

Knowledge, attitude and practices about oral cancers among dental students in H.P Government Dental College, Shimla-Himachal Pradesh

Shailee Fotedar, Vinay Bhardwaj, Kavita Manchanda, Vikas Fotedar¹, Avishek De Sarkar², Naintara Sood³

Abstract

Aim: The aim was to assess the knowledge, attitude and practices among undergraduate dental students about oral cancer. **Materials and Methods:** A cross-sectional questionnaire study was conducted among undergraduate dental students between the 3rd and 5th years in H.P Government Dental College, Shimla. The questionnaire consisted of 15 questions, five each on knowledge, attitudes and practices. The data were analyzed by Statistical Package for the Social Sciences (SPSS Inc., version 16 for Windows, Chicago, IL, USA). **Results:** The response rate of the study was 90.6%. There were 23 (21.5%) males and 84 (78.5%) females in the study. There was a predominance of females (78.5%). The average knowledge percentage for the entire population is 81.9% (excellent knowledge). Tobacco and alcohol were correctly identified by 63.5% of the subjects. Squamous cell carcinoma was described as the most common type of oral cancer by 105 (98.3%) of the students. 60.7% of the subjects strongly disagreed that their knowledge regarding the prevention and detection of oral cancer is current and adequate, and 99% agreed that there is a need for additional training/information regarding oral cancer. About 92.5% of the subjects used to educate their subjects about the harmful effects of tobacco and alcohol. **Conclusion:** The study implies that the knowledge, especially about the etiological factors of oral cancer needs to be reinforced throughout the undergraduate dental courses so that they can use the same in educating and motivating the masses to adapt healthy lifestyles.

Key words: Alcohol and tobacco, attitude, knowledge, oral cancer

Introduction

It has been well-recognized that the cancers of the oral cavity and the pharynx are a public health problem and as a result, there are a great number of deaths and people suffering from illnesses or disability in many countries.^[1] The incidence of oral cancer is rising in most countries, especially in developing countries.^[2-4]

Most epidemiological studies have revealed that heavy smoking and alcohol intake are the most important risk factors for oral cavity cancer.^[5] Smokeless tobacco use, a common practice in the Indian subcontinent, has also been shown to be a significant risk factor for oral and pharyngeal cancer.

In general, early oral cancer is asymptomatic and so around 60% of oral cancer cases are detected at later stages (III and IV). Despite therapeutic advances in recent years, this type of cancer has very poor survival rates worldwide, average of 5-year survival rate of 50%.^[6,7]

In order to reduce the morbidity and mortality rates, lower treatment costs and to improve the quality of life early diagnosis of oral cancers is must. To achieve this, it is important that health professionals, especially dentists, perform oral cancer examinations as part of their clinical practice and be especially aware of not only the pathogenesis of the disease, but also the first clinical signs.^[6,7] Nevertheless, some studies^[8] have suggested that these professionals are not able to adequately detect oral cancer in its early stages due to their ineffective attitudes and lack of knowledge. Since there is no information regarding this issue among the dental students in Himachal Pradesh, the present study was conducted. Thus, the aim of the present study was to assess the knowledge, attitude and practices among dental students about oral cancers in Himachal Pradesh.

Materials and Methods

A cross-sectional questionnaire study was conducted among dental students in H.P Government Dental College, Shimla. Permission to conduct the study was obtained from concerned authorities of the Institute. The dental curriculum in India consists of 5-year of education of which 2-year is dedicated to preclinical education and 3-year to clinical education. The study was limited only to the clinical year students. The questionnaire had questions in four major categories. Section 1 consisted of demographic questions. Section 2 had five closed-ended questions concerning the student's knowledge about oral cancers. Each question answered correctly received a score of 1 and each wrong answer received a score of 0 thus making a maximum score of 5 for a subject. The scores were transformed into percentages of correct answers. Hence, a student's total score could range from 0% (no answers correct) to 100% (all five answers correct). Students with a score <25% were considered to have weak knowledge, between 25% and 50% to have moderate knowledge, between 50% and 75% to have good knowledge, and more than 75% to have excellent knowledge. The third category consisted of five questions on attitudes items. The answers to these questions were given on a five-point Likert scale (strongly agree, agree, neutral, disagree, and strongly disagree). The attitude questions were calculated as percentages for different questions. The fourth category consisted of five closed ended questions on practice items with the answer options as "yes" and "no."

