

# Self Reported Experiences of Interns' Regarding Oral Cancer Detection: A Questionnaire Survey

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## Abstract

**Aim:** To determine the self-reported knowledge and experiences regarding oral cancer detection among dental interns relating to the etiology, risk factors and signs of oral cancer.

**Materials & Method:** A cross-sectional survey was carried out using a questionnaire developed by Carter and Ogden which was modified, among 97 dental interns of a private dental college. The questionnaire was designed to collect information on demography; knowledge of interns in etiology, signs, and symptoms and undergraduate experience in examination and biopsy procedure and management of malignant and premalignant lesions. Descriptive analysis was carried out. Comparison of mean scores between gender using Unpaired t test. Differences were considered significant when  $p < 0.05$ .

**Results:** The response rate was 97.9%. About 70.6% of the interns examine the oral mucosa routinely during clinical examination. Majority of them (83.7%) were aware of the red and white lesions affecting the oral mucosa and 81.5% have encountered oral cancer patients in their clinics. None of them felt that they have sufficient knowledge regarding detection and prevention of oral cancer and a vast majority (92.4%) were strongly positive and wanted more teaching and information on oral cancer in the form of information packs (32.6%), lectures (21.7%), seminars (25%) and interactive sessions (20.7%).

**Conclusion:** The level of awareness regarding early detection and prevention of oral cancer was low among the dental interns.

**Key Words:** Oral cancer, knowledge, practice, early diagnosis.

## Introduction

Oral cancer is a global public health problem that affects the quality of life of people. It is the sixth most common cancer in the world.<sup>1</sup> Globally, there is a wide disparity in the incidence and intraoral site distribution

of oral cancer. The highest incidence of oral cancer is found in India and Sri Lanka which accounts for about 40% of all cancers. It is one of the leading causes of mortality and disability in India.

Several studies have reported general lack of awareness among the public, dentists, dental and medical students regarding early detection of oral cancer and premalignant lesions due to which there is a delay in diagnosis and treatment of the lesions.<sup>2,3,4,5,6</sup> About 70% of the oral cancer patients present in the advanced stages.<sup>7</sup> A dental practitioner's negative attitude and low level of knowledge are considered to be factors that contribute to the delayed or inadequate detection of the early stages of oral cancer.<sup>8</sup> Consistently performing thorough oral cancer screening examination for all

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patients (including high-risk areas like tongue and floor of mouth), paying careful attention to suspicious red, white and ulcerative mucosal lesions and being aware of patients' high-risk tobacco and alcohol use offer the best potential for dentists to detect oral cancer at an early stage.<sup>9,10</sup> It has been reported that there exists an increased need for undergraduate dental students to be educated and trained in the identification of signs and symptoms of oral malignancy and premalignancy as well as early management of patients with suspicious oral lesions.<sup>11</sup>

The objective of the present study was to determine the self-reported knowledge and experiences regarding oral cancer detection among dental interns relating to the etiology, risk factors and signs of oral cancer.

### Materials & Method

A cross-sectional survey was carried out using a questionnaire among 97 dental interns of a private dental college in Karnataka, India. Ethical approval to conduct the study was obtained from the Institutional Ethical Committee. Students were informed about the study. Participation was voluntary and interns willing to participate were included in the study.

The questionnaire that was used for the study was originally developed by Carter and Ogden<sup>4</sup> which was modified. The questionnaire consisted of ten close-ended questions divided into two sections, was designed to collect information on demography; knowledge of interns in etiology, signs, and symptoms and undergraduate experience in examination and biopsy procedure and management of malignant and premalignant lesions. The questionnaire was pretested on ten interns to check the adequacy of the questions. Modifications were made according to the responses before the final questionnaire was administered.

Interns were asked to mark the best answer among the options given. Data was entered into Microsoft

Excel for Windows and analyzed using SPSS 15.0 version (SPSS Inc., Chicago, IL, USA). Descriptive analysis was carried out (number of correct responses) and presented as number and percentage. A score of '1' was given for each correct answer with 'may be/ Don't know' responses being counted as an incorrect response. Comparison of mean scores between gender using Unpaired t test. Differences were considered significant when  $p < 0.05$ .

### Results

Among the 97 dental interns, 5 were absent on the day of survey. Hence, the response rate was 97.9% ( $n = 92$ ). There were 68 female and 24 male interns. About 70.6% of the interns examine the oral mucosa routinely during clinical examination. Majority of them (83.7%) were aware of the red and white lesions affecting the oral mucosa and 81.5% have encountered oral cancer patients in their clinics. About 47.8% of the participants said that tobacco chewing is the major risk factor for oral cancer, while 21.7% said that UV light exposure is a risk factor for oral cancer. About 12% responded smoking and 15.2% said that alcohol is a risk factor for oral cancer. About 46.7% said that leukoplakia and 31.5% said erythroplakia is associated with oral cancer. Only 68.5% of them were aware that long standing/non healing scars anywhere in the oral cavity could be a sign for oral cancer and only 51.1% were aware that red or a white patch is a warning sign for oral cancer. None of them felt that they have sufficient knowledge regarding detection and prevention of oral cancer and a vast majority (92.4%) were strongly positive and wanted more teaching and information on oral cancer in the form of information packs (32.6%), lectures (21.7%), seminars (25%) and interactive sessions (20.7%).

