

Original Article

AWARENESS AND PREVALENCE OF ORAL PATHOLOGICAL LESIONS AMONG DENTAL PATIENTS ATTENDING A TERTIARY CARE DENTAL HOSPITAL

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ABSTRACT

Objectives: The aim of this study to experience a series of disease, including inflammation, infections, autoimmune, premalignant and malignant conditions.

Materials and Methods: A descriptive cross-sectional study was carried over six months from August 2024 till January 2025 amongst 300 adult patients aged 18 or above, visiting the outpatient department of a tertiary care dental hospital. Data were collected using a pretested structured questionnaire covering demographic characteristics, oral hygiene practices, deleterious oral habits, and awareness of oral pathological lesions.

Results: The mean age of participants was 36.4 ± 12.8 years, with males comprising 58% of the total sample. Oral pathological lesions were detected in 38.7% of patients. Aphthous ulcers were the most frequently observed lesions, followed by leukoplakia and oral lichen planus. Awareness of oral pathological lesions was limited, and knowledge regarding their malignant potential was notably low. A significant association was found between tobacco use and the presence of oral pathological lesions ($p < 0.001$).

Conclusion: Dental patients have several oral pathological abnormalities, although not many people know about them. Oral habits are closely associated to lesions

Key words: Autoimmune, Aphthous Ulcer, leukoplakia, Oral lesions, Oral habits

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INTRODUCTION

Oral health plays a vital role in tributary to overall health and well-being. The oral cavity has the aptitude to experience a range of diseases, en-

compassing inflammatory, infectious, autoimmune, premalignant, and malignant conditions¹. A variety of oral lesions continue to go undiagnosed, even though they hold considerable clinical importance. Oral pathological lesions commonly occur in dental practice and can significantly affect mastication, speech, aesthetics, and general quality of life. This occurs owing to a lack of knowledge, delays in dental appointments, and the failure to schedule frequent check-ups².

Oral diseases compose a significant health issue

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globally, specifically in underdeveloped countries such as Pakistan where access to dental treatment and health information is restrained³. The high rates of tobacco smoking, chewing betel quid, ingestion of areca nuts, and poor oral hygiene habits in South Asian countries all contribute to an increase in the occurrence of oral pathological lesions. There is a correlation between these factors and the development of benign oral lesions, as well as oral potentially malignant diseases (OPMDs) and oral cancer⁴. One of the most important elements influencing early reporting and the choice to seek treatment is dental patients' knowledge of oral pathological conditions. If patients are aware of the signs and symptoms of oral lesions, they are more likely to seek medical assistance as soon as possible. This shortens the duration of the illness & lowers the chance of encountering side effects⁵. Nevertheless, the data available shows that dental patients have a poor understanding, especially when it comes to asymptomatic lesions and possibly malignant illnesses⁶. There are significant opinions into the scope of the issue that may be gained by reflecting both the comprehension of oral pathological lesions and the frequency of these lesions. This assessment also helps in finding gaps in patient education⁷. This info is critical for formulating targeted preventive strategies, community-focused awareness programs, and policy-level interventions.

This study aimed to evaluate the awareness and prevalence of oral pathological lesions among dental patients at a tertiary care dental institution.

MATERIALS AND METHODS

The current study was cross-sectional descriptive, carried out in the outpatient department (OPD) of a tertiary care dental hospital over a period of six months i.e. August 2024 till January 2025. Before commencement of the study, the institutional review board gave its consent vide # (1233/BKMC). Participants in the research were required to be at least 18 years old and go to the outpatient department (OPD) for a normal dental checkup. Both patients who had a history of systemic disorders that affected the oral cavity and patients who had received therapy for oral lesions during the previous six months were not allowed to participate in the study. Written consent was obtained from each participant, who fulfilled the inclusion criteria. Through the use of the Epi

Info calculator, the 300-sample size was acquired, with the anticipated frequency being 25%⁸ and the CL being 95%.

A non-probability consecutive sampling technique was used. All eligible patients presenting to the outpatient department during the study period were approached for participation, and those who fulfilled the inclusion criteria and provided written informed consent were enrolled until the required sample size of 300 participants was achieved.