The validity of the survey questions can be assumed given that the questions had been used previously.^[9-11] The questionnaire was pretested by conducting a pilot study with five students from each year. After analyzing the pretest data, the survey had a high degree of internal consistency (Cronbach's alpha correlation coefficient $\alpha = 0.703$). The data were analyzed by Statistical Package for the Social Sciences (SPSS Inc., version 16 for Windows, Chicago, IL, USA).

Results

Out of total 118 questionnaires that were distributed, only 107 were received back which means the response rate of the study was 90.6%. There were 23 (21.5%) males and 84 (78.5%) females in the study. Out of the total population, there were 41 (38.3%) in 3rd year, 21 (19.6%) in 4th year and 45 (42.1%) in an internship.

Access this article online

Quick Response Code:



Website: www.sajc.org

DOI: 10.4103/2278-330X.155643

Departments of Public Health Dentistry and ³Intern, H.P Government Dental College, ¹Department of Radiation Oncology, Regional Cancer Center, IGMC, Shimla, Himachal Pradesh, ²Department of Oral and Maxillofacial Surgery, Guru Nanak Institute of Dental Science and Research, Panihati, Kolkata, West Bengal, India

Correspondence to: Dr. Shailee Fotedar,
E-mail: drfotedar@rediffmail.com

The average knowledge percentage for the entire population is 81.9% (excellent knowledge). The average knowledge percent was slightly higher for males (82.6%) than females (81.2%). The knowledge was moderate, good and excellent for 3 (2.8%), 21 (19.6%) and 83 (77.6%) respectively [Table 1].

Tobacco and alcohol were correctly identified by 63.5% of the subjects. 105 (98.3%) of subjects correctly reported squamous cell carcinoma as the most common type of oral cancer. Nonhealing ulcer was reported as the most common manifestation of oral cancer by 104 (97.1%). 92 (85.9%) correctly identified the T₁N₀M₀ as the stage with the best prognosis.

65 (60.7%) disagreed/strongly disagreed that their knowledge regarding the prevention and detection of oral cancer is current and adequate. 103 (96.2%) agreed/strongly agreed that annual oral cancer examinations should be provided for those of 40 years of age and above. Approximately 99% of subjects agreed/strongly agreed that patients' with suspected oral cancer lesions should be referred to a specialist. Most of the subjects agreed/strongly agreed that early detection improves 5-year survival rates from oral cancer. About 99.1% felt that there is a need for additional training/information regarding oral cancer. Practices regarding oral cancers are shown in Table 2.

Discussion

Being a dentist, we have the chance to diagnose oral cancer even in asymptomatic patients before dissemination occurs to adjacent tissues. Hence, it is the responsibility of the dental schools to ensure the formation of a generalist with solid technical, scientific, and ethical knowledge, aimed at promoting health, emphasizing the philosophy of prevention of prevalent oral diseases. Although postgraduation are important for the activity in this field, graduation is essential and must ensure that students have the relevant basic knowledge on prevention and early diagnosis of oral cancer.^[12]

This study is the first to assess the knowledge, attitude and practices about oral cancers among dental students in H.P. Government Dental College, Shimla, H.P. The study population consisted of 21.5% males and 78.5% females, which is consistent with the fact that, in India, the profession of dentistry is largely practiced by females. The mean age of the population was 22.9 years.

The average knowledge percentage was 81.9% implying the knowledge was excellent among students which is higher than good as reported by Honarmand *et al.*^[11] In the present study males (82.6%) reported slightly better knowledge when compared to the female (81.2%) counterparts, but the difference was not statistically significant. On comparing, the average knowledge percentage was highest among interns 85.7% as compared to other 2 years. This may be because these students are exposed to a wider range of oral cancer patients as they have spent more time in clinics as compared to other year students.