Table 1 shows the comparison of mean scores across genders. The mean score among males was  $5.9 \pm 2.4$  and among females is  $6.1 \pm 2.1$ , the difference of which is insignificant when analysed using Unpaired t test.

**Table 1: Comparison of mean scores between gender using Unpaired t test.**

		Mean score (SD)	t	df	Standard error of difference	p value
Gender	Male	5.9+2.4	0.3863	90	0.518	0.7, not significant
	Female	6.1+2.1				

## Discussion

Dentists need to possess a thorough knowledge of risk factors, clinical signs and symptoms of oral cancer in order to be effective in identifying, referring and counseling high-risk patients. Internship is a phase where most of the theoretical knowledge of dentistry is put into practice under supervision of the faculty. Interns need to possess adequate knowledge regarding early detection of oral malignant and premalignant lesions as they are just one step away from being fully fledged dental surgeons who have an important role in prevention and control of oral cancer.

The results of the present study showed that the interns lacked sufficient knowledge regarding detection of oral cancer and premalignant lesions. These findings were in accordance to those reported in literature.<sup>12,13,14</sup> Studies have also shown that dental students have a better knowledge regarding early detection and prevention of oral cancer when compared to medical students.<sup>6,11</sup>

In the present study, majority of the interns felt that they did not have adequate knowledge on early detection of oral cancer and wanted more even information regarding the same. This is a very relevant and important finding and should be viewed seriously. Although theory on epidemiology of oral cancer, etiopathogenesis of premalignant and malignant lesions, early detection, prevention and management of oral cancer in the dental curriculum exists, adequate clinical training under faculty supervision for careful comprehensive intraoral examination for identification of lesions is essential. Dental interns should be also trained to perform clinical diagnostic procedures like toluidine blue staining, exfoliative cytology which would help in early detection of premalignant and malignant lesions. Interns should be encouraged to attend seminars/ workshops on oral cancer prevention. Also, it is important that proper and early referral and care is given to the patient diagnosed with oral cancer for a better prognosis.

## Conclusion

The present study concluded that the level of awareness regarding early detection and prevention of oral cancer was low among the dental interns. There is a need to strengthen the knowledge and clinical skill of dental interns towards early detection and better management and prognosis of oral cancer. A general

lack of awareness among the public, dentists, dental and medical students regarding early detection of oral cancer and premalignant lesions results in delay in diagnosis and treatment of the lesions.

**Conflict of Interest:** Nil

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## References

1. Warnakulasuriya S. Global epidemiology of oral and oropharyngeal cancer. *Oral Oncology* 2009;45:309–316.
2. Mehboob B, Khan E, Khan M. Awareness about oral cancer among non-medical university students of Peshawar. *Pakistan Oral and Dental Journal* 2011; 31: 392-95.
3. Ali TS, Baig S. Evaluation of a cancer awareness campaign: experience with a selected population in Karachi. *Asian Pac J Can Pre* 2006; 7(3): 391-95.
4. Bhurgri H, Gowani SA, Itrat A et al. Awareness of cancer risk factors among patients and attendants presenting to a tertiary care hospital in Karachi, Pakistan. *J Pak Med Assoc.* 2008;58(10): 584-8.
5. Shaila M, Shetty P, DCruz AM, Pai P. The Self-Reported Knowledge, Attitude and the Practices Regarding the Early Detection of Oral Cancer and Precancerous Lesions among the Practising Dentists of Dakshina Kannada—A Pilot Study. *J Clin Diag Res* 2013; 7(7): 1491-1494.
6. Lachlan M Carter and Graham R Ogden. Oral cancer awareness of undergraduate medical and dental students. *BMC Medical Education* 2007, 7:44.
7. Natarajan E. Contemporary Concepts in the Diagnosis of Oral Cancer and Precancer. *Dental Clinics of North America.* 2011; 55 (1): 63-88.
8. Schnetler JFC: Oral cancer diagnosis and delays in referral. *Br J Oral Maxillofac Surg* 1992; 30: 210–213.
9. Patton LL, Elter JR, Southerland JH, Strauss RP: Knowledge of oral cancer risk factors and diagnostic concepts among North Carolina dentists: implications for diagnosis and referral. *J Am Dent Assoc* 2005; 136: 602–6.
10. Yellowitz JA, Horowitz AM, Drury TF, Goodman

- HS: Survey of US dentists' knowledge and opinions about oral pharyngeal cancer. *J Am Dent Assoc* 2000;131:653–661.
11. Rehman S, Khan M. Awareness of Oral Cancer in Undergraduate Medical And Dental Students. *J Pak Dent Assoc* 2012; 32(3):385-88.
  12. Božana Lončar Brzak , Ivana Canjuga , Marinka Baričević , Marinka Mravak-Stipetić. Dental Students' Awareness of Oral Cancer. *Acta Stomatol Croat.* 2012;46(1):50-58.
  13. Ogden GR, Mahboobi N. Oral cancer awareness among undergraduate dental students in Iran. *J Cancer Educ.* 2011 Jun;26(2):380-5.
  14. Uti OG, Fashina AA. Oral cancer education in dental schools: knowledge and experience of Nigerian undergraduate students. *J Dent Educ.* 2006 Jun;70(6):676-80.