Oral Cancer Awareness among Undergraduate Dental Students in Nepal

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Abstract

Introduction: Oral Cancer is one of the most common forms of cancer in the world. The early diagnosis and identification of cancerous lesions are necessary to reduce the morbidity and mortality of oral cancer. Today’s dental students are tomorrow’s dental surgeons and specialists who identify and manage the oral cancer patients. So, it is important for dental students to be aware of etiology and clinical features of oral cancer and be able to practice such knowledge in behavior.

Methods: The study was a descriptive cross-sectional study conducted at Kantipur Dental College, Kathmandu, Nepal after the ethical approval by KDC-IRC. The study population were clinical students from third, fourth and fifth year of Bachelor of Dental Surgery (BDS).

Results: Out of 101 participants, 67.3% students always examined their patient’s oral mucosa. Only 3.0% students felt very well-informed about clinical appearance of oral cancer. 54.5% students identified floor of mouth as most common site of oral cancer and 60.4% identified border of tongue as most common site of oral cancer. Of total participants, only 22.8% students had examined oral cancer lesion before the study. Almost all (99%) students reported they wanted more information on oral cancer.

Conclusions: The undergraduate students lacked knowledge on the identification and detection of oral cancer. They were also not examining patient’s oral mucosa routinely. Many students did not have sufficient information on risk factors and associated oral cancer lesions. Concerned authorities could consider methods to help improve the understanding of oral cancer among the students.

Keywords: Oral Cancer; Undergraduate Dental Students; Nepal

Introduction

Oral Cancer is the eleventh most common cancer in the world [1]. It is more common in developing countries and has particularly higher incidence in male [1]. In south central Asia, it is the third most common type of Cancer [2]. Approximately 263,900 new cases and 128,000 deaths occurred from oral cancer in 2008 worldwide [2]. The burden is increasing as the risk behaviour is in rise worldwide [3]. The prevention of increasing burden of oral cancer can be performed by early detection and intervention by dental health workers.

Risk factors

The risk factors include smoking, alcohol use, smokeless tobacco products, and HPV infections. Smoking alone is responsible for 42% of deaths from cancers of the oral cavity and heavy alcohol consumption for 16% of the deaths; the corresponding percentages in high-income countries are about 70% and 30%, respectively [4]. Smokeless tobacco products and betel quid with or without tobacco are the major risk factors for oral cancer in Taiwan, India, and neighbouring countries [4]. Oral cancer has typically been associated with men aged 60 years and older who are regular consumers of tobacco and alcohol products but recently, increase in the incidence of oral SCC has been observed in patients younger than 40 years and women without risk factors [4].

Clinical features

The critical signs that are present in almost all cancers are induration and fixation [4]. Warning features of oral carcinoma may be red lesions (erythroplasia), mixed red and white lesions, an indurated mass or ulcer, ulcer with fissuring or raised exophytic margins, pain or numbness, loose teeth, a non-healing extraction socket, fixation of tissues to deeper or overlying mucosa, lymph node enlargement, dysphagia and weight loss [4].
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Mortality rate of Oral Cancer depends on the stage of the disease. The five-year survival rate of stage I cancer, including the various sites such as borders of the tongue, floor of the mouth, cheek, and gums amounts approximately 80%, while the five-year survival of patients with advanced disease (stages III/IV) is approximately 20% [6]. Worldwide some 50% of the patients with oral cancer present with advanced disease [6]. Even though the examination of the oral cavity is easily accessible, these malignancies are often still not detected early. A dentist is usually the first person to see suspicious but asymptomatic oral lesions [10]. A dentist may not encounter an average of more than 5 - 10 patients with oral cancer during his professional life. Conventional oral examination has been shown to have high discriminatory ability and is the currently accepted practice for the detection of oral cancer and pre-malignant disorders [9]. Barriers mentioned to perform such examinations were lack of training, lack of knowledge, lack of equipment, lack of time, and the notion that dentists are the ones who are primarily responsible for oral cancer detection [10].

Detecting oral cancer at an early stage is the most effective means of reducing rates of death, morbidity and disfigurement from this disease but progression in this field is slow [5]. Late diagnosis results in more expensive, aggressive and disfiguring treatments, lower survival rates, lower function and lower quality of life among survivors. So, it is extremely necessary that dental students and dentists have extensive understanding of the aetiology of oral cancer and be able to make correct diagnosis [5].

Methods
A descriptive cross-sectional study was conducted at Kantipur Dental College, Kathmandu, Nepal. The study population were clinical students from third, fourth and fifth year students of Bachelor of Dental Surgery (BDS). The students who were included were provided with a written informed consent regarding the study aims and procedures involved. The demographic and socioeconomic data included age, sex, years of study. The self-administered questionnaire adapted and modified from Carter and Ogden was provided to the participants [12].

Inclusion/Exclusion criteria
Anyone aged above 18 years who was studying BDS and were in 3rd, 4th and 5th year at Kantipur Dental College with a will to participate in the study were included in the study. Students not willing to participate were excluded from the study.

