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Awareness About Effects of Consumption of Tobacco and Tobacco Products in Patients with Potentially Malignant Disorders and Oral Cancer

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ABSTRACT

Introduction: Tobacco use remains one of the leading preventable causes of morbidity and mortality worldwide. In India, its extensive cultural acceptance in various forms has led to a high burden of tobacco-related diseases, including oral potentially malignant disorders (OPMD) and oral squamous cell carcinoma (OSCC). Despite the known health risks, awareness about the oral consequences of tobacco use is often limited. Early recognition of symptoms and improved awareness among at-risk individuals are crucial for preventing progression from OPMD to cancer. This study assesses awareness among patients diagnosed with OPMD and oral cancer.

Methodology: A cross-sectional, questionnaire-based survey was conducted at the Department of Oral Medicine and Radiology, Krishna VishwaVidyapeeth, Karad. Ethical clearance was obtained (Protocol No. 210/2023-2024). A structured, validated questionnaire was distributed via Google Forms to 101 patients diagnosed with potentially malignant disorders or oral cancer, who consented to participate. Data on demographic details, tobacco use patterns, awareness about tobacco-related health risks, and knowledge about cessation services were collected. Responses were recorded in Microsoft Excel and analyzed using SPSS version 20. Descriptive statistics summarized awareness levels, and inferential analyses examined correlations between demographics and awareness.

Results: Among 101 participants, 99% reported active tobacco use. About 50.5% were aware that tobacco consumption predisposes to oral cancer, and 61.4% recognized that increased frequency and duration elevated cancer risk. Awareness that tobacco also causes lung cancer was noted in 69% of respondents. Regarding clinical signs, 55.4% identified proliferative mass and 51.5% identified non-healing ulcers as manifestations of oral cancer. Awareness of tobacco cessation counseling services was present in 67.3% of patients, with 64.4% believing counseling to be effective. Efforts to quit tobacco had been made by 58.4% of participants, and 74.2% acknowledged the role of family support in cessation. Although moderate awareness was observed, substantial gaps in knowledge and behavior change were evident. These findings highlight the critical need for targeted education and intervention efforts among high-risk groups.

Conclusion: This study reveals moderate awareness about the harmful effects of tobacco among patients with potentially malignant disorders and oral cancer. However, the gap between awareness and actual behavior change persists. Strengthening individual-level counseling, enhancing community engagement, and leveraging family support systems are essential to promote successful tobacco cessation. Future studies involving larger, diverse populations and clinical correlation are needed to design more effective preventive strategies and interventions.

Keyword: *Tobacco consumption, Oral cancer, Potentially malignant disorders, Awareness, Tobacco cessation, Oral squamous cell carcinoma, Health education, Risk factors, Patient counseling, India*

Awareness about effects of consumption of tobacco and tobacco products in patients with potentially malignant disorders and oral cancer.

1. INTRODUCTION

The use of tobacco is one of the most important preventive reasons for sickness and mortality worldwide. According to the World Health Organization, tobacco is responsible for more than 8 million deaths annually, with a large ratio responsible for cancer of oral cavity, lungs, and other organs [1]. In India, the burden of tobacco -related diseases is particularly high, which contains extensive cultural acceptance of various forms of tobacco consumption, including smoking (cigarettes, bidis) and smoking tobacco (cavity, khaini, and betel nut) [1].

Despite the well -recorded health hazards, awareness of the oral consequences of tobacco use is limited among the normal population. The use of tobacco is closely associated with many oral potentially malignant disorders (OPMD) such as oral submucus fibrosis, leukoplakia, erythroplacia, and eventually, oral squamous cell carcinoma (OSCC) [2]. These conditions often move silently and until they reach advanced stages, they can live without thinking, compromise on pregnancy and survival rate. The initial identity of symptoms and increasing awareness between patients is necessary in preventing progress from OPMD to oral cancer.

Studies show that adequate knowledge and awareness among individuals can significantly reduce the prevalence of tobacco related diseases through better termination rates and preventive behaviors [3]. However, socio-cultural factors, colleagues contribute to the frequent use of tobacco despite a limited access awareness efforts to pressure, addiction, and counseling services. In addition, novel tobacco products such as e-cigarette and hot tobacco products add complexity to public health intervention, especially when they are considered as safe alternative.

In addition, the introduction of novel tobacco products such as e-cigarettes and hot tobacco products adds complexity to public health intervention, especially when they are considered as a safe alternative by users without thinking [4]. This makes it mandatory to understand the current levels of awareness among the risk population, especially those who already diagnose from OPMD or oral cancer.

The current study is done with the aim of assessing awareness about potentially malignant disorders and patients diagnosed with oral cancer. Understanding the patient's perceptions and levels of knowledge, the purpose of this research is to contribute to the development of more effective educational and intervention strategies to suit high -risk population.

