

KNOWLEDGE, ATTITUDE AND PRACTICE OF DENTAL PRACTITIONERS IN KARACHI REGARDING ORAL CANCER

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ABSTRACT

The aim of this study was to assess the knowledge, attitude & practices of dentists regarding oral cancer.

This was a cross sectional study conducted in the year 2018 in Karachi, Pakistan. The questionnaire comprised of demographics, and other three major categories of Knowledge, Practice and attitude. The first category assessed the prior knowledge of dental clinicians about site, signs, symptoms and risk factors of oral cancer the further two sections evaluated practices and attitude of dental practitioners regarding oral cancer screening, examination and their ability to detect oral cancer. In the study, 70% of the dentists had knowledge about common risk factors. 64.3 % dentists agreed that squamous cells are most common cancer causing cell. When question regarding early sign and symptoms were asked only 68.3% agreed that Erythroplakia is among most common early sign & symptom when questions regarding attitude were asked 77% dentists agreed that oral screening leads to early diagnosis while 75.4% dentists believed that they are trained to perform oral examination to detect oral cancer. Furthermore, 84.9% dentists said they performed screening on every patient.

Present study indicates that dental practitioners have sufficient knowledge about the etiological factors and diagnostic procedures. Furthermore, it highlights the need for standardized oral screening procedures, Which will lead to early detection of oral cancer and is essential to reduce oral cancer related mortality rates.

Key Words: Oral Cancer; Knowledge; Risk Factors; Awareness

INTRODUCTION

According to Shaukat-Khanum cancer registry, oral cancer is the second most common cancer in Pakistan next to breast cancer in females and lung cancer in males¹ and Howlader N. Et al 2013² have stated that many lives are lost to oral cancer in Pakistan. Furthermore, Kevin DS. Et al 2017³ in their research estimated and stated that global incidence of lip, oral cavity, and pharyngeal cancer crossed 529,500 cases, corresponding to 3.8% of all cancer cases.

Thereby, declaring Pakistan to be one of the geographical areas with particularly high rates^{2,3}, recent studies indicate that men having higher rates of oral cancer compared to women, especially due to high rate of tobacco-chewing. Petersen PE 2017⁴ defines tobacco not only as a risk factor to cancer but also as an addiction for hundreds of millions of people worldwide, many of which are marketed for oral or nasal use as indicated by epidemiological local studies by Khan Z. Et al 2017⁵.

Furthermore, Meta-analysis performed by Romana I. Et al 2018⁶ indicates oral cancer to be the second most common form of cancer in Pakistan among both genders. Ethnicity has played a very important role in Karachi amongst Mohajir community due to betel nut and pan consumption whereas in Pashtun community the consumption of snuff dipping is immense⁵⁻⁶.

Avani NP et al 2017⁷ have concluded in their research that survival rate of the cancer patient depends on early detection. However, according to Yasmin B. Et al 2004⁸, the survival rate for oral cancer has not improved in the past 50 years, perhaps, due to no major changes in the screening process⁹.

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Therefore, this study fulfills the need of assessment of knowledge, attitude and practices of oral healthcare practitioners as they can be the corner stones for early detection and diagnosis of oral cancer therefore, they can contribute to reduce the incidence of cancer-related mortality rates amongst the city population.

MATERIALS AND METHODS

This cross sectional study was carried out in the year 2018 in Karachi, Pakistan. The questionnaire included licensed general dentists, identified by PMDC, that are practicing in sub-specialties as individuals or group practitioners. A closed ended 25-itemed questionnaire containing simple “Yes/No/Don’t Know” options was distributed amongst 100 licensed dentists from each of the 5 chosen sectors in Karachi, Pakistan. The sectors selected were *Defence Town, Gulshan Town, Gadap Town, North Nazimabad Town and Saddar Town*.

