

AWARENESS OF ORAL CANCER AND PRECANCER AMONG FINAL YEAR DENTAL UNDERGRADUATES IN UKRAINE

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Abstract

Background: Oral cancer presents with high mortality rates, and the likelihood of survival is remarkably superior when detected early. Health care providers, particularly dentists, play a critical role in early detection of oral cancers and should be knowledgeable and skillful in oral cancer diagnosis. *Purpose:* The objective of the present study was to assess the comprehensive awareness of final year dental undergraduates of Medical Universities and Institutes Ukraine concerning oral cancer and oral potentially malignant disorders. *Materials and Methods:* A pretested self-administered questionnaire was distributed to fifth year dental students. Questions relating to knowledge of oral cancer, risk factors, and opinions on oral cancer prevention and practices were posed. *Results:* Only a small proportion of both groups of students expressed confidence in their knowledge and skills in oral cancer prevention and detection. This study revealed areas of deficiency in the awareness of these students concerning oral cancer and OPMD. It points to a necessity to strengthen these aspects of medical and dental undergraduate curricula. *Conclusions :* The findings of the present study suggest that here is a need to reinforce the undergraduate dental curriculum with regards to oral cancer education, particularly in its prevention and early detection.

Keywords: dental students, knowledge, opinions, dental education, oral cancer, oral potentially malignant disorders, curriculum.

Introduction

Oral cancer is a major health problem and represents approximately the sixth [19] or tenth [7] of all cancers worldwide [7]. More than 500,000 patients are estimated to have oral cancer globally with approximately 389,000 new cases per annum [12]. Incidence rates are much higher in regions like Ukraine, where they account for up to 50% of all malignant tumors [1;16; 8].

More than 90% of malignant tumors of the oral cavity, oropharynx, and pharynx are squamous cell carcinoma developed from premalignant lesions such as leukoplakia and erythroplakia [5].

These recognizable diseases that precede the appearance of oral cancer are collectively referred to as oral precancer or oral potentially malignant disorders (OPMD) as recently suggested [20]. The main OPMD are usually associated with habits such as betel chewing, smoking, snuff dipping, areca nut chewing and excessive alcohol intake [19]. Smoking and alcohol consumption have been shown to act synergistically with the combined risk considerably increased in comparison to when the individual factor is found alone. Smoking and alcohol consumption have been shown to act synergistically. The two factors mutually enhance each other's carcinogenic role increasing the risk considerably. This increased risk is higher than that posed by either factor acting alone [2]. In recent times, Human Papilloma Virus infection is increasingly suspected to play a role in the causation of oral cancer particularly in young patients [10]. Globally, oral cancer affects predominantly the lower socio-economic strata of the population [17]. As most of the risk factors are related to life style of individuals, it is evident that most oral cancers are preventable.

Oral cancer has been reported to have one of the lowest 5-year survival rates of all cancers, probably because most lesions are not diagnosed in the early stages [4; 9]. The delay in presentation and/or referral is more or less evenly distributed between patients and doctors and is partly due to the unawareness of oral cancer among the public and professionals and partly due to barriers in the health care system that may prevent patients from seeking dental and medical care [5]. Therefore, researchers in oral cancer agree that the early diagnosis of oral carcinoma greatly increases the probability of cure and survival rate with minimum impairment and deformity [11;18]. It is therefore pertinent that dental practitioners possess good knowledge of the signs and symptoms of malignant and premalignant lesions for early and effective diagnosis. Ensuring that future dental practitioners are knowledgeable about malignant and premalignant lesions will improve the efficacy of screening and management of these lesions [18; 15].

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 [14]. 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 [3].

The objective of the present study was to assess the comprehensive awareness of final year dental undergraduates of Medical Universities and Institutes Ukraine concerning oral cancer and oral potentially malignant disorders. A supplementary objective was to evaluate the need for reform in the dental curricula.

2. Materials and Methods

A cross-sectional, questionnaire-based survey of undergraduate dental students at the faculty of dentistry, Medical Universities and Institutes, Ukraine was undertaken. Participation was voluntary, and participants were informed that they could withdraw at any

time and that their responses would be anonymous and treated confidentially. Upon entry, all participants signed a declaration of informed consent. The study was conducted in full accordance with the declared ethical principles of the World Medical Association Declaration of Helsinki (2002).

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. The questionnaire comprised divided into several sections. The first section included demographic variables of the responding students such as age, gender and year of study. The second section focused on the risk factors and clinical signs of oral cancer. The third section assessed oral cancer screening/oral mucosal examination habits, opinions on sufficiency of individual knowledge on oral cancer detection and prevention as well as the desire for further information/training. The questionnaire was delivered during routine lectures to all students; it required 10 minutes to complete.