2. METHODOLOGY

Ethical Clearance

The study was approved by Krishna Vishwadepeth (KVV), the Institutional Ethics Committee of Kard under protocol number 210/2023-2024, dated 03/08/2024.

Study design

A cross-sectional, self-composed questionnaire-based survey was designed to assess awareness about the effects of tobacco consumption in patients suffering from potentially fatal disorders and tobacco consumption in patients suffering from oral cancer. The survey was surveyed using an online platform (Google Form) for ease of ease and comprehensive access. Study settings and population.

The study targeted patients participating in the Department of Oral Medicine and Radiology at the School of Dental Sciences, Krishna Vishwadepeth, Karad. Participants included a person with potentially fatal disorders or oral cancer diagnosed, who were ready to provide informed consent.

Sample Size Determination

The required sample size was calculated using the formula:

n=Z2PQL2n = \frac{Z^2PQ}{L^2}n=L2Z2PQ

Where:

Z is the standard normal deviate at 95% confidence level (1.96)

P is the estimated prevalence

Q = 1 − P

L is the allowable error

Based on preliminary estimates, a sample size of 91 participants was considered adequate to achieve statistical significance.

Sampling Technique

A non-probability convenience sampling method was used, wherein patients visiting the clinic and meeting the inclusion criteria were invited to participate. Participation was voluntary.

Data Collection Tool

Data collection equipment a structured, pre-human questionnaire was used. The device included both demographic data and ten closed questions designed to assess the awareness of the participants:

Health effects of tobacco,

Its role due to oral and lung cancer,

Symptoms and symptoms of oral deformities,

Awareness and approach to counseling services.

The questionnaire was administered in local languages for better understanding and reviewed for clarity and cultural suitability. Data analysis The Microsoft Excel recorded reactions and analyzed using the SPSS Software version 20. Descriptive data was used to describe data briefly, and inferior figures were implemented to assess correlations between demographic variables and awareness levels. Result of the 101 participants in the survey, 100 individuals (99%) reported to use tobacco in some form, while only one participant (1%) denied the use of any tobacco. The study focused on understanding awareness about the sick effects of tobacco between potentially malignant disorders and patients suffering from oral cancer. The following questions were recorded with a response of yes or no.

Table 1: Questions regarding Awareness and Behavioral Responses

Sr. No.	Question	Yes (%)	No (%)
1	Do you currently consume any form of tobacco?		
2	Are you aware that tobacco consumption can cause oral cancer?		
3	Do you know that frequency and duration of tobacco use increase cancer risk?		
4	Are you aware that tobacco use can lead to lung cancer along with oral cancer?		
5	Do you know that oral cancer appears as a proliferative mass?		
6	Do you know that oral cancer appears as a unhealed ulcer?		
7	Are you aware about the availability of tobacco counselling sessions?		
8	Do you think counselling is an effective method of quitting tobacco?		
9	Have you ever tried quitting tobacco?		
10	Do you think family support is an important factor for quitting tobacco?		

3. RESULTS

Out of 101 patients, 99% of patients were using tobacco in different forms ,and about 50.5% of patients were aware of consumption of tobacco as predisposing factor for oral cancer. In our study about 61.4% of patients were aware that increase in frequency and duration of tobacco consumption increases the risk of oral cancer. About 69% of patients in our study agreed that tobacco use can lead to lung cancer along with oral cancer.

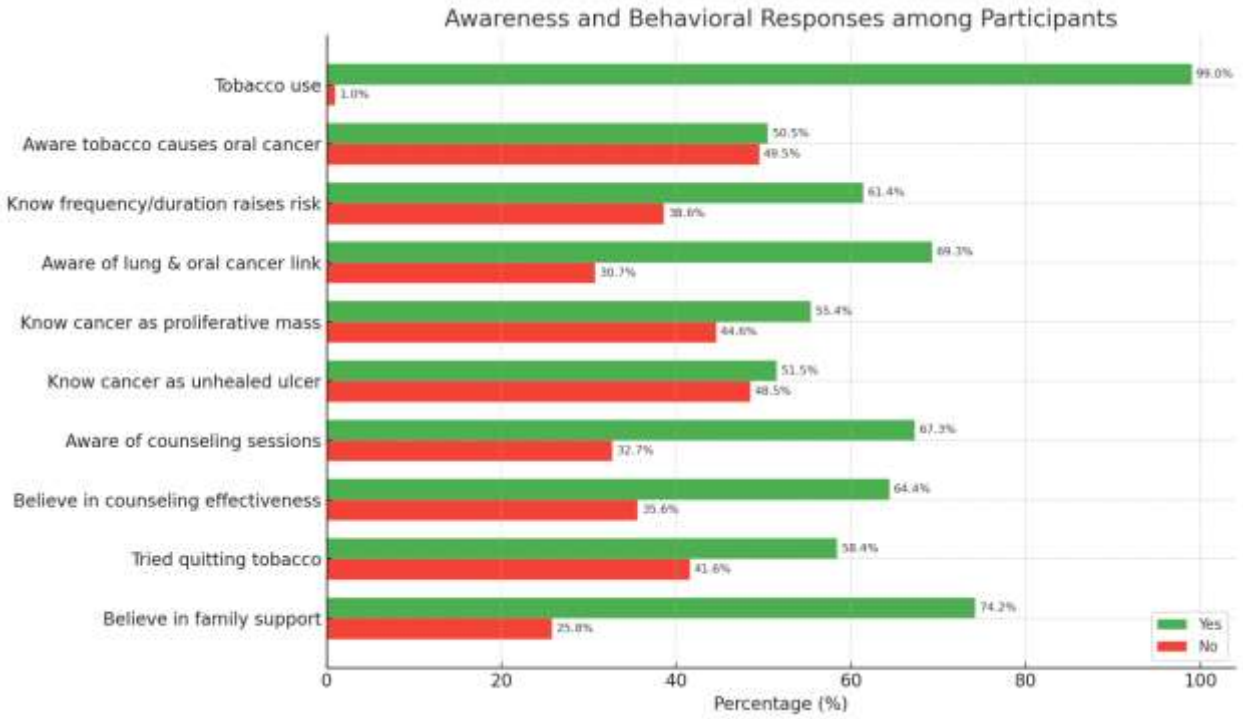
Oral cancer occurs as proliferative mass or unhealed ulcer in oral cavity, in our study about

