Original Article

ASSESSING ORAL CANCER KNOWLEDGE AMONG DENTAL STUDENTS, HOUSE OFFICERS AS WELL AS FACULTY MEMBERS OF KHYBER COLLEGE OF DENTISTRY, PESHAWAR, PAKISTAN

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ABSTRACT

Objective: *To assess the knowledge and awareness of undergraduate dental students, house surgeons and senior dentists regarding risk factors, signs and detection of oral cancer.*

Methods and Materials: *A questionnaire was distributed among 200 students, house officers and faculty members to assess their knowledge regarding oral cancer. The data was collected from October to December 2010 in Khyber College of Dentistry, Peshawar. The questionnaire included questions regarding risk of oral cancer, its diagnostic signs, symptoms and examination procedures. The statistical analysis was carried out using SPSS version 17.*

Results: *The respondents were aware of the major risk factors. While 71.3% of participants considered smoking as the highest risk factor for oral cancer, but there is a statistically significant difference in the awareness among students, house surgeons and senior dentists of Khyber College of Dentistry, Peshawar, Pakistan.*

Conclusion: *The level of knowledge regarding oral cancer was better among senior dentists and house officers as compared to final year students.*

Key Words: *Oral cancer, Dental students, Dental education.*

INTRODUCTION

Approximately 90% of oral malignancies are squamous cell carcinoma (SCC), typically on the lip or lateral part of the tongue[1]. More than 90 percent of oral cancers are diagnosed in people aged 45 years or older and the use of tobacco is listed as the main risk factor[2]. Other risk factors for oral cancer include infection with human papillomavirus (HPV), low consumption of fruits and vegetables and long-term sun exposure and oral leukoplakia[3]. However, oral leukoplakia attributed to smokeless tobacco may be reversed within two to six weeks if the patient discontinues use of the product[4]. Lack of knowledge regarding diagnostic procedure on part of the dentist may lead to a late diagnosis[5].

The American Dental Association Center for Disease Control and Prevention in 1996 and the National Institute of Dental Research/National Institutes of Health, stated that health care professionals need to be aware of oral cancer, know its risk factors and how to properly perform an oral cancer examination as a routine part of a complete patient examination[6]. Previous studies of dental and medical students, dentists, physicians, dental hygienists and nurse practitioners have shown that health care professionals are not as aware about oral cancer as they should be, and that they do not perform prevention and early detection procedures on a uniform basis in the US[7].

This study is aimed to investigate the oral cancer awareness of final year students, house officers and faculty members in Khyber College Dentistry Peshawar, Pakistan.

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MATERIAL AND METHODS

The cross-sectional survey was conducted between October 2010 to December 2010 among final year students and dentists of Khyber College of Dentistry Peshawar, Pakistan.

A questionnaire was distributed among the dentists as well as the final year students with an information sheet which explained the purpose of the study and an envelope to facilitate the return of the completed questionnaire. The dentists were encouraged to participate and conûdentiality of the response was guaranteed. Response to the questionnaire constituted the participants informed consent.

The questionnaire was designed with the purpose of using the information to consider ways of improving prevention, early detection and referral of oral cancer patients by dentists. Section 1 included questions related to participant demographics and designation. These items related to the dentist's gender, age and designation. Section 2 consisted of 10 questions both open and close ended, which focused on knowledge about the main risk factors and treatment procedures of oral cancer. This section elicited responses about the risk factors and other closed-end questions with the categorical yes or no options.

The completed questionnaires were then entered in SPSS version 17 for statistical analysis. The responses were coded as numeric in order to facilitate the data entry. The results were analyzed using the Pearson Chi- square (χ^2) test.

RESULTS

The total study population was two hundred. There were one hundred and three males (51.5%) and ninety seven females (48.5%). The response rate was 86.5%. The age range was 20-58 years with mean age of 26.4$\pm$6.804 years. Out of 173 respondents, the final year students were 65 (32.37%), house surgeons were 89 (44.51%) and faculty members were 46 (23.2%).

When asked about their approach to examination of oral mucosa in routine, 88.6% affirmed that they perform systematic examination of the oral mucosa on every patient. The responses vary significantly from final year students and dentists. (P= 0.002)

To test their knowledge regarding oral cancer, participants were asked about risk factors, 71.3% of the sample responded positively considering smoking as the highest risk factor for oral cancer compared to other risk factors. The opinion about the highest risk factor changes significantly from final year students to house surgeon (P = 0.000). Also 97.2% advised their patients about the risk factors of oral cancer.

Regarding the clinical features of oral cancer, 41.5% were well informed about the appearance of oral cancer. Only 6% were poorly informed about clinical appearance of oral cancer. The knowledge about the appearance of clinical cancer changes significantly among the three categories of the respondents (P=0.000).

When asked about the referral of suspected patients, 94.6% suggested an Oral and Maxillofacial surgeon to be the appropriate person for management of such patients. Eighty one percent of the respondents were aware of the prevention and detection of oral cancer. Among these, 31% were faculty members, 28.7% were house surgeons while the students of final year comprised the remaining 21.3%. The knowledge concerning prevention and detection of oral cancer does vary significantly among the three categories of respondents (P=0.01). The details of the responses given by the sample population are given in Table 1.