The data management and statistical analysis were performed using the statistical software SPSS version 20.0. Frequencies and percentages were obtained for categorical data, and Chi-square test was used to determine the association between variables. P value<0.05 was considered significant.

3. Results

The total study population was 850. The respondents were 536 (63.06%) female and 314 (36.94%) male students with a mean age of 23.20 ± 1.35 years (range=22-32 years). When asked about their approach to examination of oral mucosa in routine, 12.35% affirmed that they perform systematic examination of the oral mucosa on every patient.

Regarding knowledge on risk factors of oral cancer, the vast majority of students identified chronic trauma (38.05%), smoking (36.8%), alcohol consumption (15.42%), chewed tobacco (9.31%), spicy food (0.42%) (figure 1).

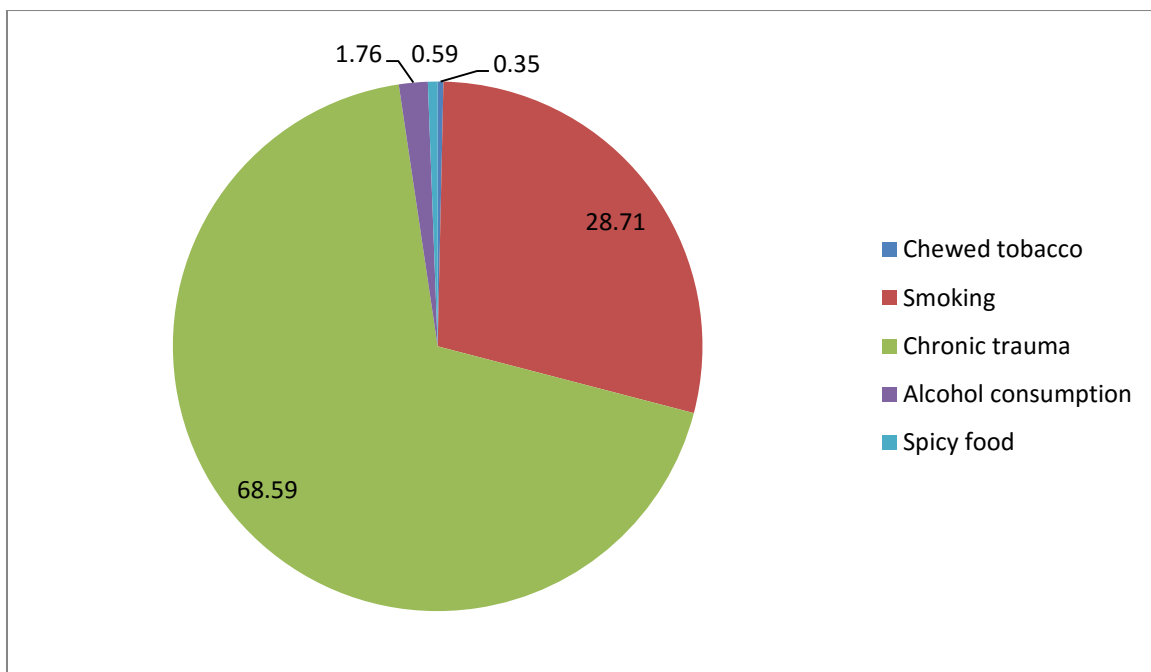


Figure 1. Awareness of risk factors.

Regarding the clinical features of oral cancer, 10.47% were well informed about the appearance of oral cancer. Only 72.71% were poorly informed about clinical appearance of oral cancer (figure 2).