55. 4% of patients agreed that oral cancer occurs as proliferative mass and 51.5% agreed that it occurs as unhealed ulcer.

Tobacco cessation programs play an vital role in prevention of oral cancer. About 67.3% of patients in our study were aware of tobacco counseling sessions and 64.4% of patients agreed that tobacco cessation counseling method was an effective method for quitting tobacco. Most of the patients in our study tried quitting tobacco which accounts for 58.4% and around

74.2% of patients agreed that family support is an important factor for quitting tobacco.

Figure 1: Bar chart comparing the percentage of "Yes" and "No" responses.



4. DISCUSSION

The current study underlines an important public health anxiety: there is a significant difference in awareness about the related health risks, despite the high proliferation of tobacco in patients with potentially malignant disorders (PMD) and oral cancer diagnosed. This discovery aligns with previous research that it shows that the use of tobacco is widespread, knowledge about its harmful effects, especially about oral health, is often limited. For example, a study conducted at Kabul University's Stomatology Teaching Hospital showed that only 41.8% of patients were aware of oral cancer, despite recognizing 99.2% tobacco as a risk factor. This suggests that while general awareness about the loss of tobacco is present, specific knowledge about oral cancer is inadequate [5]. Similarly, research in Iran found that 80% of dental patients lacked knowledge of early manifestations of oral cancer, and only 18% of the incidents were most likely to the site. In particular, 90% of these patients expected that their dentists informed them about the harmful effects of smoking, indicating dependence on health professionals for education [6].

In India, a study between the residents of the urban slums in the city of Jodhpur said that 56% knew about oral cancer, in which the use of tobacco was prevalent between both men and women. The youth population (15–30 years) showed more desire to quit tobacco than older persons, highlighting the importance of interventions targeting for different age groups [7].

In addition, a readiness to quit tobacco among OPMD patients was found in a study employing the Transtheoretical Model to be higher among OPMD patients and more in the preparation and action stages. This highlights the value of using diagnosis as a teachable moment for promoting quitting [8].

In spite of such observations, obstacles remain. In the United States, one survey pointed out that although 94% of the patients were aware that smoking increased the risk for oral cancer, only 20% received instructions on this aspect from clinicians. This disconnect between awareness and physician advice suggests an imperative to get proactive feedback from clinicians.

Additionally, psychological reasons like addiction, cognitive dissonance, and denial contribute to sustained tobacco consumption despite knowledge of its dangers. These need to be addressed through holistic approaches that integrate education with behavioral intervention [5].

5. CONCLUSION

Finally, this research underscores that although patients with potentially malignant disorders and oral cancer express a moderate awareness about the ill effects of tobacco, there remain appreciable knowledge gaps. Awareness may not

necessarily mean behavior change, as the fact that only a relatively small number of participants had tried quitting tobacco despite their perception of the danger posed by it indicates.

Public health approaches need then to go beyond broad awareness campaigns and take on more multi-dimensional strategies involving individual-level counseling, community-based involvement, and family support systems, all of which are demonstrated to enhance cessation success [9].

But interpretation of the results from this study has to be guided by some several limitations such as a limited number of patients in the sample, single-site investigation, no clinical correlation, and no analysis regarding behavior or socioeconomics. These impose bounds on generalizability but suggest significant avenues of future study.

Subsequent studies must target more diverse and bigger populations, utilize longitudinal designs, and include clinical and psychosocial parameters in order to clarify the determinants of awareness as well as action in tobacco quitting. Effective and sustainable interventions may only be crafted once this can be achieved.

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