Evaluation of general dentists' knowledge about oral cancer in Ilam, Iran in 2016

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Abstract

Introduction: Oral cancer is the sixth most common malignant neoplasm and one of the top ten causes of death worldwide. Dentists' lack of knowledge about the signs and symptoms of oral cancer is an important for diagnosing the oral cancer accurately and at early stages. In this study, we examined the level of dentists' awareness toward oral cancer in Ilam, Iran.

Materials and methods: A total of 98 dentists (65 males and 33 females) with average age of 35.57±7.9 years were invited to take part in the study and respond to suitably designed questionnaires. Data were collected and a possible relationship between age and knowledge score was further analyzed.

Results: The maximum awareness score that respondents could attain was 13. The mean score was 8.14 ± 1.8, which was higher than the national average level. The average scores for men and women were 7.58 ± 2.1 and 8.46 ± 1.5, respectively. But, this difference was not statistically significant (P = 0.1).There was no statistically significant relationship between age and knowledge score (P = 0.3, r = -0.11).In addition, knowledge score in different age groups were compared, and there was no significant difference (P = 0.5).

Conclusion: Results of this study indicated that dentists' awareness about oral cancer is higher than average in Ilam; however, the need for educational programs for increasing the level of knowledge about oral cancer is recommended.

Keywords: Oral cancer, Knowledge, Dentist

Introduction

Oral cancer includes at least 2% of all malignant tumors in humans and is the sixth most common malignant neoplasm in the world and one of the top ten causes of death worldwide (1). Unfortunately, the incidence of head and neck cancer has increased in the past 20 years. Annual death from cancer in Iran is more than 30,000 (2). The risk of oral

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cancer increases with age and its prevalence is two times higher in men than in women (3). Several etiologic factors are involved in the development of oral cancer, including smoking, alcohol consumption, genetic factors, occupational hazards, sun rays, bacterial and viral infections, and systemic problems such as iron deficiency anemia and vitamin A deficiency. All these factors may be involved in the development of oral cancers (4). Oral cancer may be asymptomatic in early stages or may accompanied by slight pain, causing delays in diagnosis and further medical interventions (5). Diagnosis of this type of cancer in early stages can noticeably improve survival rates in patients (6). Dentists can play an important role in the early diagnosis of oral cancer during oral examination due to their familiarity with the structures and various tissues in the mouth. Lack of knowledge about the signs and symptoms of oral cancers causes a burden of inaccurate and delayed diagnosis of this cancer in the early stages (7).

There are few studies in Iran assessing the level of dentists' knowledge that led us to design the current study to examine the level of dentists' knowledge of oral cancer in Ilam.

Materials and methods

This cross-sectional study was performed among general dentists (n = 98; 65 males and 33 females) in Ilam. The average age was 35.57 ±7.9 years, with a range of 25 to 52. We used a questionnaire containing 23 questions that was appropriately was prepared by two influent dentists from our institute. It includes items about demographic characteristics and oral cancer (7, 8).The Delphi method and test-retest were used to determine the validity and reliability of the questionnaire, respectively. The questionnaire was completed by participants in their offices. The data were analyzed by the statistical tests, t-tests and Pearson's and Spearman's correlations using the statistical software, SPSS 19. A possible relationship between knowledge and work experience was examined using one-way analysis of variance (ANOVA).

Results

The maximum awareness score that respondents could attain was 13. The mean score was 8.14 ± 1.8, which was more than the midpoint. The average scores in men and women were 7.58 ± 2.1 and 8.46 ± 1.5, respectively. The difference was not statistically significant (P = 0.1)

Knowledge scores in different age groups were compared, which were not significant (P = 0.5). Similarly, Pearson's correlation coefficient showed no significant relationship between age and knowledge score (P = 03 and r = -0.11). In contrast, considerable differences were seen between knowledge and work experience (P = 0.01). These significant differences were seen in dentists with six years or more of experience. About two thirds (62.5%) of the dentists participating in this study were willing to enroll in continuing education about oral cancer, while 35.5% were not willing to enroll in continuing education. Interestingly, the knowledge score between the two groups (willing to enroll/unwilling to enroll) showed no significant difference. The highest percentage of correct answers (98.5%) was related to the etiology of oral cancer; the lowest percent (7.2%) was related to erythroplakia cases with dysplasia or squamous cell carcinoma (SCC).The lowest percentage of correct answers (17.4%) was related to the age group that should be checked annually for oral cancer. Almost 9 in 10 (89.9%) of dentists considered SCC as the most common lesion, while 63.8% of dentists did not consider the most frequently occurring location of SCC as the right place and only 17.4% knew of the relationship between SCC and age (Table 1).

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Table 1. State and distribution of responses to the study questions.

