

Research Article

Level of Awareness of Causes and Symptoms of Oral Cancer in Patients Referring To Tabriz Faculty of Dentistry In 2014

Faezeh Mehrbakhsh¹, Mojtaba Sabzijate^{2*}, Shahriar Eftekharian²,
Mohammad Norouzi², Davood Mohammadi³ and Seyed Alireza Abtahi⁴

¹Medical Student of Urmia University of Medical Sciences, Urmia, Iran.

²Postgraduate Student of Orthodontics of Shahed University of Medical Sciences, Tehran, Iran.

³Postgraduate Student of Pediatric Dentistry of Shahed University of Medical Sciences, Tehran, Iran.

⁴Dentistry Student, Dentistry of Shahed University of Medical Sciences, Tehran, Iran.

* Corresponding Author: Mojtaba Sabzijate

ABSTRACT

Introduction and objectives: Oral cancer is one of the most common cancers. Incidence of this cancer is on the rise and more than half of the patients are diagnosed in advanced stages of the disease (1). Early diagnosis of cancer is very important. Therefore, it is essential to present guidelines for identification of lesions in early stages. This research aims to study the level of awareness of causes and symptoms of oral cancer in patients referring to Tabriz Faculty of Dentistry in 2014.

Methods and Materials: In this cross-sectional study, a questionnaire that its reliability and validity are confirmed by statistical tests is distributed among 380 randomly selected patients referring to Faculty of Dentistry. Information collected by questionnaire will be analyzed by ANOVA and T Test.

Findings: Findings show that 4.32% of the subjects have information about oral cancer; they have acquired much of their knowledge from media. There are positive responses in terms of questions related to etiological factors of oral cancer such as chronic exposure to the sun (6.42%), eating hot peppery food (1.16%), alcohol consumption (4.68%), and smoking (4.78%). They believed that they are risk factors. Moreover, three questions about the first signs of oral cancer are red lesions without pain (8.21%), white lesions (20%), and chronic wound (5.15%) have answered by positive responses. There are significant relationships between alcohol consumption, sex, education level, and frequency of using dental services. In addition, there is a significant relationship between three symptoms of oral cancer with education level and frequency of using dental services.

Conclusion: level of patients' knowledge about etiological factors of oral cancer is at a moderate degree; but their knowledge of first signs of oral cancer is at a very low degree. Since most of the information was provided to public by the media, the role of media and learning programs about risk factors and early diagnosis of oral cancer must be emphasized to increase people's awareness.

Keywords: Oral cancer, awareness, patients.

INTRODUCTION

Cancer is one of the greatest threats to public health in the developing world. Oral cancer is one of the most common cancers and the second leading cause of death worldwide after cardiovascular disease. (2)

Alcohol and cigarettes are two important risk factors for oral cancer. Moreover, incidence of cancer is also associated with social and economic level; it increases with aging so that 98 percent of cancers of the throat and mouth occur in patients older than 60 years (3-4).

The incidence of oral cancer among types of cancer is ranked in the eleventh place. Belated diagnosis of the disease is a major cause of mortality in oral cancer. It may be due to lack of knowledge of technicians and patients about oral cancer. Besides,

lack of allocating enough time for the oral examination by dentists and technicians is another reason. In the early stages, oral cancer is usually painless and asymptomatic; it can be prevented with early diagnosis (3-5).

Early diagnosis of lesions is now the best method to control and reduce death and disability from cancer of the mouth. It should be noted late diagnosis of the disease can play an important role. Early diagnoses of signs and symptoms depend largely on the level of knowledge and awareness about cancer lesions. It has been made clear that most patients do not have enough information about detection, disease, and treatment procedures. Based on the recommendations of international health, it is necessary for all patients older than 40 years to be a subject of oral cancer examination (13) while only 13-20 percent of patients older than 40 years receive examinations (14).

This research has been conducted to investigate patients' knowledge and attitudes about oral cancer. Hence, it studied knowledge of patients about oral cancer in Tabriz.

MATERIALS AND METHODS

Subjects of this cross-sectional study are clients of Faculty of Dentistry in Tabriz in 2014. In order to determine the sample size, 30 samples have been estimated according to statistics from previous years and the resultant formula with respect to an average level of knowledge (P=0.05) in the target population, with a power of 80.0 and 10% difference in the awareness of the society; the samples have been selected randomly among the clients. After selecting patients, description about necessary objectives of the study were given in plain language for patients. Informed consent was given from patients participating in the research. In the case

of illiterate persons, another person read the questionnaire and filled it. The incomplete questionnaires were excluded from consideration and new patients replaced them.