Furthermore, the questionnaire assessed demographics and practitioners knowledge about the site, signs, symptoms and characteristics of oral cancer lesions as well as their level of expertise in screening and performing biopsies amongst other oral cancer examinations. The data was analyzed using statistical package for social sciences (SPSS).

RESULTS

DISCUSSION

The study assesses the knowledge, attitude & practices of dentists practicing in Karachi, Pakistan in the year 2018. A 25-item survey was conducted which included 100 licensed dental practitioners from 5 different towns of Karachi, Pakistan.

No previous research is available to assess the knowledge, attitude and practice of dental practitioners regarding oral cancer in Karachi Pakistan. The study is the first of its kind to be carried out in the region. Whereas one such study was conducted in Japan and Australia¹⁰⁻¹¹, which concluded that all dental practitioners were carrying out regular screenings of the oral mucosa as a part of their routine diagnostic activities. In comparison to this study about 84% of the dentists said that they perform screenings on every patient who visit their clinic in Karachi.

As per this study, all the dentists had greater than 70% knowledge about the common risk factors predisposing to oral cancer. A difference was noted when about low consumption of fruits and vegetables were asked as a risk factor of oral cancer, where 58% of the dentist agreed to it while the other 42% disagreed. Recent studies have highlighted the role of nutritional factors in the etiology of oral cancer. Such as a study by Anita P. Et al 2018,¹³ concluded and established the

TABLE 1.1 – SUMMARY OF 25 ITEM QUESTIONNAIRE FOR DENTAL PRACTITIONERS

Risk factor of oral cancer		N	%	P-value
Low oral hygiene	Yes	109	86.5	0.26
	No	16	12.7	
	Don't know	0	0	
Use of tobacco	Yes	124	98.4	0.402
	No	1	0.8	
	Don't know	0	00	
Recurrent oral cancer lesions	Yes	95	75.4	0.27
	No	30	23.8	
	Don't know	0	0	
Smoking	Yes	125	100	0.00
	No	0	0	
	Don't know	0	0	
Use of alcohol	Yes	110	87.3	0.00
	No	15	11.9	
	Don't know	00	00	
Mainpuri, Snuff, Maawa, Shisha, Cigar	Yes	117	92.9	0.007
	No	8	6.3	
	Don't know	00	00	

Low Consumption of fruits and vegetables	Yes	74	58.7	0.12
	No	49	38.9	
	Don't know	00	00	
What Are Precancerous Lesions?				
Red Erosions	Yes	104	82.5	0.10
	No	21	16.7	
	Don't know	00	00	
Vesiculo-bullous lesion	Yes	103	81.7	0.00
	No	22	17.5	
	Don't know	00	00	
Non Scrapeable White Patch	Yes	94	74.6	0.00
	No	30	23.8	
	Don't know	1	0.8	
Scrapable White patch	Yes	90	71.4	0.00
	No	34	27.0	
	Don't know	1	0.8	
Common site of oral cancer?				
Cheek and palate	Yes	99	78.6	0.00
	No	24	19.0	
	Don't know	3	2.4	
Tongue and Floor of Mouth	Yes	100	79.4	0.00
	No	19	15.1	
	Don't know	7	5.6	
Surface of lips	Yes	96	76.2	0.00
	No	25	19.8	
	Don't know	4	3.2	
Signs & Symptoms				
Lump	Yes	106	84.1	0.004
	No	20	15.9	
	Don't know	00	00	
Erythroplakia	Yes	86	68.3	0.00
	No	29	23.0	
	Don't know	11	8.7	
Leukoplakia	Yes	94	74.6	0.00
	No	21	16.7	
	Don't know	11	8.7	
Bleeding, pain, numbness	Yes	98	77.8	0.00
	No	26	20.6	
	Don't know	2	1.6	
Non Healing Ulcer	Yes	96	76.2	0.00
	No	30	23.8	
	Don't know	00	00	
ATTITUDE		N	%	P-Value

