

ORIGINAL ARTICLE

Awareness of Oral Cancer Among Professionals Practicing General Medicine and General Dentistry in LahoreSABA HANIF¹, ARMAGHAN ISRAR MIRZA², SAADIA FIRDOUS³, NABEELA RIAZ⁴, SAMREEN YOUNAS⁵, ZUBAIR AHMAD⁶, ZARA SHAKEEL⁷¹Demonstrator OMFS KEMU²Associate Professor OMFS KEMU³Assistant Professor OMFS Avicenna Dental College Lahore⁴Professor/HOD/ OMFS KEMU⁵Demonstrator OMFS KEMU⁶Manager Inspections Punjab Health Care Commission⁷BSc Dental technology KEMUCorresponding author: Saadia Firdous, Email: dr_saddia@yahoo.com, Cell: 03314050989**ABSTRACT****Objective:** To inquire the oral cancer awareness among general medical and general dental professionals and their knowledge of early detection and prevention of oral squamous cell carcinoma.**Study design:** cross sectional study**Place and duration of study:** Oral and maxillofacial surgery Department King Edward Medical University from 5th November 2019 to 5th February 2020.**Methodology:** A questionnaire was given to dental and medical practitioners and their responses were included in the results. This study was done in three months' period from 5th November 2019 to 5th February 2020 after ethical approval from institutional review board.**Results:** The questions were given back by 57 general medical practitioners and by 40 general dental practitioners, producing return rates of 38% GMPs and 26.66% GDPs respectively. The questions were answered by 93 GMPs and by 110 GDPs producing rates of 62% GMPs and 73.33% GDPs respectively.**Conclusion:** Patients suffering from oral pathologies often go to their general medical practitioner and dental practitioners. The number of patients of squamous cell carcinoma of oral cavity are rising in the Pakistan, hence general medical and general dental practitioners need to play significant role. This study talks mainly about the need for improvement in awareness about oral squamous cell carcinoma.**Keywords:** oral cancer, awareness, risk factors**INTRODUCTION**

Oral squamous cell carcinoma is one of the significant health issue across the world. Squamous cell carcinoma accounts 95% of all oral cancer.¹ South east Asia (India, Pakistan, Nepal and Bangladesh) is one of the high risk populations for oral cancers.² according to World Health Organization data, there is risk of epidemic spread of OSSC in this region by 2020.^{3,4} Squamous cell carcinoma is a malignant neoplasm of epithelial cells showing increased squamous cell proliferation and identified by the presence rete ridges and keratin pearls.

According to previous studies of the oral cancer, it is estimated that more than 500000 patients have oral cancer around the world and approximately per year cases are 389000.⁵ So that's why it is called most common cancer in the world. Some studies shows it is the 6th most common malignancy.⁶ So basically oral cancer can be stated approximately 2.4% of all oral cancers.⁷ The major risk factors that cause oral cancer are alcohol consumption and smoking tobacco but betel quid chewing and pan chewing also linked to oral cancer.

Previous studies also shows that oral cancer increases with age by alcohol and tobacco consumption mostly.⁸ Oral cancer is most common in men in third world countries but it occurs in women and young patients too. The detection of oral cancer at initial stage increases the chance of cure by reducing morbidity and makes health professionals more manageable to treatment. Because of this early detection of the lesions and invasive cancers of the oral cancer, screening can be used for oral cancer treatment.

The most simple and acceptable screening test for oral cancer is visual inspection. Patients can be diagnosed by this test.⁹ But delay in early detection can lead to more morbidity associated with oral cancer. Mouth cancer can be preventable by avoiding its known risk factors. From the past few decades, lack of public awareness has been noticed one of the major factor in delaying treatment and timely referral of oral cancer.

Lack of awareness of general medical and dental professionals can also cause in delay in the treatment of oral

cancer. Many efforts are made to raise the awareness among the public and health professionals (general medical and dental professionals) for oral cancer by initiatives like mouth cancer awareness week. But there is no effect of these initiatives (like mouth cancer awareness week) on reduction of patient or referral delay. And public perception about risk factors and oral cancers signs and symptoms is still not appreciable.

But with the help of social media, newspaper, articles, and billboard oral cancer prevention campaign can be helpful to raise oral cancer awareness. So the aim of this study is to assess the knowledge among the medical professionals and dental professionals of prevention and early detection of oral cancer.

METHODOLOGY

This study was done in three months period from 5th November 2019 to 5th February 2020 after ethical approval from institutional review board. The general medical and dental professionals present at the Mayo Hospital, Punjab dental Hospital and Ganga Ram Hospital Lahore were included in this study.

A questionnaire was given to medical professionals and dental professionals in above given hospital in Lahore. A questionnaire based on ten questions and those questions were, investigating about the routinely oral mucosa examination, oral screening habits, knowledge about the risk factors of oral cancer, knowledge about the changes associated with oral cancer, to give public knowledge about risk factors, to have sufficient knowledge concerning prevention and detection of oral cancer, point of referral selection, desire of further information and training and promotion of oral cancer awareness and factors predisposing patients to risk. A questionnaire required at least fifteen minutes to complete.

