Level of awareness of oral cancer and oral potentially malignant disorders among medical and dental undergraduates

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Abstract

The aim of this study was to investigate the awareness of oral potentially malignant disorders (OPMD) and oral cancer among medical and dental students of the University of Peradeniya. A pre-tested, self-administered questionnaire was used among 1006 students. Majority were medical students (74.3%), females (60.5%), and in the second year (25.2%). About 54% of respondents had poor knowledge. Dental students had a significantly higher knowledge and female students showed greater awareness. About 90% of medical students had never examined a patient with OPMD, and 79.5% of them had not examined one with oral cancer. Medical undergraduates must receive adequate education about OPMD and cancer.

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Introduction

Oral cancer (OCA) accounts for 12.8% of all cancers in Sri Lanka [1]. Most commonly it occurs in middle-aged and older individuals. It is the commonest cancer among men, and accounts for 18.4% of all male cancers [1]. Incidence among females is 4.82% [1]. It is a significant health problem in Sri Lanka since it accounts for 9.3% deaths of all cancers in both sexes [1].

Common signs and symptoms of oral cancers are an ulcer in the mouth that does not heal, pain that does not go away, a lump in the cheek, a white or red patch in the mouth, and sore throat and difficulty in chewing or swallowing. OCA is associated with betel chewing with or without tobacco, smoking, alcohol consumption, infection with human papilloma virus, low intake of fruits and vegetables, and long term exposure to sunlight [2].

The stage of diagnosis is important for survival. Oral cancers have a high likelihood of cure when detected at an early stage [3]. Any delay in presentation for treatment might lead to significant morbidity and mortality associated with oral cancer. In most patients with oral cancer, the cancer is preceded by the existence of oral potentially malignant disorders, and when such disorders are diagnosed and managed in an appropriate manner, oral cancer could be prevented. The lack of public awareness concerning oral cancer and oral potentially malignant disorders (OPMD) is an important reason for late detection of these conditions [4,5]. Screening programmes help to detect cases of cancer as well as OPMDs [6]. Previous studies reveal that medical and dental practitioners are not fully aware of the importance of routine oral examination, risk factors, and oral potentially malignant disorders [7, 8].

Delay in identification by health professionals is a factor that contributes to delay in the diagnosis of OCA. A study in Pakistan has shown poor level of awareness regarding oral cancer among undergraduate dental students [9]. Literature has highlighted the need for improved education of health professionals at the undergraduate level regarding oral cancer. Published data on awareness among Sri Lankan undergraduates are not available. The general objective of the study was to assess the level of knowledge on OPMD and oral cancer among medical and dental undergraduates in Sri Lanka. The specific objectives were to assess the awareness of burden, associated risk factors, early detection, treatment and prognosis of oral cancer and OPMD.

Methods

This study was carried out among medical and dental undergraduates at the University of Peradeniya, Sri Lanka

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in 2014. All students at the Faculties of Medicine and Dental Sciences, University of Peradeniya were included in the study. A self-administered questionnaire was used as the data collection tool. It had two parts: the first part gathered socio-demographic characteristics including participants' age, sex, Faculty, and the year of study. Specific questions on OPMD and oral cancer awareness were included in the second part. Written consent for participation was obtained from all participants. Questionnaires were given to the students after a routine lecture. Approval for the study was obtained from the Ethics Review Committee of the Faculty of Dental Sciences, University of Peradeniya. Collected data were computed on ms Excel. SPSS version 17 was used for the statistical analysis.

Results

One thousand and six students participated in the study out of which 748 (74.3%) were medical students. Non-response rate was less than 10%. Majority of the participants were females (60.5%) and were in the second (25.2%) or third year (22.3%).

OCA was not identified as the most common cancer among Sri Lankan males by about one half of the respondents. Squamous cell carcinoma was identified correctly as the commonest type of OCA by about 90% of dental students but only by 34.5% medical students. The participants had a good understanding about the aetiological agents of OPMD and oral cancer. Chewing betel with tobacco and arecanut as a cause of oral cancer was identified correctly by 95.2% of the respondents and 93.8% of them identified the role of smoking correctly. Only 29% of the medical students were aware of oral submucous fibrosis (Table 1). Overall, dental students had a better knowledge than the medical students ($p<0.01$).