DISCUSSION

The results of this study confirmed that there was an overall deficiency in oral cancer awareness and knowledge amongst the undergraduate dental students. The results of house surgeons as well as faculty members were comparatively better. These finding of undergraduate dental students were similar to students in the United Kingdom and Canada[8].

In the present survey, smoking, snuff and chronic irritation were the most commonly identified risk factors. Similar results were reported in studies carried out by Farhat et al[9] and Lachlan.[10] This may be due to the fact that use of smoked and smokeless tobacco is a prevalent risk factor of oral cancer among patients in our province and thus the students and dentists were more aware of them.

Amongst the signs of oral cancer, red lesion and white lesion were most commonly identified by students as well senior dentists. These findings are in

Table 1: Responses of the Sample Population

Questions	Responses	Final Students	House Surgeon	Faculty Members	P-Value
Do you examine patient's oral mucosa routinely?	Yes No	47 (23.6%) 0	62 (31.2%) 16 (8.09%)	68 (33.8%) 7 (3.4%)	0.002
Do you screen the oral mucosa if the patients are in high risk categories?	Yes No	0 (1.4%) 0 (1.4%)	12 (55%) 1 (4.3%)	6 (27.5%) 2 (10.4%)	0.049
What would you consider as high risk factor for oral cancer?	Snuff dip. Smoking Chronic irritation	28 (14.2%) 86 (42.8%) 28 (14.2%)	0 57 (28.5%) 0	— — —	0.439
Do you advise patients about risk factors for oral cancer?	Yes No	48 (24%) 0	78 (38.8%) 3 (1.7%)	69 (34.4%) 2 (1.1%)	0.238
Have you had the opportunity to examine patients with oral lesion?	Yes No	45 (22.4%) 2 (1.1%)	75 (37.6%) 4 (2.2%)	71 (35.3%) 2 (1.1%)	0.761
The clinical appearance of oral cancer, do you feel you are?	Very well Well inform Adequate Poorly	4 (2.2%) 27 (13.4%) 15 (7.3%) 1 (0.5%)	3 (1.6%) 20 (10.1%) 47 (23.5%) 9 (4.4%)	19 (9.5%) 36 (18%) 17 (8.4%) 2 (1.1%)	0.000
What changes within the mouth would you associate with oral cancer?	White lesion Red lesion Color change Pigmentation	66 (33.3%) 0 32 (16.6%) 17 (8.3%)	0 17 (8.3%) 17 (8.3%) 0	17 (8.6%) 17 (8.3%) 17 (8.3%) 0	0.327
Where should a patient with oral lesion consult?	Dentist Doctor	46 (23.0%) 1 (0.5%)	80 (39.8%) 0	73 (36.7%) 0	0.234
Where would you refer a patient if you suspect an oral malignancy?	Plastic surgeon ENT surgeon Maxillofacial General Pract. Oncogen	2 (1.1%) 0 45 (22.4%) 0 0	0 0 75 (37.0%) 2 (1.1%) 03 (1.6%)	0 0 70 (35.2%) 0 3 (1.6%)	0.048
Do you feel that you have sufficient knowledge concerning prevention and detection of oral cancer?	Yes No	43 (21.3%) 4 (2.2%)	57 (28.7%) 23 (11.27%)	62 (31.0%) 11 (5.6%)	0.031

$P < 0.05$ shows significant difference

line with the studies of Uti et al[11] and Clovis et al.[12] However in a study done in Iran[13] low awareness was found about key sign and symptoms among undergraduate medical and dental students. Knowledge of other risk factors and signs of oral cancer was comparatively poor in house surgeons as well as senior dentists of Khyber College of Dentistry, Peshawar as evident by their lake of correspondence in the questionnaire. This is a significant finding because lack of awareness from key signs symptoms has been recognized as a significant factor in delay of diagnosis and treatment of oral cancer[14]. This reflects the need for integrative efforts to improve the level of knowledge among undergraduate students as well as dental practitioners.

As far as the routine examination of patients is concerned, there is statistically significant difference amongst the students, house surgeons and faculty members (P=0.002). It is clear from the table that faculty members do routine examination more than the students and house surgeons. This is in accordance with study done in North Carolina[15] where 31% of dentists were aware of diagnostic concepts of oral cancer. However the results are in contradiction with a study done in Kuwait[16] where only 22.9% dentists had better knowledge regarding diagnosis of oral cancer.[16]

The poor level of knowledge about oral cancer in the students as compared to faculty members, emphasizes the need to improve the education of undergraduate dental students regarding prevention and early detection of oral cancer because delay in presentation and/or referral has a significant effect on the associated morbidity and mortality[17].

CONCLUSION

The following can be concluded from the results of this study;

1. Of the respondents, 88.6% performed a systemic examination of oral cancer patients.
2. The level of knowledge regarding oral cancer was better among senior dentists and house officers as compared to final year students.

Recommendation

This study highlighted the need for improvements in the oral cancer curricula and clinical training in dental colleges of Pakistan. We recommend more instructional time should be given regarding detection of the disease. Emphasis on the early diagnoses of oral cancer needs to be incorporated into the curriculum by the Higher Education Commission as well as PMDC to ensure that dental students and dentists in Pakistan are provided with sound knowledge regarding this morbid disease.

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