Data Collection Analysis: All Data was analyzed by using SPSS 24 version and student t-test, χ^2 and extended χ tests were applied.

RESULTS

The questions were sent back by 40 general dental and by 57 general medical practitioners, with return rates of 38% GMPs and 26.66% GDPs respectively. Questionnaires were filled by 93 GMPs and by 110 GDPs producing rates of 62% GMPs and 73.33% GDPs respectively.

Question 1 & 2: Professionals routinely examined patient's oral mucosa 45 GMPs and 100 GDPs percentages 48.38% GMPs and 90.90% GDPs of the professionals who did not check the mucosa of oral cavity of patients with increased risk, 48 GMPs and 10 GDPs percentages 51.61% GMPs and 9.09% GDPs

Question 3: Do you know about the risk factors of oral cancer? The risk factors are shown in table 1.

Some professionals 25 GMPs (percentage) 26.88% and 39 GDPs (percentage) 35.45% were known about risk factors of oral cancer but said only "yes" without mentioning risk factors. 63 GMPs percentage 71.59% and 69 GDPs percentage 63.88% mentioned names of risk factors. Total 88 GMPs percentage 94.62% and 108 GDPs percentage 98.18% were known about risk factors but GDPs were more aware of risk factors than GMPs.

Most common risk factors smoking, alcohol, pan chewing, betel nut chewing

Smoking risk factor known by 51 GMPs percentage 54.83% and 61 GDPs percentage 55.54%

Alcohol risk factor known by 17 GMPs percentage 18.27% and 27 GDPs 24.54%

Pan chewing risk factor known by 33 GMPs percentage 35.48% and 51 GDPs percentage 46.36%

Betel nut chewing risk factor known by 20 GMPs percentage 21.50% and 26 GDPs percentage 23.63%

So, smoking was identified well by all GDPs and GMPs other than risk factors

Question 4: 81 GMPs percentage 87.09% and 103 GDPs percentage 93.63% were reported regularly creating awareness to patients about the risk factors.

Question 5: What signs and symptoms within mouth would you relate with oral cancer? As this was an open question, a variety of responses were gathered. Changes in oral region associated with oral cancer are shown in table 2.

84 GMPs percentage 90.32% and 107 GDPs percentage 97.27% were well known about oral changes associated with oral cancer.

Question 6: Preferred points of referral

OMFS= 46 GMPs percentage 49.46% and 97 GDPs percentage 88.18%

ENT= 22 GMPs percentage 23.66% and 4 GDPs percentage 3.63%

Oral medicine= 12 GMPs percentage 12.90% and 4 GDPs percentage 3.63%

GDPs selected OMFS more frequently than oral medicine and ENT as their point of recommendation

Question 7: 31 GMPs percentage 33.33% and 65 GDPs percentage 59.09% showed that they had ample update related to prevention and diagnosis of cancer in oral region.

Question 8 & 9: 84 GMPs 90.32% and 103 GDPs 93.63% respectively demanded further information on cancer in oral cavity with an information pack in spite of arranging meetings or seminars.

Question 10: All dental professionals and all medical professionals except 1 (98.9%) think that we should launch a campaign on social media and websites for awareness of oral cancer and its risk factors

Table 1:

Questions	Responses	Dental professionals n (%)	Medical Professionals n (%)
Do you routinely see patient's oral mucosa?	Yes	100 (90.90)	
	No	10 (9.09)	45 (48.38)
Do you know about the risk factors related to oral squamous cell carcinoma?	Yes	108 (98.18)	48 (51.61)
	No	2 (1.81)	88 (94.62)
How many mentioned names of risk factors?	Pan chewing	39 (35.45)	5 (5.37)
	Smoking	61 (55.54)	25 (26.88)
How many said only "yes" in answer?	Alcohol	27 (24.54)	51 (54.83)
What would you consider as risk factors for cancer in oral region?	Betelnut chewing	26 (23.63)	17 (18.27)
	Yes	103 (93.63)	20 (21.50)
Do you tell your patients/ public about risk factors?	No	7 (6.36)	81 (87.09)
What symptoms in mouth would you consider with oral cancer?	Erythroplakia	58 (52.72)	12 (12.90)
	Leukoplakia	49 (44.54)	26 (27.95)
How many were well aware about oral signs associated with oral cancer?	Oral ulcer	71 (64.54)	22 (23.65)
	Others	83 (75.45)	47 (50.53)
Where would you refer a patient if you suspect premalignant/malignant lesion?	OMFS	107 (97.27)	44 (47.31)
	ENT	97 (88.18)	84 (90.32)
Do you feel that you have sufficient information regarding prevention and detection of oral cancer?	Oral medicine	4 (3.63)	46 (49.46)
	Yes	4 (3.63)	22 (23.66)
Would you like more information or training an oral cancer?	No	65 (59.09)	12 (12.90)
	Yes	45 (40.90)	31 (33.33)
If so which format would you desire?	Information pack	103 (93.63)	62 (66.66)
	Seminars	7 (6.36)	84 (90.32)
Whats your opinion we should launch a campaign on social/media websites for awareness of oral cancer and its riskfactors?	Meetings	20 (18.18)	9 (9.67)
	Yes	72 (65.45)	28 (30.10)
	No	23 (20.90)	48 (51.61)
		110 (100)	16 (17.20)
		0	92 (98.92)
			1 (1.07)