The information was gathered via the use of a standardized questionnaire that had been pre-tested and was delivered through in-person interviews. In the questionnaire, questions were asked on socio-demographic information, oral hygiene practices, activities that are harmful to oral health (such as smoking, using smokeless tobacco, and chewing betel quid), and knowledge of oral pathological lesions. All of the people were subjected to a comprehensive intraoral examination that was carried out by appropriately experienced dental specialists under sufficient lighting conditions, using mouth mirrors and probes. Oral lesions were detected based on clinical criteria, and patients were referred for additional investigations, such as cytology or biopsy, where it was deemed essential to do so. Version 29 of the Statistical Package for the Social Sciences (SPSS) was used for both the gathering of data and its subsequent analysis. Descriptive statistics were employed to compute frequencies and percentages. The Chi-square test was utilized to evaluate the correlations between oral lesions and independent variables. A p-value below 0.05 was deemed statistically significant.

RESULT

There were a total of 300 participants, with a mean age of 36.4 ± 12.8 years. Among the 300 participants, 174 (58%) were men and 126 (42%) were females. The total prevalence of oral pathological lesions was found to be 38.7%, with 116 individuals being recognized as having these lesions. According to Table 1, the majority of the participants were men, and the majority of the patients were in the age range of 31–45 years. Aphthous ulcers were the lesions that were seen the most commonly, followed by leukoplakia and oral lichen planus (Table 2). According to the findings shown in Table 3, there is a poor level of knowledge of oral pathological lesions and the possibility for them to become cancerous. The use of

tobacco was shown to have a statistically significant connection with the occurrence of oral pathological lesions, as shown in Table 4.

DISCUSSION

Oral soft tissue lesions are a serious health problem that contribute to a high morbidity percentage. Even though it is a significant issue, there are not a lot of publications that discuss how prevalent it is among the general population or how it is connected to oral healthcare practices. Comparatively, dental caries and periodontal diseases are not affected by this. A considerable prevalence of oral pathological lesions was found among dental patients, as evidenced by the present study, which is consistent with the results of previous research conducted in related regions and internationally. The fact that oral lesions are so prevalent in ordinary dental practice is shown by the prevalence rate of 38.7%.

Similar prevalence numbers were found by Ahmed et al. (2024)⁹, who found that oral mucosal ulcers were present in 77% of students who in university study in Libya. A comparable incidence of roughly 35% was observed by Gaballah et al. (2022)¹⁰ in research that was carried out in Ajman, which is in close alignment with the results of the present study.

Table 2: Prevalence of Oral Pathological Lesions Among Dental Patients

Type of Lesion	n	%
Aphthous ulcers	37	12.3
Leukoplakia	27	9.0
Oral lichen planus	20	6.7
Candidiasis	16	5.4
Traumatic ulcers/Fibroma	16	5.3
Total	116	38.7

Table 1: Demographic Characteristics of Study Participants (n = 300)

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	174	58
	Female	126	42
Age Group (years)	18–30	98	32.7
	31–45	124	41.3
	>45	78	26.0

Table 4: Association Between Oral Habits and Presence of Oral Lesions

Oral Habit	Lesions Present n (%)	Lesions Absent n (%)	p-value
Tobacco users	72 (62.1)	44 (37.9)	<0.001
Non-users	44 (24.4)	140 (75.6)	

Aphthous ulcers were the most prevalent lesions seen in this research, which may be attributed to stress, nutritional inadequacies, and mild trauma as some of the causes that contributed to their development. Additionally, Ahmed et al. (2024)¹¹ and Maqsood et al. (2023)¹² came to the same conclusions for their research. Recurrent aphthous stomatitis is one of the oral mucosal conditions that is said to be among the most common among dental outpatients. Leukoplakia and oral lichen planus are considered potentially malignant oral illnesses, hence the study's findings about their incidence are very alarming. Investigations by Teodorescu et al. (2022)¹³ and Reis et al. (2025)¹⁴ have revealed leukoplakia as a prevalent oral potentially malignant disorder (OPMD) in South Asian populations, predominantly linked to tobacco and areca nut consumption.