Do you believe in the necessity of oral mucosal examination?	Yes	101	80.2	0.880
	No	24	19	
	Don't know	1	.8	
Do you believe that you are adequately prepared to perform an oral examination?	Yes	95	75.4	0.016
	No	28	22.2	
	Don't know	3	2.4	
Do you believe that oral cancer screening on a national basis would be effective in decreasing the mortality of oral cancer?	Yes	90	71.4	0.006
	No	36	28.6	
	Don't know	0	0	
Practice		N	%	P-value
Do you do screening on every patient that comes to your clinic?	Yes	107	84.9	0.031
	No	19	15.1	
	Don't know	0	0	
If you find a non-healing ulcer what do you do?				
Refer to specialist?	Yes	97	77	0.044
	No	27	21.4	
	Don't know	1	0.8	
Perform biopsy yourself?	Yes	75	59.5	0.002
	No	51	40.5	
	Don't know	0	0	

link between the low consumption of fruits and vegetables and increased risk of cancer development, This indicates that those 42% of dentists who disagreed do not read scientific articles and lack updated knowledge to diagnose oral cancer lesions. Furthermore, according to Oral Cancer Foundation 2018¹⁴ early detection and tobacco control can considerably decrease the mortality rates and increase the survival rate up to 50%. Whereas, dental practitioners can play a very vital role in awareness, early detection and screenings so their knowledge should be assessed and updated accordingly

In this study, on average 70% of dentists had the knowledge about the precancerous lesions. Furthermore, in this study 90% of the dentist agreed that oral cancer causing cells were squamous cells, 79.4% of the dentists indicated that the common sites experienced in patients is tongue and floor of mouth.

When questions about sign and symptoms of oral cancer were asked, about 84.1% of the practitioners agreed that having a lump is a sign and symptom of oral cancer. Almost 75% of the dentist agreed that

leukoplakia, bleeding, pain, numbness and non-healing ulcers can be a sign of oral cancer. However, only 68.3 % of dentists reckons that erythroplakia can be a sign of oral cancer and got the lowest percentage when compared to other asked sign and symptoms. According to the research conducted by Patton B, Lauren L. (Oral cancer early detection),¹⁶ visual screenings are key for early detections of oral cancer due to its feasibility and cost effectiveness. In order to perform screenings accurately dental practitioners should have vigorous knowledge regarding signs symptoms early lesions and common sites.

In this current study when questions regarding diagnosis were asked, 80% of the dentist believed that biopsy should be performed for diagnosis of oral cancer. Furthermore, 80% of dentists also believe in the necessity of oral mucosal examination as it's an essential mean of early detection of oral cancer and premalignant lesions. Around seventy-six percent of dentists responded that visual screening is effective in early detection of oral cancer. This indicates that

majority of the dentists agreed to the importance of oral cancer screening. Therefore, this study agrees with the results of Azhar N. Et al 2018¹² where 89.9% of dentists believed that visual screening is effective in the early detection of oral cancer and 52.4% of general dental practitioners believe that oral screening on a national basis would be effective in decreasing the mortality of oral cancer.

Furthermore, in this study when dentists were asked that if they updated themselves regularly regarding the latest oral cancer drugs and intervention procedures, only 69% of the dentists responded. Results indicates the need of systematic educational updates in oral cancer prevention and early detection. as suggested in studies conducted by Anita P. Et al 2018¹³ Tax CL & Haslam K. Et al 2017¹⁵

In this study, during the assessment of practices it was concluded that 75.6% of the dentists have oral cancer screening facility in their clinic/Hospital while 84.9% of the dentists said they do screening on every patient that comes to their clinic and referred cancer-diagnosed patients to specialist. Additionally the study conducted by Patton B. Et al 2017¹⁶. Indicates that A noteworthy decrease of 34 % in oral cancer mortality among a high-risk group of tobacco or alcohol users when routine checkups are followed by oral visual screening. Furthermore, in the practice section dentists also indicated that they refer their patients to a specialist in treating a non-healing ulcer rather than performing a biopsy themselves.