Table 2: Risk Factors Related with Oral Cancer

Smoking
Betel nut chewing
Pan chewing
Tobacco chewing
Alcohol consumption
Infectious diseases
Viral factors
Autoimmune diseases
UV light exposure
DIETRY
Iron deficient diet
Vitamin A deprived diet
High fat diet

DENTAL
Number of missing teeth/poor oral hygiene
Dental surgeries/ dental procedures
Oral Signs Associated with Oral Cancer
Pain
Bleeding
Ulceration
Leukoplakia
Erythroleukoplakia
Mucosal damage
Hyperplasia
Inflammation
Erythroplakia
Necrosis

Growth and mass
Irregular shape and borders

DISCUSSION

Across the globe, about 650,000 new cancers of oropharynx are detected per year and they result in about 350,000 annual deaths.¹⁰

In Asia, the reported incidence rate is much higher, i.e. 150/100000.¹³ More than 90-95% of oral malignancies are OSCC or one of its variants.^{11,12,14}

Early detection and timely referral are really significantly affecting prognosis of patients suffering from squamous cell carcinoma. The oral cavity is very easy to examine and consent can be obtained without any ethical issue. It is very easy for dentists to include the screening protocol into their routine examinations. A study performed by M Greenwood and R J, Lowry¹⁵ to compare the perception of oral cancer and related issues in general dental and general medical professionals. It was concluded that dental professionals have diagnosed more cases of oral cancer than medical practitioners.

Joanne B. Clovis, et al.¹⁶ conducted a study to find information along with ideas of dentists related to oral cancer in Nova Scotia and British Columbia. The conclusion showed that most dentists were aware of their deficiency of knowledge.

A study conducted by Saba et al¹⁷ at King Edward medical university Lahore in 2012 showed that 77% of medical practitioners and 97% of the dental professionals will refer case of Oral cancer to oral and maxillofacial surgeon hence showing the need of improved education among general medical practitioners. The authors suggested a better education at undergraduate level, more interactive sessions and seminars to create awareness among medical colleagues.

L. M. Carter and G. R. Ogden¹ carried a study to know dental Practitioner's and General Medical Practitioner's (GMPs) perception of preventing and early detecting of oral squamous cell carcinoma and concluded that GMPs were not examining the oral mucosa on routine basis.

In our study the results showed Professionals routinely examined patient's oral mucosa 45 GMPs and 100 GDPs 48.38% GMPs and 90.90% GDPs respectively. Some professionals 25 GMPs (percentage) 26.88% and 39 GDPs (percentage) 35.45% were known about risk factors of oral cancer but said only "yes" without telling about risk factors. 71.59% GMPs and 69.63.88 %GDPs showed names of risk factors. Total 94.62% GMPs and 98.18%GDPs known about risk factors but general dental practitioners identified a larger number of risk factors than GMPs. About 87.09%GMPs and 93.63% GDPs reported regularly giving advice to their patients on the risk factors for oral cancer.

When it comes to preferred points of referral
OMFS= GMPs 49.46% and GDPs 88.18%

ENT= GMPs 23.66% and GDPs 3.63%.

Oral medicine= GMPs 12.90% and GDPs 3.63%.

Our results showed 90.32% GMPs and 93.63% GDPs respectively asked for further details.

All general dental professionals and all general medical professionals except 1 (98.9%) think that we should launch a campaign on social media and websites for awareness of oral cancer and its risk factors.

The present study shown, that there is more requirement of training for dental professional to enhance perception of oral cancer and related causative factors.

Educational reforms should be made pointing towards providing latest information on etiological factors, intra oral examination, other diagnostic aids such as brush biopsy, Congo red or toluidine blue staining, use of vitalite thereby aiding in early recognition of oral carcinoma. It is imperative to give significance to intra oral examination at the undergraduate level and provide chances for dentists and medical professionals to ensure that such examinations become a habit and early detection and referral is ensured. The recommendations is to provide information through booklets and arranging workshops and seminars, more stress on recognition of oral pathologies and best biopsy technique in the clinical practice. Frequent organization of continuing medical education programs and seminars on oral squamous cell cancer awareness is also recommended.

This research has certain drawbacks that should be kept in mind. The study performed on dental professionals and medical practitioner in Lahore and not represent further region. However, according to our viewpoint that the practitioners were quite honest in their responses..

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