An insufficient awareness of oral pathological abnormalities was shown by the participants, with only 41.3% of patients indicating that they had previous knowledge of these abnormalities. There is a correlation between this finding with the research conducted by Ismael et al. (2024)¹⁵ in the Iraqi Dental students as population. The study's conclusions demonstrated that dental patients' understanding of oral problems and the potential for cancer was low to moderate. The lack of awareness seen in much research indicates a persistent lack of patient education, particularly with asymptomatic lesions or those in

Table 3: Awareness of Oral Pathological Lesions Among Participants

Awareness Variable	Yes n (%)	No n (%)
Awareness of oral lesions	124 (41.3)	176 (58.7)
Knowledge of malignant potential	84 (28.0)	216 (72.0)

their early stages. The findings of this study further support the conclusions drawn by earlier research since they demonstrate a strong link between oral habits and the development of lesions. The intake of tobacco was shown to have a substantial link with the development of oral mucosal lesions and oral potentially malignant diseases (OPMDs), according to research conducted by Alharbi et al. (2022)¹⁶ and Wetzel et al. (2020)¹⁷ because of these comparative findings, the etiological relevance of behavioural risk factors is strengthened, and the requirement of habit cessation counselling within the context of normal dental treatment is brought into closer focus.

The findings of the present study should be interpreted considering certain limitations. First, the cross-sectional design limits the ability to establish temporal or causal relationships between oral habits and the development of oral pathological lesions. Second, the study was conducted among patients attending a single tertiary care dental hospital; therefore, the findings may not be fully generalizable to the wider community or to individuals who do not routinely seek dental care. Third, the diagnosis of lesions was primarily based on clinical examination, while additional investigations such as cytology or biopsy were performed when considered necessary. Consequently, the prevalence estimates may not represent histopathologically confirmed diagnoses for all lesions. In addition, information regarding oral hygiene practices, tobacco use, and awareness was obtained through questionnaire-based interviews and may therefore be subject to recall or reporting bias.

Future research should include multicenter and community-based studies involving larger and more diverse populations to provide more representative estimates of oral pathological lesions and awareness. Longitudinal studies would also be valuable for evaluating the development and progression of oral lesions and for clarifying the temporal relationship between potentially harmful oral habits and pathological changes. Interventional studies assessing the effectiveness of structured patient education, tobacco cessation counselling, and routine oral screening may further determine effective strategies for improving awareness and promoting early detection.

Moreover, there are significant clinical implications associated with the results of this research. Given the high prevalence of oral pathology among the

patients treated by dentists and the fact that people do not realize the nature and malignant character of such disorders, it is necessary to make sure that each dental visit includes an oral soft tissue examination. Dentists need to pay attention not only to their main specialty, including dental and periodontal diseases, but also to mucosal abnormalities and give proper counseling about smoking and other harmful habits.

Overall, this study demonstrates that oral pathological lesions are relatively common among dental patients, while awareness of these conditions remains inadequate. Aphthous ulcers were the most frequently identified lesion, and tobacco use showed a statistically significant association with the presence of oral pathological lesions. These findings emphasize the need for routine oral examination, improved patient education, and preventive counselling as integral components of dental care. Strengthening awareness and early detection may contribute to reducing the burden of oral pathological disease and improving oral health outcomes.

CONCLUSION

Dental patients have several oral pathological abnormalities, although not many people know about them. Oral habits are closely associated to lesions. To reduce oral pathological lesions and improve oral health, it is important to teach patients, check their mouths, and take steps to prevent problems.

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CONFLICT OF INTEREST
Authors declare no conflict of interest.
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AUTHORS' CONTRIBUTION

The following authors have made substantial contributions to the manuscript as under:

Conception or Design: SU, MN, FS, SM, QM, SS

Acquisition, Analysis or Interpretation of Data: SU, MN, FS, SM, QM, SS

Manuscript Writing & Approval: SU, MN, FS, SM, QM, SS

All the authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.



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