Participants' awareness on OPMD was poor. Only 36% identified oral leukoplakia as an OPMD. About a third of participants believed that the early detection of oral cancer was difficult. Knowledge of treatment options was not adequate among the respondents. Only 11% of the respondents knew the overall 5-year survival rate of oral cancer. Only 10.7% of the respondents had good knowledge of OPMD and oral cancer and in 12.5% of them, knowledge was very poor. Dental students and medical students in the final year had significantly better knowledge ($p<0.05$). Senior students in the years 3, 4 and 5 had better knowledge than the junior students ($p<0.01$). Of the medical students 80.9% had not examined a patient with OPMD and 79.5% of them had not examined an oral cancer (Table 2).

Table 1. Awareness on burden and behevioural characteristics, risk factors, early detection and prevention of OCA

	Answered correctly					
	Medical N	(748) %	Dental N	(258) %	Total N	(1006) %
OCA is the most common cancer among Sri Lankan men	341	45.8	147	57	488	48.5
OCA affects higher socioeconomic groups	568	75.9	201	77.9	769	76.4
Commonest type of OCA is squamous cell carcinoma	258	34.5	234	90.7	492	48.9
OCA is mostly a non-preventable disease in Sri Lanka	561	75	221	85.7	782	77.7
Chewing betel quid with tobacco and areca nut is a cause of OCA	705	94.3	254	98.4	959	95.3
Smoking does not play any role in the causation of oral cancer	702	93.9	242	93.8	944	93.8
Areca nut induced OSF is an OPMD	216	28.9	190	73.6	406	40.4
Excessive alcohol consumption is a causative factor for oral cancer	379	50.7	146	56.6	525	52.2
OCA is mostly preceded by white or red patches in the oral mucosa	495	66.2	211	81.8	706	70.2
Oral leukoplakia is a OPMD	201	26.9	161	62.4	362	36
OPMD will always progress to malignancy	297	39.7	180	69.8	477	47.4
Early detection of oral cancer is difficult	492	65.8	199	77.1	691	68.7
Cancer of the floor of the mouth has a poor prognosis.	174	23.3	102	39.5	276	27.4
Overall 5-year survival rate <70%.	75	10	36	14	111	11
Radiotherapy alone is the best method of treatment for advanced oral cancer	297	39.7	175	67.8	472	46.9

Table 2. Participants' clinical exposure to oral cancer during undergraduate training

	Medical N	(748) %	Dental N	(258) %	Total N	(1006) %
Examined a patient with OPMD	93	605	50	126	121	11
Examined a patient with oral cancer	114	595	38	138	110	10
Assisted a biopsy	15	690	43	49	198	11
Sufficient knowledge on prevention and detection of OPMD/ oral cancer	63	640	44	72	174	12

Discussion

Medical and dental undergraduates who participated in this study had a good understanding of the aetiological agents of OPMD and oral cancer. However, identification of alcohol as a potential risk for oral carcinogenesis was low (47.8%). In contrast to the published literature, where the identification of alcohol as a risk factor is high among dental students in this study, only 43.4% of dental students in this study identified it correctly, whereas among medical students it was higher (49.3%) [8]. This shows the importance of emphasising the role of alcohol in causation of oral cancer in teaching curricula.

Even though they had a good knowledge of some OPMDs, oral erythroplakia as an OPMD was identified correctly only by 18.3% of the respondents. Low awareness of erythroplakia as an OPMD has been reported by others as well [8]. Only 11% knew the overall 5-year survival rate of oral cancer. Knowledge of OPMD and oral cancer among the participants was not satisfactory, and only 10.7% of the respondents had good knowledge of OPMD and oral cancer, and in 12.5%, it was very poor. Similar to the literature from other countries, dental students, especially students in the final year, had a significantly better knowledge ($p<0.05$) [10].

About 80% of the medical students had not examined an OPMD or a single oral cancer. A significant number of medical and dental students who have completed clinical training believe that they do not have sufficient knowledge on prevention and detection of OPMD and oral cancer. In a country where OPMD and oral cancers are common, this emphasizes the need for a change in the medical curriculum to incorporate this important area.

Conflicts of interests

There are no conflicts of interest.

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