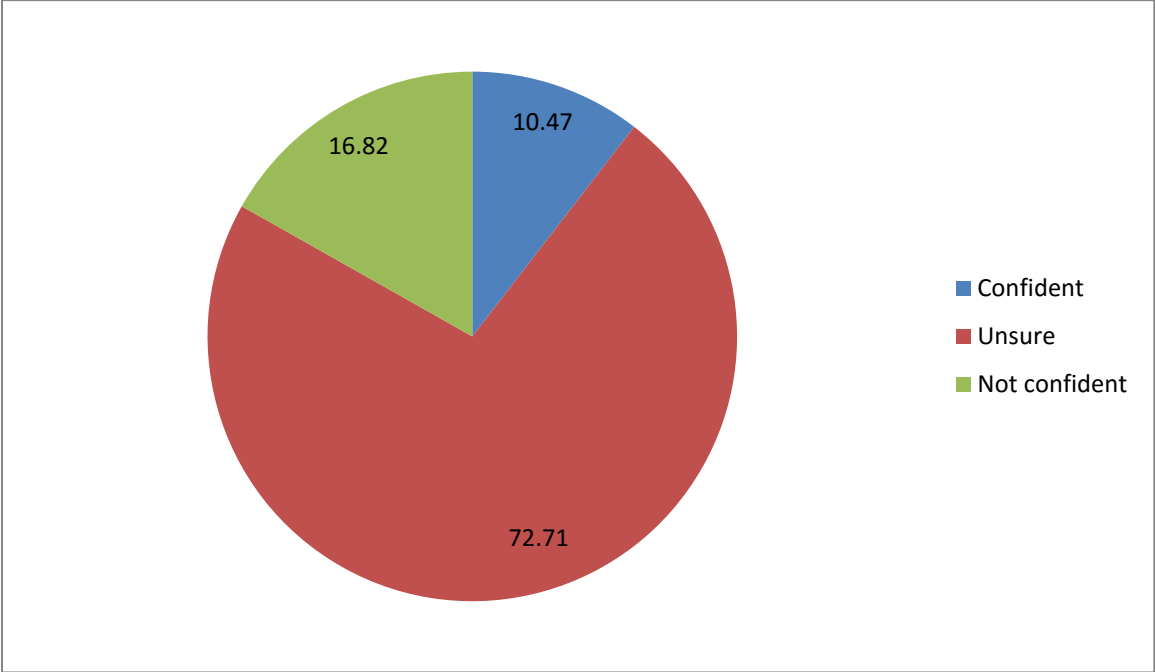


Figure 2. Student responses of self evaluation of knowledge on oral cancer.

When asked about the referral of suspected patients, 55.88% suggested an Oral and Maxillofacial surgeon to be the appropriate person for management of such patients, 34.0% -- an Oncologist (figure 3). Only two percent of the respondents were aware of the prevention of oral cancer (fig. 4).

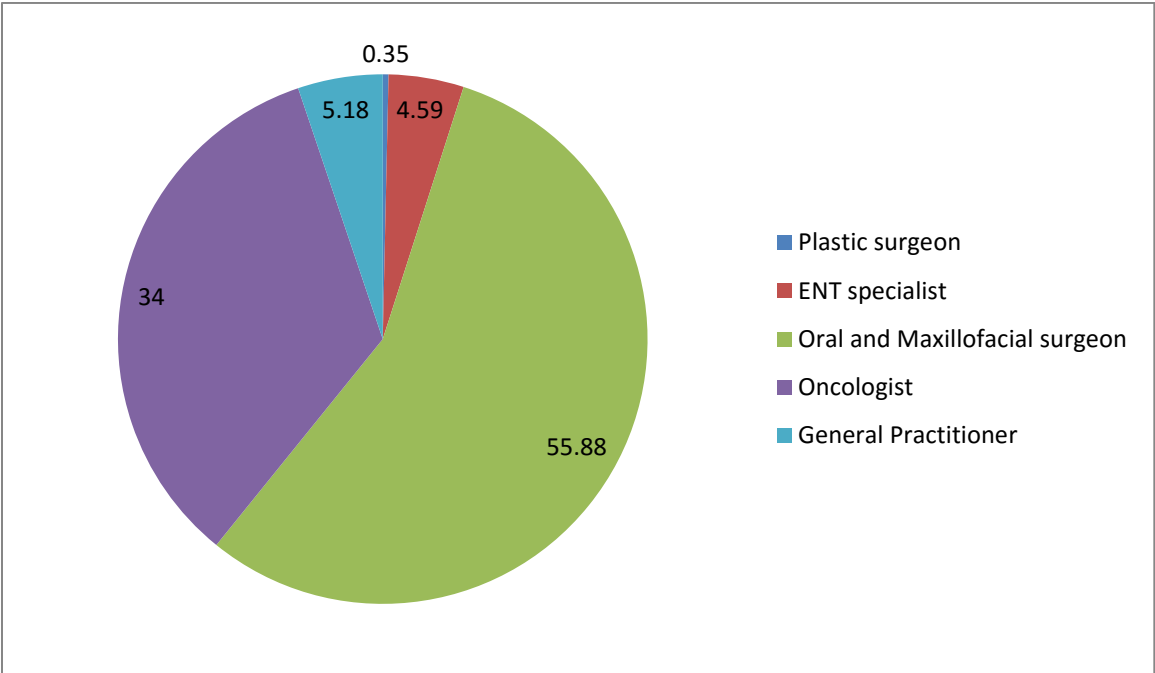


Figure 3. Point of referral selected by Dental Students.