To extract knowledge level and attitudes, the reliability and validity of develop questionnaire has been confirmed by statistical tests and experts. Questionnaires used in this study consist of three parts. First, information about age, sex, education level and the number of dental visit. Second, questions for evaluation of patients' knowledge about risk factors and signs of oral cancer. Third, questions to assess the knowledge about symptoms of oral cancer. 1 is regarded for correct answers and zero is set for false answers. The highest score for a questionnaire is 8 and the lowest score is zero. Then, average scores are transferred to a balanced distribution graph. Scores between 0-3 are weak, 3-5 are good, and 5-8 are excellent. Level of education is evaluated using regression models.

Validity and reliability of the questionnaire are examined. Data obtained from the research is analyzed by descriptive statistical methods (frequency, standard deviation, and mean); they were also examined by SPSS 16 software and chi-square.

FINDINGS

142 of 380 patients in the study are male (37.2%) and 238 patients are female (62.8%). The youngest subject has 19 years old client and the oldest person in the study is 76 years old.

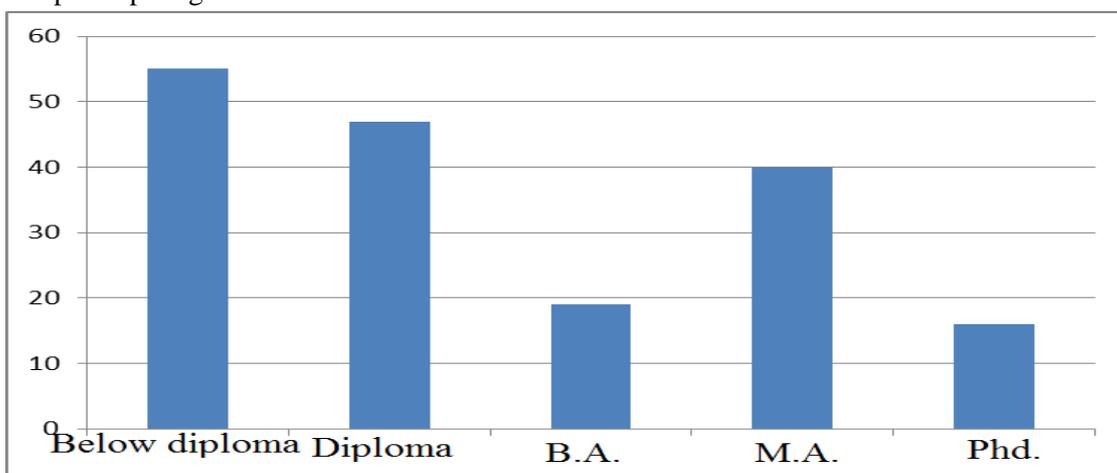


Figure 1. Participants' education level

3% of subjects refer monthly to a dentist, 1.2 % yearly, and 6.97% of the patients have no

special plan for visiting the dentist. There is no significant relationship between knowledge

level and the number of dental visits ($P < 0.05$); but knowledge level has a significant relationship to age and education level.

In patients who have knowledge of oral cancer, 117 subjects (30.8%) have acquired their information from media, 27 subjects (7.4%) have acquired their information from the doctor, and 3 subjects (0.8%) have acquired their information from the dentist. All patients stated that they have never visit a dentist to check their oral cancer.

162 subjects (42.6%) believed that chronic sun exposure is a factor that causes oral cancer;

16.1% of the subjects believe that eating hot peppery foods is a factor causing oral cancer. There is a significant relationship between correct answer to these questions and number of dental visit.

178 subjects (46.8%) of the patients regard alcohol consumption and 298 subjects (78.4%) regard cigarette as risk factor for oral cancer. There is a significant relationship between the correct answer to these questions and level of education.

