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Survey of the awareness of dental students in Mazandaran University of Medical Sciences about prevention, Early Detection and Referral of Patients with Oral Cancer in 1397

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Oral cancer is a major health problem and a serious cause of illness and death throughout the world. Because of the familiarity with the mouth structure and more likely to have oral or dental examinations dentists are in a special situation. The purpose of this research is assessing the level of knowledge and awareness of the students of general dentistry This is a cross-sectional study with a descriptive-analytical approach, conducted in 1397. 155 dental students of Mazandaran University of Medical Sciences were selected by random sampling method. The required information was collected using a questionnaire designed by Carter and Ogden and analyzed using SPSS software version 16. The results showed that in the “screening for oral mucus in high-risk patients", many people [94.19%] and "sufficient knowledge about the diagnosis and prevention of oral cancer", many people [59.35%] responded positively. In the selection and prioritization of oral cancer risk factors, most students [41.3%] smoked and then [34.2%] considered alcohol as the most effective risk factor. The findings showed that the level of awareness of the participants in the diagnosis of cancer lesions was enough, but the students did not have enough knowledge about all the risk factors for oral cancer and lesions associated with the disease. There was also a high percentage of willingness to learn more about this subject, especially through lectures and seminars

Keywords: Knowledge, dental students, prevention, oral cancer

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Introduction

Oral cancer is a major health problem, especially in developing countries [1], and a serious cause of illness and death throughout the world [2]. Cancer is associated with age and risk factors such as tobacco and alcohol consumption, as 80% of cancers in the mouth occur in smokers. Sun rays, bright skin, using tobacco pipe, alcohol consumption are among the risk factors for lip cancer [6-3]. Although there is easy access to oral examinations, about 60% of cancers are diagnosed in the final stages (stages 3 and 4) [7].

The lack of public awareness in the past was reported as an important factor in delayed referral and treatment of oral cancer [8.9]. Despite the advances in therapy in recent years, this kind of cancer has a weak survival rate worldwide, much less than 5 years of survival. Early detection of lesions by detecting pre-malignant lesions erythropoiectomy and leukoplakia, is currently the best way to control and reduce mortality and morbidity from oral cancers [10].

Dentists are in a special position due to familiarity with the oral structure and the possibility of more involvement in the oral examination of the patients. Various studies have shown that dentists' ability to detect early symptoms to a large extent depends on their level of knowledge and awareness about cancerous lesions. However, it has been found that dentists' knowledge is often insufficient

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for diagnostic symptoms, the cause of illness and the therapeutic process [11-13]. According to international recommendations, all patients with over 40 years of age are required to undergo diagnostic examinations of oral cancer [14], while only typically 20 to 13% of patients over 40 receive these examinations [15].

Many variables affect the diagnosis of oral cancer, including nutrition, patient safety, tumor location and outbreak of oncogenes, but the diagnostic stage is considered as the most important indicator of oral cancer prognosis [7]. ensuring that future dentists are aware of oral cancer, it will improve the prevention, screening, and management of these lesions [16]. Thus, the aim of this study is to assess the level of knowledge and awareness about oral cancer among general dentistry students.

Materials and Methods

This is a cross-sectional study which is conducted using a descriptive-analytical approach. 155 dental students from third, fourth, fifth and sixth year of dentistry schools of Mazandaran University of Medical Sciences who were studying in 1397 were selected by stratified random sampling. thus, by referring to the faculty of education and based on the list of students, the subjects were selected by stratified random sampling method. The first and second-year students were not included in the study due to the lack of teaching of pathology and diagnosis of oral diseases. After obtaining the necessary permissions to conduct the research and after obtaining written informed consent from the students, while expressing the goals and manner of the study, the selected individuals were studied. Meanwhile, in keeping with the observance of the ethical points and confidentiality of the data, it was ensured that their response will be used for research purposes.

