

International Journal of Dental Science and Innovative Research (IJDSIR)

IJDSIR : Dental Publication Service

Available Online at: www.ijdsir.com

Volume - 7, Issue - 1, February - 2024, Page No. : 09 - 15

Awareness of oral cancer and precancer in patients visiting the outpatient department of dental hospital in Nashik city, India

¹Dr.Surabhi Ashok Sarode, MDS, Oral Pathology and Microbiology, MGV's KBH Dental College, Nashik, Maharashtra, India.

²Dr. Pradeep G L, Professor, Dept. of Oral Pathology and Microbiology, MGV's KBH Dental College, Nashik, Maharashtra, India.

³Dr. Nilima Prakash, Professor, Dept. of Oral Pathology and Microbiology, MGV's KBH Dental College, Nashik, Maharashtra, India.

⁴Dr. Aarti M. Mahajan, Professor and HOD Dept. of Oral Pathology and Microbiology, MGV's KBH Dental College, Nashik, Maharashtra, India.

⁵Dr. Smita J. Chaware, Senior Lecturer, Dept. of Oral Pathology and Microbiology, MIDSR Dental College and Hospital, Latur, Maharashtra, India.

Corresponding Author: Dr. Surabhi Ashok Sarode, MDS, Oral Pathology and Microbiology, MGV's KBH Dental College, Nashik, Maharashtra, India.

Citation of this Article: Dr. Surabhi Ashok Sarode, Dr. Pradeep G L, Dr. Nilima Prakash, Dr. Aarti M. Mahajan, Dr. Smita J. Chaware, "Awareness of oral cancer and precancer in patients visiting the outpatient department of dental hospital in Nashik city, India", IJDSIR- February – 2024, Volume –7, Issue - 1, P. No. 09 – 15.

Copyright: © 2024, Dr. Surabhi Ashok Sarode, et al. This is an open access journal and article distributed under the terms of the creative common's attribution non-commercial License. Which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given, and the new creations are licensed under the identical terms.

Type of Publication: Original Research Article

Conflicts of Interest: Nil

Abstract

Context: The natural history of oral cancer and precancer provides some encouraging evidence that early detection and management of small cancers of certain sites such as tip of the tongue and lip results in a better prognosis. Perhaps due to lack of awareness, affected individuals do not seek treatment at early stages of the disease. Thus, a survey was carried out to ascertain the situation in a hospital-based patient population and to assess awareness about oral cancer and precancer among patients visiting the outpatient department of a dental hospital in Nashik city, India.

Aims: To assess awareness about oral cancer and precancer among patients visiting the outpatient department of a dental hospital.

Methods and Material: A self-administered questionnaire was used to collect information from 500 randomly selected outpatients attending the Dental Hospital. The questionnaire included questions to ascertain information on socio-demographic parameters,

awareness of oral cancer and precancer, habits of betel chewing, smoking and alcohol consumption. Statistical analysis used: -

Results: 500 people participated in the study out of which 460 (92%) were aware about oral cancer, 283(56.2%) were aware about precancer.448 (89.60%) patients knew that chewing tobacco is one of the risk factor for oral precancer and 467(93.40%) were aware that it is also the risk factor for oral cancer.

Conclusions: The study shows that the patients attending the Dental Hospital were well informed about oral cancer. But, awareness about oral precancer was relatively low. Knowledge about risk factors like alcohol consumption and chronic trauma was low as compared to smoking and tobacco chewing.

Keywords: awareness, oral precancer, oral cancer, smoking, tobacco

Key Messages: Early detection of oral cancer is the most effective means to improve survival and to reduce morbidity, treatment duration, and associated costs. The lack of knowledge and awareness and risk factors is responsible for the diagnostic delay in identifying the potentially malignant disorders. Early detection helps in decreasing the incidence but also in improving the survival rate for those who develop oral cancer.