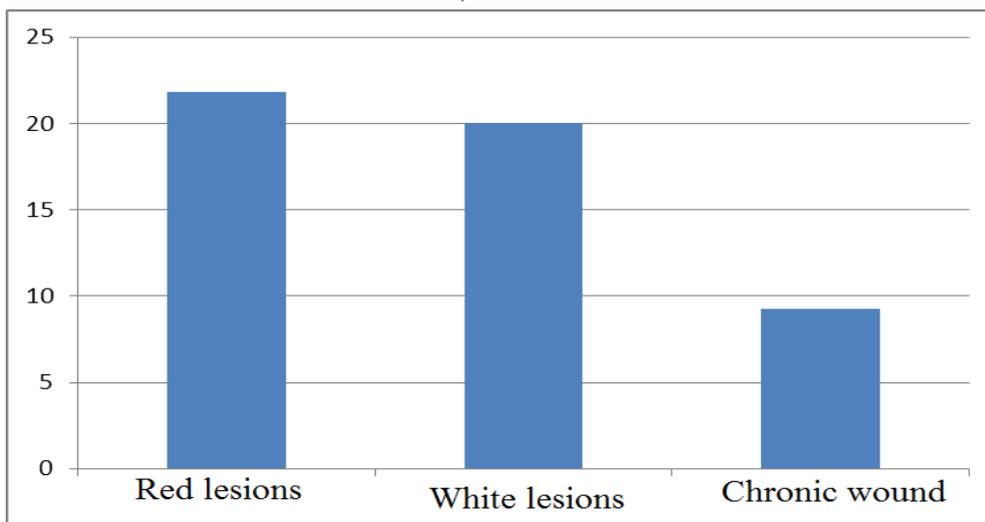


Figure 2: The percentage of correct answers to the symptoms of cancer

Average score of participants about etiological factors of oral cancer is 2.20 of 5, about the first signs of oral cancer is 57% from 3; the total score is 59.2. There is no significant relationship between sex and education level.

DISCUSSION AND CONCLUSION

Oral cancer is a serious problem in many countries. It is not only lead to a significant rate of mortality but also bring dysfunctional, behavioral, financial, and social problems (6).

Oral cancer is one of the most important factors that lead to life threatening. Life expectancy is 80% when the tumor is detected at an early stage; and it is less than 30% when the tumor is metastasized (8).

Unfortunately, less than 37% of oral and laryngeal cancers are diagnosed at an early stage (9). Thus, cancerous and pre-cancerous lesions are major barriers in the diagnosis of oral cancer. However, there are few studies in this regard and about people’s knowledge and diagnosis of cancers. In 1998, Canto et al

conducted a study titled “Veterans’ Knowledge of risk factors for and signs of oral cancers and their use of dental services”. According to their results, 84% of participants considered tobacco as a risk factor for cancer while 39% considered alcohol as a risk factor for cancer (1-10). This research found that 46.8% of participants regard alcohol as a risk factor for oral cancer and 78.4% of the participants considered cigarette as a risk factor for oral cancer. In 1999, Varnaksio et al conducted a research titled “Lack of public awareness about oral cancer.” according to their results, oral cancer is one of the least heard cancers by people; only 56% of the participants had information about oral cancer while this rate for skin cancer was 96%.

76% of people were aware of the relationship between cigarette and cancer while 19% of people knew the relationship between alcohol and cancer. 94% of the participants agree that early recognition is effective in remission; therefore, increasing knowledge of people about oral cancer will be very effective (9-10). In this

study, 67.6% of the patients have no information about oral cancer.

In 2003, Haung Wei Yu et al conducted a research titled "Alcohol and risk of oral cancer in Puerto Rico". They concluded that alcohol consumption could be effective in the incidence of oral cancer regardless of the amount (12).

Pakfetrat et al (2010) conducted a research titled "Knowledge about oral cancer in patients referring to Mashhad dental school." Based on their results, 89.4% of the patients who filled the questionnaire have poor knowledge about oral cancer. In terms of etiology, 83/8% of patients were unaware of the risk factors for oral cancer. There was no significant relationship between knowledge about cancer and gender; but there is a significant relationship between education level of clients and their level of knowledge about cancer. In general, knowledge about oral cancer is low (14). This research shows that there is no significant relationship between knowledge level and number of visits to the dentist; but knowledge level has significant relationship to age and education level ($p < 0.5$).

In "Oral cancer knowledge and awareness," Pettit et al (2007) conducted a research on 184 patients who had received no consultation about oral cancer. 100 samples were selected as intervention group and 84 persons were in control group. A pamphlet about oral cancer was given to them. Patients' awareness about oral cancer was evaluated a year later. They concluded that there was a significant difference between the control and case groups (7-15).

