cancers include smoking, alcohol use, smokeless tobacco products, and HPV (human papillomavirus) infections, with smoking and alcohol having synergistic effects. 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 neighboring countries. (Zohaib Khan *et al.*, 2014) Majority of oral cancers have been observed to arise from long-standing premalignant lesions especially in high incidence areas. (Gurkan Yardimci *et al.*, 2014) Mouth cancer is largely preventable by avoiding known risk factors and national and international guidelines stress the importance of early detection. (West *et al.*, 2006) 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. (Ford and Farah, 2013) 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. (Consumption of tobacco products Press Information Bureau Government of India Ministry of Health and Family Welfare, 2013) 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. Alarmingly high statistics and delayed presentation of patients at time of primary diagnosis underscores the need for an extensive awareness campaign on the issues related to oral cancer. Such campaigns represent potential opportunities to educate people and also help in implementation of effective education strategies targeting the areas where the public knowledge is found lacking. (Agrawal and Pandey, 2012)

Awareness about cancer, its risk factors and their symptoms can lead to early clinical presentation. Unlike reported from low-risk populations, the data from this study has suggested that the overall awareness of oral cancer in this high-risk population is high. (Kalavathy Elango) However a considerable proportion of habitués were not aware of the risk of their habits. This included 54.3% of smokers, 45.7% of subjects who consumed alcohol, and 47.1% of pan-chewers. The data from this study has confirmed that the prevalence of risk habits and awareness about oral cancer and the knowledge of risk factors are proportional to the education level of the subjects. The present study found that among socio-demographic factors, there was a significant correlation between the participants' level of education and knowledge about risk factors. This result is in agreement with those of other studies conducted in India by Devadigaand Prasad *et al* and in contrast to the results of a study recently conducted in American adults Luryi *et al*. (Razavi and Tahani, 2015) Overall awareness of oral cancer in this high-risk community was good. Only 5.7% (4 persons) were totally unaware of the oral cancer and its risk factors. 94.3% (n=66) of the subjects had heard about oral cancer and 27.1% knew someone with history of oral cancer. 88.6% (n=62) correctly identified the causes of oral cancer. There were, however, certain misconceptions about oral cancer in this community. 88.6% believed that oral cancer is a curable disease. Those subjects who did not respond to the questions were excluded from the analysis. 70.0% subjects identified smoking as the cause of oral cancer, but only 68.6% recognized

alcohol as a risk factor. 87.1% correlated pan chewing with oral cancer. The results of this study reflect previous studies by Horowitz *et al*. and Warnakulasuriya *et al*. which found that awareness of OPC was lower than that of other cancers and life-limiting illnesses caused by tobacco and alcohol use. Also, according to these studies, knowledge of drinking as a risk factor for OPC was significantly lower than that of smoking as a risk factor for the cancer. (Park *et al*., 2011) Overall, 47.1% of the interviewed subjects gave history of tobacco chewing. Among the surveyed public, 54.3% gave history of smoking cigarettes or bidis. Among the surveyed public, 45.7% gave history of alcohol consumption.

Conclusion

This awareness study, conducted among dental patients revealed a good knowledge towards oral cancer and need for more structured awareness programs about the early signs, symptoms and etiology of oral cancer and the importance of regular oral examination among the people. The present study also 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 such as television, posters, leaflets, radio advertisements.

Conflict of interest

The authors declare no conflict of interest.

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