Introduction

Oral cancer is a serious and growing problem in many parts of the globe. Oral and pharyngeal cancer, grouped together, is the sixth most common cancer in the world.¹ India has the largest number of oral cancer cases and one third of the total burden of oral cancer globally. Oral cancer poses a serious health challenge to the nations undergoing economic transition.² In India, around 77,000 new cases and 52,000 deaths are reported annually, which is approximately one-fourth of global incidences. Oral squamous cell carcinoma (OSCC) contributes remarkably i.e. 84-97% to oral cancer.²

It has been well established by researchers that virtually all oral cancers are preceded by visible changes in the oral mucosa, usually in the form of white, red, or red and white patches.³ Lack of public awareness about these signs, symptoms and risk factors are believed to be responsible for the diagnostic delay in identifying these potentially malignant disorders.³ In a World Health Organization (WHO) Workshop, held in 2005, the terminology, definitions and classification of oral lesions with a predisposition to malignant transformation have been discussed. The term "potentially malignant" was preferred above "premalignant" or "precancerous" furthermore, it has been recommended to abandon the traditional distinction between potentially malignant lesions and potentially malignant conditions and to use the term "potentially malignant disorders" instead.⁴ Risk factors for oral cancers include smoking, alcohol use, smokeless tobacco products, and HPV (human papillomavirus) infections, with smoking and alcohol having synergistic effects.⁵

Oral cancer can be identified by the screening program.⁶ Ignorance about the danger signs or lack of health-seeking behavior in case of premalignant lesions is perhaps responsible for this situation. ⁶ Screening and health education are well-recognized approaches for preventing the occurrence of oral cancers.⁶

Delayed diagnosis of oral precancer and cancer is mainly due to lack of awareness of the public about sign and symptoms and its associated risk factors which influences the treatment and survival rates. The study was carried out to find out awareness about oral precancer cancer among patients visiting OPD (outpatient department) of dental college in Nashik.

Material and Methods

This study was conducted in the year 2017 on patients attending the OPD of dental college in Nashik city, India. The study was carried out for 3 months of duration (August 2017 to October 2017). To assess the awareness of oral precancer and cancer, а self-administered questionnaire was designed. The questionnaire consisted of relevant questions related with socio-demographic information, awareness of precancer and cancer. Prior permission from Institutional ethical committee was taken before starting the study. Questionnaire was distributed to patients visiting OPD randomly. Prior distribution questionnaire was evaluated by dental professionals (faculty members) of Dental College.

Patients consent was taken prior distributing the questionnaire. The questionnaire distributed was in two languages English and one regional language i.e., Marathi. The study was carried out in randomly selected five hundred patients (n=500).

Close-ended questionnaire was conducted, questions were based on understanding of patients. After Table 1: Socio-demographic data of the participants completion of questionnaire information was given to patients regarding oral precancer and oral cancer for spreading more awareness. Statistical analysis was not done. Data was collected and entered in Microsoft excel and the responses were calculated.

Results

Total 500 people were participated in the study out of which 187 (37.4%) were males and 313 (62.6%) were females. 289 (57.8%) subjects belonged to 20 age group, 107 (21.4%) belonged to 21-40 age group, 71 (14.2%) belonged to 41-60 age group, 33 (6.6%) were >60 age group. 343 (68.6%) of the population was from the urban area , while 157 (31.4%) was from the peripheral rural area. 91.4% of the subjects were literate. 176 (35.2%) were students, 87 (17.4%) were doing jobs, 122 (24.4%) were housewives, 37 (7.4%) were farmers and 78 (15.6%) were self employed. 38 (7.6%) were smokers, 53 (10.6%) were having habit of chewing tobacco, 15 (3%) were alcoholic and 304 (60.8%) with no deleterious habit. (Table 1)

	Number of participants	Percentage
Gender		
Male	187	37.4%
Female	313	62.6%
Age		
20 yrs	289	57.8%
21-40 yrs	107	21.4%
41-60 yrs	71	14.2%
>60 yrs	33	6.6%
Population		
Urban area	343	68.6%
Rural and peripheral areas	157	31.4%
Occupation		

Students	176	35.2%	
Service	87	17.4%	
Housewives	122	24.4%	
Farmer	37	7.4%	
Self employed	78	15.6%	
Habit			
Smoker	38	7.6%	
Chewing tobacco	53	10.6%	
No deleterious habit	304	60.8%	

Awareness of oral precancer and cancer

460 (92%) were aware of oral cancer and 40 (8%) were unaware. 283 (56.2%) were aware of predisposing condition called precancer (Table 2).