Row	Questions	Answers	
		True (%)	False (%)
1	One of the most common malignancies in the oral cavity is SCC	62 (63/2%)	38(37.2%)
2	Oral cancer affects the patient's age	51(52%)	49(48.2%)
3	The most common clinical feature of oral cancers is without repair ulcer	57(58/1%)	43(42.1%)
4	One of the most important etiologic factors in the development of oral cancer is smoking	68(69/3%)	32(31.3%)
5	A poorly matched denture can be one of the etiologic factors in the development of oral cancer	31(31/6%)	69(67.6%)
6	Previous malignancy increases the risk of new malignancy	61(62/2%)	39(38.2%)
7	Primary oral cancers often form a small, red, painless area.	43(43/8%)	57(55.8%)
8	The first is the treatment for oral ulcers is biopsy	46(46/9%)	54(52.9%)
9	Oral SCC is always associated with radiographic changes	58(59/1%)	42(41.1%)
10	Treatment of leukoplakia depends on its histopathologic diagnosis	21(21/4%)	79(77.4%)
11	Erythroplakia is 90% of cases with dysplasia	5(5/1%)	95(93.1%)
12	The most common location of oral cancer is tongue	44(44/8%)	56(54.8%)
13	People over 50 should be examined annually for oral cancer	12(12/2%)	88(86.2%)

SCC: Squamous cell carcinoma.

Discussion

Oral cancer is one of the biggest public health threats in the community, with a dramatically increasing rate of mortality annually (8). It is speculated that early diagnosis of oral cancer would results in about 70% to 90% survival rate in patients. Accordingly, dentists' knowledge about symptoms and clinical manifestations of malignant oral lesions would be helpful in timely referrral of patients to medical centers (9). The results of the present study and other research showed that dentists' knowledge about oral cancer was not sufficient enough to diagnose and prevent this type of cancer (10, 11). In the current study, the average score of knowledge was 8.14 out of 13, which was similar to the results of a study performed by Motallebnejad and Hedayati, who reported an average score of 8.95 out of 14 (12) and is similar to an average score of 10 out of 14 in Clovis' study (13) .

SCC is the most common malignancy of oral cavity, forming 90% of oral lesions. In this study, 89.9% of dentists considered SCC as the most common lesion, which was consistent with the studies performed by Saghafi et al., Canto et al., and Motalebnejad and Hedayati, who noticed that SCC was the most common malignancy of the oral cavity in 91%, 80% and 87% of patients, respectively (7, 12, 14) .

Alcohol and tobacco are often mentioned as primary causative agents in the development of oral cancer.

In this study, 98.5% of the dentists were aware of these agents, which was similar to the results of studies performed by Saghafi (94%) (8), Zarei (84%) (15), Motallebnejad (88.2%) (16), and Razavi (96%) (9).

Aging is an important criterion that increases the incidence of oral cancer. In this study, 17.4% of dentists were aware of the relationship between age and SCC. Oral cancer occurs most commonly in the tongue. In this study, 63.8% percent of dentists mentioned that the most common location of SCC was the tongue, which is similar to results found by Cloviset al. (56%) (13); however, there was a wide gap between the results of the current study with the findings of Motallebnejad (34.5%) (16) and Saghafi (35%) (8).

A small red and painless area usually appears during early stages of oral cancer, and the

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most common clinical feature of oral cancer is a non-healing wound. In this study, 43% of dentists found red and painless areas, which is consistent with the results of Nicotera (42.8%) (17), but differs from Saghafi's results (25%) (8). In this study, 57% of dentists stated a non-healing wound was the most common clinical feature of SCC, showing a drastic difference compared to the results of the study performed by Saghafi et al. (90%) (8).

In terms of histology, over 90% of oral cancer lesions showed severe erythroplakia dysplasia. In the current study, 7.2% of the participants were aware of this, which is similar to the results of Saghafi's study (12%) (8), but in contrast to the results of Nicotera's study, in which 48.4% of the subjects were aware of these lesions (17).

About two thirds (62.5%) of the dentists in this study were willing to participate in continuing education regarding oral cancer, which was similar to Saghafi's (64.3%) (17) and Canto's results (64%) (14), but was different from the results of Motallebnejad (88%) (12) and Zarei (94%) (15).

In addition, we found no statistically significant relationship between age and knowledge, but there was a significant relationship between knowledge and job experience.

Conclusion

The results of this study indicated that dentists' awareness about oral cancer is insufficient in Ilam. Since dentists' knowledge has been decreasing since their graduation from dental school, the need for the development of continuing education programs, training, and retraining seminars regarding diagnosis of oral cancer seems to be necessary.

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Authors' Contributions

Khadijeh Abdal, conceptualization and data collection; Keywan Mortezaee and Sara Haidari: manuscript writing; and Marziyeh Darvishi, conceptualization and data analysis.

Conflict of interest disclosure

The authors state that they have no conflict of interest.

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