The required information was collected through a questionnaire designed by Carter and Ogden [17] and based on that the knowledge of dentistry students in England about oral cancer was studied. Validity and reliability of this questionnaire have already been approved by Carter and Ogden. Previously, in internal studies, the translated version of this questionnaire has been used [18-20]. In addition to registering demographic and academic information, the mentioned questionnaire was designed to investigate the students' knowledge of oral cancer, including 1. Examining the behavior in the oral and dental examination, recommending patients [informing] about the risk factors for oral cancer, 3. Awareness of the risk factors for oral cancer and its associated clinical manifestations, 4. Place of referral for oral cancer patients, 5. Investigating the request for more information about the disease. To assess the validity of the questionnaire, experts' opinions, experts and researchers were identified and confirmed through content validity and its reliability was determined by calculating the Cronbach's alpha coefficient. To this end, 30 qualified students were enrolled in the study and the Cronbach's alpha for the knowledge construct was 73%. The collected data were analyzed using descriptive statistics including mean and standard deviation for describing the research samples and inferential statistical tests including chi-square using SPSS software version 16.

Results

The number of participants in the study was 155, of which 82 were female [52.92%] and 73 were men [47.10%]. The subjects were from the four entry periods of the year 91 [23.23%], 92 [21.49%], 93 [16.13%] and 94 [38.71%]. The results also showed that in the category "oral mucus examination of patients routinely", the majority of people [57.13%], in the category "desire for more information or education about oral cancer," the majority of people [76.77%], in the category "screening In the case of oral mucus in high-risk patients", the majority of people [94/19%] and in the category "awareness about risk factors for oral cancer to patients" the majority of people [86.46%] responded positively.. In the "sufficient knowledge about the diagnosis and prevention of oral cancer", the majority of people [59.35%] were aware. There was not a significant relationship between awareness of these questions with gender and year of entrance, except for the category "Knowledge about the diagnosis and prevention of oral cancer", which had a significant difference in the ratio of responses between sex variable levels [p = 0.002] , So that women answered this question more than men. In students who tended to receive more information, 35.48% were willing to receive the required information through lectures, 34/19% through seminar and 30.32% via information packages.

In the selection and prioritization of risk factors for oral cancer from the perspective of dental students, among the factors of smoking, alcohol consumption, UV rays, immune suppression, genetics, oral factors, viral factors, nutritional factors and chronic infection, the majority of students entering the year 91 to 94

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[41.3%] considered smoking the most effective risk factor, and after that [34.2%] alcohol was the most effective risk factor. Two factors of nutritional factors [0.9%] and chronic infection [0.6%] from the perspective of dentistry students were among the last priorities. In Table 2, the selected risk factors are reported by gender. The selection and prioritization of risk factors in terms of input year [P = 0.445] and gender [P = 0.415] was not significant.

Table 1. Distribution of items related to knowledge and its relation to gender and year of entry among dental students about the prevention, early diagnosis, and referral of patients with oral cancer in 1397

Row	questions	Response frequency		Significance level of chi-square test	
		Yes	No	Sex	entry year
1	Examination of the oral mucosa of patients routinely	13/56	87/43	197/0	590/0
2	Screening for oral mucus in high-risk patients	19/94	81/5	308/0	157/0
3	Awareness of risk factors for oral cancer to patients	45/86	55/13	602/0	607/0
4	Examination of oral cancer disease	13/96	87/3	421/0	615/0
5	Sufficient knowledge about the diagnosis and prevention of oral cancer	35/59	65/40	002/0	184/0
6	The desire for more information or education about oral cancer	77/76	23/23	246/0	828/0

Table 2. Abundance and frequency of selected risk factors for cancer in dentistry students by sex in 1397

risk factors	Sex					
	Man		Female		Total	
	Abundance	Frequency	Abundance	Frequency	Abundance	Frequency
smoking	61	13/40	72	35/42	133	30/41
alcohol consumption	51	55/33	59	71/34	110	16/34
Rays UV	10	58/6	11	47/6	21	52/6
Suppressing the immune system	3	97/1	2	18/1	5	55/1
Genetics	15	87/9	12	06/7	27	39/8
Oral factors	2	32/1	8	71/4	10	11/3
Viral agents	6	95/3	5	94/2	11	42/3
Nutrition factors	3	97/1	0	00/0	3	93/0
Chronic infection	1	66/0	1	59/0	2	62/0
Total	152	% 100	170	% 100	322	% 100

Awareness level about the clinical aspect of oral cancer was such that 15.48% were in excellent condition, 29.68% in good condition, 27.9% in average and 27.74% in poor condition, and there was no significant difference in regard to the incoming year [P = 0.207] and gender [P = 0.871]. In response to the question of what changes can be related to oral cancer, students are "white and red lesions" [54.84%], "thick lesion with irregular margin" [21.94%], "ulcer lasting more than two weeks "[% 61.61], bleeding [% 10.7] and necrosis [% 52/4], and this proportion of knowledge compared to the ratio of entry year [P = .405] and gender [P = 0.306] was not significant