Table 2: Awareness of or	ral precancer and cancer
--------------------------	--------------------------

	Aware	Unaware
Oral cancer	460 (92%)	40 (8%)
Precancer	283 (56.2%)	217 (43.4%)

Awareness of clinical presentation of oral precancer

293 (58.60%) patients thought precancer looks like white patch in the oral cavity, 147 (29.40%) thought its presentation to be like ulcer, 80 (16%) thought that it causes difficulty in opening mouth and 60 (12%) thought that it is present as red patch in the oral cavity (Table 3). Table 3: Awareness of clinical presentation of oral

precancer

Clinical presentation	Number	Percentage
Ulcer	147	29.40%
White patch	293	58.60%
Difficulty in opening mouth	80	16%
Red patch	60	12%

Awareness of clinical presentation of oral cancer

344 (68.80%) patients were cognizant that oral cancer appears to be persistent red/white patch in the oral cavity, 243 (48.60%) were aware of tissue overgrowth,

©2024 IJDSIR, All Rights Reserved

187 (37.50%) were of the opinion that it represents the ulcer that does not heal, 117 (23.40%) were aware that it can show difficulty in opening mouth while only 80 (16%) patients knew that it can cause difficulty in swallowing and 40 (8%) were aware that oral cancer can be caused by ill fitted denture (Table 4).

Table 4: Awareness of clinical presentation of oral cancer

Clinical presentation	Number	Percentage
tissue overgrowth	243	48.60%
ulcer that does not heal	187	37.50%
difficulty in swallowing	80	16%
persistent red/white patch	344	68.80%
difficulty in opening mouth	117	23.40%
ill fitted denture	40	8%

Awareness of risk factors associated with oral precancer and oral cancer

448 (89.60%) patients knew that chewing tobacco is one of the risk factor for oral precancer and 467(93.40%) were aware that it is also the risk factor for oral cancer. 393(79%) patients were knowledgeable about smoking causes oral precancer and 433(86.60%) were acquainted that it causes oral cancer. 360 (72%) patients were concious that alcohol is a risk factor for oral precancer and cancer. 283 (56.60%) were conversant that chronic trauma is one of the risk factor for precancer and 180 (36%) were alert that it causes oral cancer (Table 5).

age 1

Table 5: Awareness of risk factors associated with oral

precancer and oral cancer

Risk	Risk Oral precancer		Oral cancer	
factors	Yes (%)	No (%)	Yes (%)	No (%)
Chewing tobacco	448 (89.60%)	52(10.40%)	467(93.40%)	33(6.60%)
Smoking	393(79%)	107(21%)	433(86.60%)	67(13.40%)
Alcohol	360(72%)	140(28%)	360(72%)	140(28%)
Chronic trauma	283(56.60%)	217(43.40%)	320(64%)	180(36%)

Sources of information regarding oral precancer and cancer

377 (75.40%) patients well informed about oral precancer and cancer through television, 51(10.20%) had listen to a radio broadcast about oral precancer and cancer, 70 (14%) got to know from medical practitioners and 32 (6.4%) patients had read about precancer and cancer in some newspaper (Table 6).

 Table 6: Sources of information regarding oral precancer

 and cancer

Sources	Number	Percentage
Television	377	75.40%
Newspaper	32	6.4%
Radio programmes	51	10.20%
Medical practitioners	70	14%

Awareness about oral cancer screening and curability

207(41.40%) individuals were aware about oral cancer screening and 293(58.60%) were unaware (Graph 1). 353(70.60%) were aware that oral cancer is curable and 147(29.40%) individuals be of the opinon that oral cancer is incurable (Graph 2).

Awareness about prevention of oral cancer by stoppage of habits like smoking , alcohol, chewing tobacco and spread from touching 457(91.40%) people believes that oral cancer can be prevented by stoppage of habits like smoking, alcohol, chewing tobacco (Graph 3). 43(8.60%) individuals thought that it spreads from touching and 457(91.40%) individuals considered that it does not spread from touching (Graph 4).



Graph 1: Awareness of oral cancer screening



Graph 2: Awareness about curability



Graph 3: Awareness about prevention of oral cancer by stoppage of habits like smoking , alcohol, chewing tobacco





Discussion

The study of the oral cavity is important to identify the pathologies associated with it.⁷Oral squamous cell carcinoma (OSCC) develops from preexisting potentially malignant disorders including oral leukoplakia, erythroplakia, submucous fibrosis, and lichenoid dysplastic lesions or can arise *de novo*.⁸

In rural India there are majority people, still having minimal knowledge regarding oral cancer and its causes marking a high percentage when compared to the urban.⁹