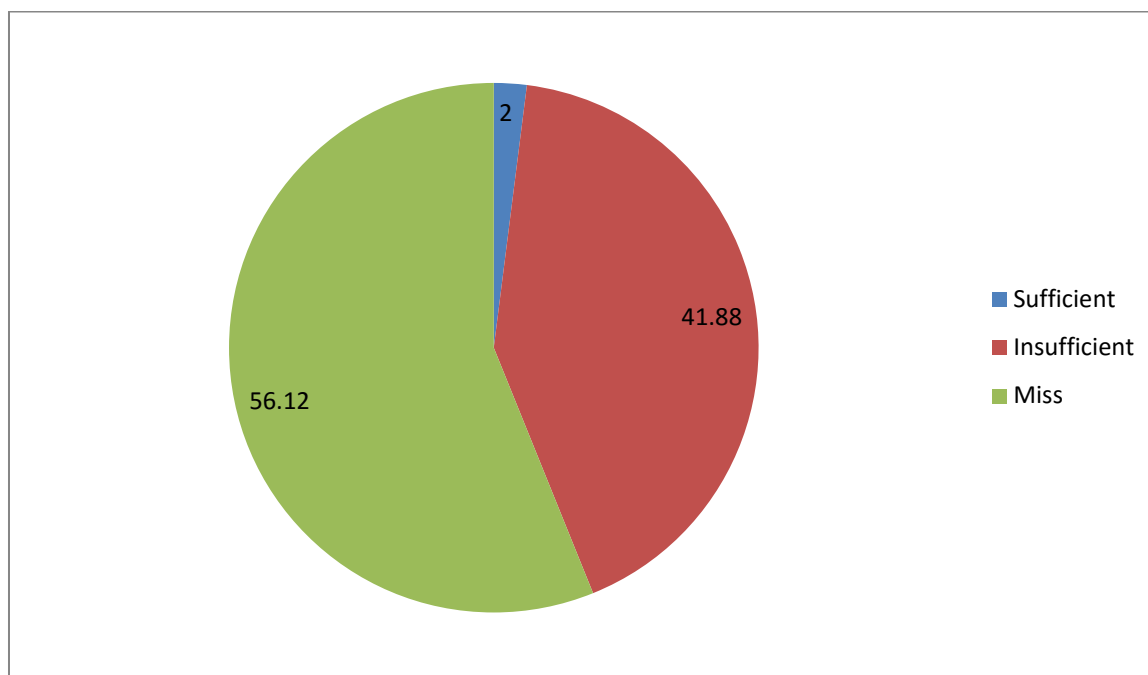


Figure 4. Awareness of the prevention of oral cancer

4. Discussion

Oral cancer is arguably the most significant condition that can be diagnosed by a dentist. Besides, early detection is believed to be the best way of decreasing the mortality and morbidity rate of the disorder [18]. Hence, the present study is the first of its kind to emanate from Ukraine to evaluate in depth awareness of dental and medical students concerning oral cancer and OPMD.

Unlike the studies referred to above, the questionnaire used in the present study was designed to evaluate a comprehensive level of oral cancer awareness by incorporating questions on epidemiologic, prognostic and treatment aspects in addition to the commonly included aetiological and clinical questions. It can be argued that students with awareness of the wider dimensions of the global oral cancer burden and its less than satisfactory prognosis and treatment outcomes are more likely to play a more committed role in oral cancer prevention and early detection as future practitioners.

The results of the present study show that dental students in Ukraine are satisfactorily knowledgeable regarding clinical signs, risk factors and diagnostic concepts of oral cancer.

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 [6] and Lachlan [13]. 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 country and thus the students were more aware of them.

The level of awareness on prognostic and treatment aspects of the dental students had been found to be considerably low. As illustrated by Figure 2 a lot of dental students (38.24%) expressed a lack of confidence in their awareness concerning oral cancer, its prevention and detection. 47.17% dental students were similarly neutral in this regard. Only 14.59% of dental students stated that they were confident of themselves in the domain of oral cancer including its prevention and detection.

Oral cavity is a part of the body that can be easily examined without the need for any sophisticated equipment. Primary and secondary prevention of oral cancer is thus a relatively

easily attainable objective if healthcare providers such as dentists have adequate knowledge of risk factors and skills in the recognition of OPMD, and are able to educate their patients to abstain from the known risk factors in addition to examining the mouths of their patients, whenever opportunity arises, to rule out OPMD.

Furthermore, such routine examination of the mouth would facilitate the detection of oral cancer in its early stages, which would in turn lead to prompt referral of the patient for relatively less complicated and less mutilating treatment. It is evident therefore that dental students should receive education and training to enable them, as future dental practitioners play effective roles in the primary and secondary prevention of oral cancer.

It is imperative that dental students should be imparted with adequate knowledge and skills with regard to oral cancer and OPMD on account of their close involvement with oral health. Generally speaking, the dental undergraduate curriculum in most dental schools aims to educate dental students on various aspects of oral cancer, comparatively, to a greater depth.

Conclusion

In conclusion, Ukrainian dental students showed a satisfactory level of knowledge regarding oral cancer, educators and policymakers need to place greater emphasis on oral cancer education and training in dental faculties. This study revealed an urgent need for a more structured teaching program, with more focus on the early signs and symptoms of oral cancer and precancerous lesions. Moreover, there is a need to reinforce the current undergraduate dental curriculum in regards to oral cancer education particularly in prevention and early detection.

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