Smoking and alcohol consumption were correctly reported as risk factors by 63.5% of subjects which is >92.4% as reported by Soares *et al.*^[10] and 94% as reported by Carter and Ogden^[4] and 79.2% as reported by Uti and Fashina.^[13] In our study, the knowledge of risk factors about tobacco and alcohol was less

when compared to other studies, which indicates that the role of these risk factors has to be emphasized in future teaching of undergraduate dental students.

In the present study, 97.1% of the subjects reported correctly SSC as the most common oral cancer which is higher than 48.1% as reported by Soares *et al.*^[10]

The answers on the attitudes of students revealed that above 95% of them reported that "annual oral cancer examinations should be provided for those of 40 years of age and above"; patients' with suspected oral cancer lesions should be referred to a specialist. Early detection improves 5-year survival rates from oral cancer. 99.1% felt that there is a need for additional training/information regarding oral cancer. Only 7.5% of the subjects reported that their knowledge regarding the prevention and detection of oral cancer is current and adequate.

Coming to the practices, 89.7% reported that they used to examine the oral mucosa routinely which is higher than 81.9% as reported by Soares *et al.*^[10] 98.1% reported that they referred the patients with suspicious lesions to an oral surgeon for further evaluation.

About 92.5% of the subjects educate their patients on the adverse effects of alcohol and tobacco and assist them in cessation, which is higher than 82.1% as reported by Soares *et al.*^[10] The literature, however, is unanimous in pointing out that the main risk factors are exposure to tobacco carcinogens and excessive alcohol consumption.^[14] In fact, at least three quarters of cases of oral cancer could be prevented by eliminating risk factors such as tobacco and alcohol. Thus, it is important to educate the masses about it, since not doing so may be deemed negligent omission.

The limitation of this study is that it is based on self-administered questionnaire which may lead to over and under reporting. However according to Gilbert *et al.*^[15] this method is sufficiently valid for most important research questions.

Conclusion

It may be concluded that the overall knowledge about oral cancers was excellent among students but had only good knowledge about etiological factors. About 1/3rd of the population disagreed that their knowledge about prevention and detection of oral cancer is current and adequate, and 99% agreed that there is a need for additional training/information regarding oral cancer. 92.5% of the subjects used to educate their subjects about the harmful effects of tobacco and alcohol. Hence, it is recommended that the knowledge of oral cancers

Table 1: Average knowledge scores of subjects according to gender and year

	Poor	Moderate	Good	Excellent	Mean %
Gender					
Male	0	1 (4.4)	2 (8.7)	20 (86.9)	82.6
Female	0	2 (2.4)	19 (22.6)	63 (75.0)	81.2
Total	0 (0)	3 (2.8)	21 (19.6)	83 (77.6)	81.9
Year					
3 rd year	0	0 (0)	8 (19.5)	33 (80.5)	83.60
4 th year	0	1 (4.8)	5 (23.8)	15 (71.4)	76.6
Internship	0	2 (4.4)	8 (17.8)	35 (77.8)	85.7
Total	0 (0)	3 (2.8)	21 (19.6)	83 (77.6)	81.9

Table 2: Respondents attitude and practices towards oral cancer

Questions about attitude towards oral cancer			
Questions	Strongly agree/ agree (%)	Don't know (%)	Strongly disagree/ disagree (%)
My knowledge regarding the prevention and detection of oral cancer is current and adequate	8 (7.5)	34 (31.8)	65 (60.7)
Annual oral cancer examinations should be provided for those of 40-year of age and above	103 (96.2)	2 (1.9)	2 (1.9)
Patient's with suspected oral cancer lesions should be referred to a specialist	106 (99.1)	0 (0)	1 (0.9)
Early detection improves 5-year survival rates from oral cancer	104 (97.2)	3 (2.8)	0 (0)
Do you feel that there is need for additional training/information regarding oral cancer	106 (99.1)	1 (0.9)	0 (0)
Questions about practices towards oral cancer			
Questions	Yes	No	
Do you examine the oral mucosa routinely?	96 (89.7)	11 (10.3)	
Do you take history from patient about alcohol and tobacco use?	106 (99.1)	1 (0.9)	
Do you refer the patients with suspicious lesions to a oral surgeon for further evaluation?	105 (98.1)	2 (1.9)	
Do you educate patients on the adverse effects of alcohol and tobacco and assist them in cessation?	99 (92.5)	8 (7.5)	
Have you ever attended any educational programs on oral cancers?	4 (3.7)	103 (96.3)	