©2024 IJDSIR, All Rights Reserved

When the diagnostic delay exceeds one month, the risk of having an advanced stage oral cancer stage is significantly higher. In most cases, the patient is responsible for a large part of the diagnostic delay; however, delay can also be the result of an incorrect medical approach by not suspecting an oral malignancy and not diagnosing and treating it promptly and adequately.¹⁰

Despite recent advances in the detection and treatment of cancer, visual accessibility of the oral mucosa and the scientific knowledge on cancer risk factors, oral cancer carries a low survival rate (nearly 50%).⁹ Earlier diagnosis greatly increases the patient's chances of survival as the mouth is very accessible for a clinical or self examination.⁹ Lack of consciousness in patients, phase of negation, and ignorance of the symptoms are the factors for not seeing a clinician immediately and are regarded the "first-time loss". The "second-time loss" happens owing to absence of medical and dental professionals' consciousness and absence of timely diagnosis. The "third-time loss" is the period from the diagnosis to the start of therapy.¹¹In our study we found that 460 (92%) were aware of oral cancer and 40 (8%) were unaware. 283 (56.2%) were aware of predisposing condition called precancer.

The high prevalence of oral precancerous lesions and the high morbidity from oral cancer in India provide excellent opportunities for research aimed at prevention and control of overt disease.¹²

Conclusion

The study shows that the patients attending the Dental Hospital were well informed about oral cancer. But, awareness about oral precancer was relatively low. Knowledge about risk factors like alcohol consumption and chronic trauma was low as compared to smoking and tobacco chewing.

- From the above data we can make the following recommendations
 - Patients should be made aware of oral precancer and its complications.
 - Educational programmes should be conducted to create awareness about risk factors and preventive measures of oral precancer and cancer.
 - Patients should be motivated to stop the deleterious habits which leads to oral precancer and cancer.

References

- 1. Warnakulasuriya S. Global epidemiology of oral and oropharyngeal cancer. Oral Oncol 2009;45:309-16.
- Borse V, Konwar AN, Buragohain P. Oral cancer diagnosis and perspectives in India. Sens Int. 2020;1:100046.
- B. Hari Vinay, P. Venkat Baghirath, J. Vijay Kumar, Arvind. Prevalence of precancerous lesions and conditions in Telangana region, Andhra Pradesh, India. J Indian Assoc Public Health Dent. 2014;12:23-7.
- Van der Waal I. Potentially malignant disorders of the oral and oropharyngeal mucosa; terminology, classification and present concepts of management. Oral Oncol. 2009;45(4-5):317-23.
- Mamta A, Sushma P, Shikha J, Shipra M. Oral Cancer Awareness of the General Public in Gorakhpur City. Asian Pacific Journal of Cancer Prevention 2012; 13: 5195-5199.
- Sargaiyan V, Dhakray V, Dhakray N, Aggarwal S, Sengar AS. Effect of Oral Health Education on Oral Cancer and Oral Self-examination in Gwalior, Madhya Pradesh. Int J Oral Care Res. 2018;6(2):S47-48.
- Mangalath U, Aslam SA, Abdul Khadar AK, Francis PG, Mikacha MS, Kalathingal JH. Recent trends in

prevention of oral cancer. J Int Soc Prevent Communit Dent. 2014;4:S131-38.

- Ahire BS, Bhoosreddy AR, Bhoosreddy SA, Pandharbale AA, Kunte VR, Shinde MR. Awareness of patients about existing oral precancerous lesions/conditions in Nashik city of Maharashtra. J Indian Assoc Public Health Dent 2016;14:207-10.
- Gopinath T P.S., Renita D, Vinayak K. Oral cancer awareness in rural Karnataka - are they aware? Journal of Health and Allied Sciences NU 2015:05(03):019-023.
- Abati S, Bramati C, Bondi S, Lissoni A, Trimarchi M. Oral Cancer and Precancer: A Narrative Review on the Relevance of Early Diagnosis. Int. J. Environ. Res. Public Health 2020;17(24):9160.
- Srivastava R, Sharma L, Pradhan D, Jyoti B, Singh O. Prevalence of oral premalignant lesions and conditions among the population of Kanpur City, India: A cross-sectional study. J Family Med Prim Care 2020;9:1080-5.
- Sankaranarayanan R. Oral cancer in India: An epidemiologic and clinical review. Oral Surg Oral Med Oral Pathol.1990;69(3):325-30.

.....