In response to the question that patients should visit a doctor in the presence of oral lesions or a dentist, 87.74% of students chose dentist and 12.26% of them considered the doctor as the reference who should be referred for the patient, And the ratio of the answer to this question was not significant in comparison with the ratio of input year [P = 0.719] and gender [P = 0.980]. In response to the question, who will you refer the patient to after graduation if you suspect malignancy in the patient's mouth? , 68.3% chose oral disease specialist, 18.6% face and jaw surgeons, 10.9% ear, nose, and throat specialist, and 2. 58% beauty surgeons and no one selected dentists and general practitioners [graph 1]. This ratio was significant in comparison with the entry year [P = 0.040] and gender [P = 0.044].



Figure 1. Frequency of referral location in case of suspected malignancy in oral cancer among dental students in 1397

Discussion

The aim of this study was to assess the knowledge of dental students about prevention, early detection, and referral of oral cancer patients. Based on the results of the study, 56.16% were ordinarily performing oral mucus examinations and there was no significant relationship between the increase in the academic year and gender and the examination of the oral mucosa. This result was aligned with studies by Mahboobi, Ogden [19] and Hosseini [37]. Of the students who normally did not examine the oral mucosa, 94.1% stated that such an examination would be performed if the patient was at a high risk of developing cancer. In the study of Hosseini [37], 87 percent were placed in this category. This group of students may have less awareness of risk factors and changes in cancerous and pre-cancerous lesions in the oral cavity. The use of cigarettes and alcohol are the most important risk factors for oral cancer, and the abandonment of these habits after the diagnosis of oral cancer is helpful in the success of the treatment [3]. In the

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present study and Hosseini's study [37] students also had such a viewpoint. Students often reported smoking and alcohol use as risk factors for oral cancer. Although the risk factors mentioned above were the same as the similar researches are done in dentistry students in England [26], Canada [28], and the United States [30], awareness of other risk factors for oral cancer was lower among Sari students. Most students [by gender, women more than men] were willing to advise their patients about the risk factors of the disease in the future, but there was no significant relationship between gender and their willingness to provide counseling to patients. This issue should be taken into consideration especially for students who are graduating.

54.84% had reported white and red lesions as a cancer-related oral change. In total, only 68.6% of the subjects selected the highly informed option about the knowledge of cancerous lesions view, which did not show a meaningful relationship between the level of knowledge of individuals from the lesions with the gender and their year of entrance. In this study, 96.13% of patients did not have the opportunity to examine the disease with oral lesions so far. By the year of entry, the participants from the entry of 1394 chose "no" for the examination of oral lesions more than other options they chose that It can be attributed to fewer years of attendance in the clinic and clinical work, but there was no statistically significant relationship between them.

76.77%of people wanted to learn more about oral cancer, and this was not related to their school year. 35.48% of the subjects of the study chose lecture option, and 34.19% of the participants selected the seminar as a way to raise their knowledge. This is the case that in some other studies people tended to use methods such as brochures more [37]

The findings of this study showed that the level of knowledge of dental students in Sari in relation to the diagnosis of oral cancer lesions is not sufficient and students in spite of performing routine examinations for oral cancer, they don't have enough knowledge about some of the risk factors and oral lesions associated with cancer. As students want more information on cancer, it is necessary to develop more comprehensive and effective educational programs during their education. In addition, in some countries, continuous education after graduation is considered necessary and this increases the awareness of dentists.

Conclusion

Considering the increasing incidence of oral cancer in Iran, physicians and dentists have a very important role in preventing and diagnosing this disease. The findings of this study showed that the level of knowledge of most of the dental students in Sari in regard to the diagnosis of cancerous lesions was enough or more , but despite this awareness and knowledge about the prevention and diagnosis of oral cancer and the routine screening for the disease, students are not well aware of all the risk factors for oral cancer and lesions associated with the disease, and also a high percentage of students are more inclined to learn more about this, especially through lectures and seminars; therefore, more comprehensive educational programs should be developed during the course of their education..

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Conflicts of interest

None.

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