CONCLUSION

In the end, this study implies that dental practitioners have ample knowledge about the etiological factors and diagnostic procedures carried out for oral cancer.

RECOMMENDATIONS

This study indicates that updated knowledge and cancer screening facilities are required amongst dental practitioners to diagnose oral cancer. Furthermore, a need for national standardized oral screening procedure, which leads to early detection of oral cancer and is essential to reduce mortality rates in Karachi, is required.

Dental practitioners should analyze patients on the high risk of oral cancer by their history and there is a need to provide regular screening of potential oral

cancer patients. However, further research is required to assess the facilities available in Karachi.

REFERENCES

- 1 SKMCH Registry; 2015
- 2 Howlader N, Noone AM, Krapcho M, SEER Cancer Statistics Review, 1975-2009. Bethesda, Md: National Cancer Institute, 2013;4(4):119-25.
- 3 Shield KD, Ferlay J, Jemal A, Chaturvedi AK, Bray, The global incidence of lip, oral cavity, and pharyngeal cancers. 2017; 3(2):51-64
- 4 Petersen PE. Tobacco and oral health - the approach of the WHO Oral Health Programme, 2017; 4(2):69-75.
- 5 Khan Z, Kader RA, Katchi S, Heise TL, Dreger S; Naswar (Smokeless Tobacco) Use and the Risk of Oral Cancer in Pakistan: A Systematic Review with Meta-Analysis Nicotine & Tobacco Research, 2017;6(2):87-95.
- 6 Idrees R, Fatima S, Ghafar JA, Raheem A, Ahmad Z; Cancer prevalence in Pakistan: meta-analysis of various published studies to determine variation in cancer figures resulting from marked population heterogeneity in different parts of the country. World Journal of Surgical Oncology, 2018;4(3):112-19.
- 7 Avani NPM, Srinivas P, Kothia NR, Chandu VC. Recent advances in the early diagnosis of oral cancer: A systematic review. Int J Med Rev. 2017; 4(4):119-25.
- 8 Bhurgri Y, Bhurgri A, Nishter S, Ahmed A, Country Profile of Cancer and Cancer Control, JPMA 2004; 5(3): 62-7
- 9 Peterson CE, Gordon SC, Hew CWL, Dykens JA, Jefferson GD; Society of Behavioral Medicine position statement: Society of Behavioral Medicine supports oral cancer early detection by all healthcare providers, Translational Behavioral Medicine, 2018;4(4):120-26.
- 10 Qureshi MA, Mirza T, Khan S. Cancer patterns in Karachi (all districts), Pakistan: First results (2010–2015) from a Pathology based cancer registry of the largest government-run diagnostic and reference center of Karachi, Cancer Epidemiology, 2016;4(5):114-22
- 11 Haresaku S, Makino M, Sugiyama S, Naito T, Mariño RJ. Comparison of Practices, Knowledge, Confidence, and Attitude towards Oral Cancer among Oral Health Professionals between Japan and Australia. Journal of Cancer Education, 2018; 4(4):429–35
- 12 Azhar N, Sohail M, Ahmad F, Ahmed S, Jamil S, Mughal N, Salam H. Risk factors of Oral cancer- A hospital-based case control study. J Clin Exp Dent. 2018; 10(4):396-401.
- 13 Patel A, Pathak Y, Patel J, Sutariya V -Role of nutritional factors in pathogenesis of cancer Food Quality and Safety, March 2018;1(6):27–36
- 14 American Cancer Foundation. Cancer Facts & Figures, Atlanta: ACSJ; 2018; 5(4):312-24.
- 15 CL Tax , Haslam SK, Brilliant MG, Doucette HJ, Cameron JE - Oral cancer screening: IODH, 2017; 4(4)179-86
- 16 Patton B, Lauren L. Oral cancer early detection: What will it take? JOMS, 2017; 4(7):115-22.

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