on etiological factors should be reinforced throughout the undergraduate dental course. Preventive activities through educating patients about the risks associated with etiological factors and smoking cessation need to be emphasized in the school curriculum to enable students to help their patients make choices for healthier lifestyles.

References

- Natarajan E, Eisenberg E. Contemporary concepts in the diagnosis of oral cancer and precancer. *Dent Clin North Am* 2011;55:63-88.
- Abdullah Jaber M. Dental practitioner's knowledge, opinions and methods of management of oral premalignancy and malignancy. *Saudi Dent J* 2011;23:29-36.
- Oliveira JMB, Pinto LO, Lima NGM, Almeida GCM. Oral Cancer: Assessment of academic dentistry and nursing knowledge as for the risk factors and diagnostic procedures. *Rev Bras Canc.* 2013; 59:211-8.
- Carter LM, Ogden GR. Oral cancer awareness of undergraduate medical and dental students. *BMC Med Educ* 2007;15:44-52.
- Znaor A, Brennan P, Gajalakshmi V, Mathew A, Shanta V, Varghese C, *et al.* Independent and combined effects of tobacco smoking, chewing and alcohol drinking on the risk of oral, pharyngeal and esophageal cancers in Indian men. *Int J Cancer* 2003;105:681-6.
- Gómez I, Warnakulasuriya S, Varela-Centelles PI, López-Jornet P, Suárez-Cunqueiro M, Diz-Dios P, *et al.* Is early diagnosis of oral cancer a feasible objective? Who is to blame for diagnostic delay? *Oral Dis* 2010;16:333-42.
- Baykul T, Yilmaz HH, Aydin U, Aydin MA, Aksoy M, Yildirim D. Early diagnosis of oral cancer. *J Int Med Res* 2010;38:737-49.
- Nicotera G, Gnisci F, Bianco A, Angelillo IF. Dental hygienists and oral cancer prevention: Knowledge, attitudes and behaviors in Italy. *Oral Oncol* 2004;40:638-44.
- Vijay Kumar KV, Suresan V. Knowledge, attitude and screening practices of general dentists concerning oral cancer in Bangalore city. *Indian J Cancer* 2012;49:33-8.
- Soares TR, Carvalho ME, Pinto LS. Oral cancer knowledge and awareness among dental students. *Braz J Oral Sci* 2014;13:28-33.
- Honarmand M, Hajihosseini A, Akbari F. Oral cancer knowledge of senior dental students in Zahedan, South-East of Iran. *Asian Pac J Cancer Prev* 2014;15:3017-20.
- Dib LL, Souza RS, Tortamano N. Evaluation of the knowledge about oral cancer among undergraduate dental students of different units at University Paulista. *Rev Inst Cienc Saude* 2005;23:287-95.
- Uti OG, Fashina AA. Oral cancer education in dental schools: Knowledge and experience of Nigerian undergraduate students. *J Dent Educ* 2006;70:676-80.
- da Silva SD, Hier M, Mlynarek A, Kowalski LP, Alaoui-Jamali MA. Recurrent oral cancer: Current and emerging therapeutic approaches. *Front Pharmacol* 2012;3:149.
- Gilbert GH, Rose JS, Shelton BJ. A prospective study of the validity of data on self-reported dental visits. *Community Dent Oral Epidemiol* 2002;30:352-62.

How to cite this article: Fotedar S, Bhardwaj V, Manchanda K, Fotedar V, Sarkar AD, Sood N. Knowledge, attitude and practices about oral cancers among dental students in H.P Government Dental College, Shimla-Himachal Pradesh. *South Asian J Cancer* 2015;4:65-7.
Source of Support: Nil, **Conflict of Interest:** None declared.