Andishe Tadbir et al (2013) conducted a study on level of knowledge about the etiology and symptoms of oral cancer in southern Iran. It showed that 33.2% of people have no information about oral cancer and people acquire most of their knowledge from media. Sunlight (32.4%), hot and peppery food (40.7%), alcoholic drinks (47.4%), and cigarette (73.6%) are regarded by people as the causes of cancer. Oral cancer had a significant difference with alcohol consumption and education level. On the early signs of oral cancer, painless red lesions (27.8%), painless white lesions (13.5%), and painless chronic wound (56.7%) are known by people (14).

This research shows that 30.8% of the participants have obtained their information from media. 42.6% of the patients regard chronic exposure to the sun and 16.1% of the patients regard eating hot and peppery foods as exacerbating factors of cancer.

In Australia, Formosa et al (2015) concluded that dental patients' awareness of oral cancer is very low (16). The present research also concluded that awareness of oral cancer in patients referred to Tabriz Faculty of Dentistry is very low.

REFERENCES

1. Warnakulasuriya S. Global epidemiology of oral and oropharyngeal cancer. *Oral oncology*.2009,45(4) :309_16
2. Mashberg A, Boffetta P, Winkelmann R, Garfinkel I. Tobacco smoking, alcohol drinking, and cancer of the oral cavity and oropharynx among us veterans. *cancer*.1993,72(4):1369_75
3. Ghani WMN, Does JG, Jamaluddin M, Kamaruzaman d, zain RB. Oral cancer awareness and its determinants among a selected Malaysian population. *Asian Pacific (journal of cancer prevention)*.2013,14(3)
4. F, Bianco A, Angelillo IF. Dental hygienists and oral cancer Nicotera G, Gnisci prevention: knowledge, attitudes and behaviors in Italy. *Oral oncology*.2004,40(6):638_44
5. Ramaswamy P, Uday g, Sreenivasulu p, Khaitan T, Geethika v. Awareness about oral cancer among Dental postgraduate students in the state of Andhra. Pradesh, India. *journal of cancer Education*.2014,29(4):665_8
6. petti S, Scully C. Oral cancer knowledge and awareness: primary and secondary .15-408: (4) 43, effects of an information leaflet. *Oral oncology*.2007
7. Horowitz AM, *Nournal of the American Dental Association*. 1995, 126(1):39-45
8. lingen MW, Kalmar JR, Karrison T, Speigh PM. Critical evaluation of diagnostic aids for the detection of oral cancer. *Oral oncology*. 2008, 44(1):10-22.
9. Al- Ansari J, Honkala E, Honkala S. Oral health knowledge and behavior among male

- health sciences college students in Kuwait. BMC Oral Health. 2003, 3(1):2
10. Horowitz A, Goodman H, Watson M, Cohen L, Fedele D. Maryland, Canto M veterans' Knowledge of risk factors for and signs of oral cancers and their use of dental services. Gerodontology. 1998, 15(2):79-86
 11. Eversole LR. Clinical outline of oral pathology: diagnosis and treatment: PMPH-USA, 2001
 12. Ko YC, Huang YL, Lee CH, Chen MJ, Lin LM, Tsai CC. Betel quid chewing, cigarette to oral cancer in Taiwan. Journal of oral smoking and alcohol consumption related pathology & medicine. 1995, 24(10): 450-3
 13. Silverman S. Demographics and occurrence of oral and pharyngeal cancers: the outcomes, the trends, the challenge. The Journal of the American dental association. S-11S32:72001,1
 14. Tadbir AA, Ebrahimi H, pourshahidi S, Zerratkar M. Evaluation of levels of knowledge about etiology and symptoms of oral cancer in southern Iran. Asian Pacific. Journal of cancer prevention. 2013, 14(4): 227-20
 15. Petti S. pooled estimate of world leukoplakia prevalence: a systematic review. Oral. Oncology. 2003, 39(8):770-80
 16. Formosa t, Jenner R, Nguden-thi MD, Stephens c, Wilson C, Ariyawardana. awareness and knowledge of oral cancer and potentially malignant oral disorders among dental patients in far north Queensland, Australia. Asian Pacific journal cancer prevention. 2015, 16(10):4429-34
 17. Alfano MC, Horowitz AM. Professional and community efforts to prevent morbidity and mortality from oral cancer. J Am Dent Assoc. 2001;132 Suppl:24S-29S.
 18. Horowitz AM, Siriphant P, Sheikh A, Child WL. perspective of Maryland dentists on oral cancer. J Am Dent Assoc. 2001;132(1):65-72.