Ethical consideration
The study was carried out after approval by the Institutional Ethical Review Committee of Kantipur Dental College. The study also included the informed written consent from the subjects. Strict confidentiality of the information was maintained. For the confidentiality, personal information as full name was not included in the questionnaire.

Results
The SPSS version 25.0 software was used to analyse the data. There were 101 participants in our study. The mean age of participants was 22.28 years. 72.3% students were female and 20.8% were male in our survey. There were 25 students from third year, 24 students from fourth year and 46 students from final year with 6 students from unknown year of study.

Among 101 participants, 67.3% students always examined their patient's oral mucosa but 9.9% never examined the oral mucosa routinely. For high risk categories patient, 57.4% students always screened their patient's oral mucosa whereas 9.9% never screened oral mucosa of high risk category patients. 86.1% students considered smoking as a risk factor for oral cancer. Only 20.8% students considered alcohol is a risk factor for oral cancer whereas 56.4% selected smokeless tobacco as a risk factor for oral cancer. Finally, 40.6% students considered Human Papilloma Virus as a risk factor for oral cancer.

After graduating, 94.1% students specified that they will always advise their patients about risk factors of oral cancer. After graduating, 1% students acknowledged they will refer oral cancer patients to plastic surgeon whereas 11.9% students believed they will refer them to general medical practitioner. However, 93.1% students documented that they will refer oral cancer patients to an oral and maxillofacial surgeon.

Only 3.0% students felt very well-informed about clinical appearance of oral cancer whereas 23.8% felt poorly informed. Of total participants, only 22.8% students had examined oral cancer lesion before the study.

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In our study, 63.8% students felt that red and white lesions were associated with oral cancer but only 23.8% considered indurated ulcer were associated with oral cancer. Similarly, 47.5% students selected that non-healing chronic ulcers were associated with oral cancer and 28.7% students felt fixation of tissue were associated with oral cancer.

For the most common site of oral cancer, 54.5% students selected floor of mouth but 60.4% selected border of tongue as most common site of oral cancer. Additionally, 10.9% students selected gingiva as most common site of oral cancer whereas 11.9% selected palate as most common site of oral cancer.

However, in our study, only 30.7% students felt they had sufficient knowledge for prevention of oral cancer whereas 16.8% students felt they had sufficient knowledge for detection of oral cancer. Among all, 99% students said they wanted more information on oral cancer. Case presentation was most preferred method (75.2%) followed by seminars (32.7%), lectures (22.8%) and Information packet (18.8%).

Discussion

Our study demonstrates that the students do not have sufficient information on oral cancer. They had minimal knowledge about the risk factors and oral cancer associated lesions. They were also not well-informed about the detection and prevention of oral cancer. Even though oral cancer and precancerous lesions are common, it was stimulating to find that majority of students had not examined oral cancer lesions.

Various studies have also reported lack of awareness about oral cancer among doctors and dentists and particularly among medical and dental students. The study dated back in 1991 by Warnakulasuriya KA, Johnson NW investigating the opinions, attitudes and practices towards oral cancer prevention among UK dentists indicated a considerable need for improvement in the manner and extent of provision of health advice in respect of the major risk factors for oral cancer [11]. In 2007, Carter LM and Ogden GR conducted a cross-sectional questionnaire-based study to assess general medical practitioners’ (GMPs’) and general dental practitioners’ (GDPs’) awareness of prevention and early detection of oral cancer [12]. They concluded the need for improved education of general medical practitioners on oral cancer. The study by Vijay Kumar KV and Suresan V in 2012 among dental practitioners concluded that educational interventions for practitioners and dental students are necessary [13]. Soares TRC., et al. 2014 conducted study on undergraduate dental students and concluded the need to implement the clinical suspicion of oral cancer throughout the undergraduate course to enable awareness and early diagnosis [5]. In our study, we found that many students lacked the basic knowledge of oral cancer. The study by Santosh Kumar MP and Harsini AK in 2016 also concluded that even though undergraduate dental students have basic knowledge, it is not enough to practice and help in prevention of oral cancer [14]. In Nepal, Shrestha A, Marla V., et al. in 2016 conducted a similar study to evaluate the awareness of undergraduate dental and medical students towards oral cancer in B. P. Koirala Institute of Health Sciences [7]. They also demonstrated a lack of awareness in many aspects of oral cancer among medical and dental students.

Conclusion

Oral cancer is a major cancer in south Asia. The dental students who are being clinically trained at their third, fourth and fifth years of BDS study are the dentists that join the workforce in coming years. So, it is vital to recognize their level of awareness in oral cancer. We can conclude that the undergraduate students do not possess sufficient knowledge and confidence to detect and manage oral cancer lesions. The concerned authorities could consider the results in reviewing the results and implement methods to help improve the understanding of oral cancer among the students.

Limitations

We conducted the study in a single centre and could not include more colleges.

Conflict of Interest

We have no conflict of interest to declare.
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Bibliography


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