



ORIGINAL RESEARCH ARTICLE

PREVALENCE OF ORAL MUCOSAL LESIONS IN PATIENTS WITH PSYCHIATRIC DISORDERS IN A TERTIARY MEDICAL CENTER

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Received: 15 Nov, 2022

Accepted: 25 Dec, 2022

Published: 31 Dec, 2022

Key words: Oral Mucosal Disorders; Oral lichen planus; Psychosis; Schizophrenia.

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DOI: <https://doi.org/10.54530/jcmc.1218>

Citation

Roy S, Yadav K, Acharya M, Raj P, Singh B. Prevalence of oral mucosal lesions in patients with psychiatric disorders in a tertiary medical center. Journal of Chitwan Medical College. 2022;12(42):59-62.

ABSTRACT

Background: Psychological stress adversely affects the physiological effectiveness of a person to an abundant point of melancholy. Considering the high prevalence of oral health problems in psychiatric patients, the present study was conducted to assess prevalence of oral mucosal lesions in psychiatric patients attending psychiatric outpatient department (OPD) at Nobel Medical College Teaching Hospital.

Methods: The descriptive cross-sectional study was conducted in Outpatient Department of psychiatry at Nobel Medical College Teaching Hospital in Biratnagar. A total number of 130 patients diagnosed with oral mucosal lesions and stress related conditions were screened. Data for this research was collected by Oral visual examination. Statistical analysis was carried out by using spss software version 21 with use of descriptive statistics like mean and percentage.

Results: Majority of the participants were females constituting of 61% of the study group and male subjects with 39 % of the sample size. Major participants were of 38-48 years of range and least from 58 years and above. Schizophrenia was most prevalent psychiatric disorder. Lichen planus was mostly associated with 38% of females, while apthous ulcers were predominant in 40 % of male populations.

Conclusions: Oral mucosal Lesions lessen the quality of life of patients, the role of stress and other psychogenic factors cannot be ruled out. The present study highlights the association of stress and anxiety in development of mucosal lesions in patients with psychiatric disorders.



INTRODUCTION

Psychological stress adversely affects the physiological effectiveness of a person to an abundant point of melancholy. This has led to prompt increase in psychiatric disorders in the population over the years.¹ Dental disease and psychiatric illness are among the most prevalent health problems in the patients suffering from psychological stress.² Dental distress is also known to have a positive correlation with psychosomatic disorders, alcohol dependence and tobacco abuse and a variety of different psychiatric disorders have also linkage to etiopathogenesis of potentially malignant lesions.³

Dental treatment in patients with psychiatric disorders should be implemented considering their systemic conditions; the palliative care varies and depends upon various factors such as age, current mental condition and case history.^{2,4}

Although stress related disorders have a wide impact on various oral mucosal disorders, psychological problems were not considered seriously in the treatment of oral mucosal diseases because of the lack of definitive evidence and demographic

differences in the management of oral mucosal lesions.⁵

Psychiatric patients are at a countless risk of having oral mucosal lesions and hence treatment needs greater than the common inhabitants.⁶ They are more susceptible to various medical conditions as a result of psychotropic medications, an unhealthy lifestyle, cigarette smoking, and healthcare inequalities.⁷

Considering the high prevalence of oral health problems in psychiatric patients, the present study was conducted to assess prevalence of oral mucosal lesions in psychiatric patients.

METHODS

The descriptive cross-sectional study was conducted in psychiatric outpatient department (OPD) at Nobel Medical College Teaching Hospital in Biratnagar from 25 June to 10 October 2022. A total of 130 patients with positive history of oral mucosal lesions, and stress related disorders were screened. Convenience sampling technique was used for sampling. Prior consent for the study was obtained from Nobel

medical college and teaching hospital and only cooperative subjects will be included in the study. Prior consent for the study was obtained from Nobel medical college and teaching hospital and only cooperative subjects of age group 18-70 years, with oral mucosal lesions were included in the study. Oral mucosal lesions mainly oral lichen planus, aphthous ulcers, burning mouth syndromes and leukoplakia were screened in psychiatric patients diagnosed with schizophrenia, bipolar disorders, depressive illness, anxiety disorders and few subjects with unidentified psychosis. Uncooperative patients were ruled out prior to the selection of the study sample.

Data for this research was collected by Oral visual examination. All the subjects were informed in their vernacular language and a written consent was obtained in certain patients from their guardians. Ethical Approval was obtained from the Institutional Ethical review board (IERB) / research committee of Nobel Medical College Teaching Hospital.(639/2022).

Statistical analysis was carried out by using Statistical Package for the Social Sciences (spss) version 21 with use of descriptive statistics like mean and percentage. All the data thus obtained were computed on Microsoft excel sheet.

RESULTS

A total of 130 subjects were included in the study, consisting of 50 male and 80 female subjects, with age range of 18 to 67 years.

Table 1 demonstrates the gender wise distribution of subjects,

Table 3: Psychiatric disorders according to gender wise distribution

Gender	Schizophrenia (37)	Bipolar affective disorders (17)	Generalised anxiety disorder (22)	Depressive illness (19)	Obsessive compulsive disorder (11)	Unspecified Psychosis (18)
Male(50)	23	11	13	11	6	7
Female(80)	14	6	9	8	5	11

Table 4 highlights the prevalence of oral mucosal lesions in study population; lichen planus was mostly associated with female around 38%, while aphthous ulcers were predominant in 40 % of male populations. 25%of the female population

Table 4: Disease according to gender wise distribution in subjects

Gender	Lichen planus	Aphthous ulcer	Leukoplakia	Burning mouth Syndrome
Male(50)	19(38%)	20(40%)	7(14%)	4(8%)
Female(80)	25(31.25%)	20(25%)	15(18.75)	20(25%)

Table 5: Oral mucosal disease according to age wise distribution in subjects

Age Range	Lichen planus	Aphthous ulcer	Leukoplakia	Burning mouth Syndrome
Less than 28 years	8 (32%)	6(24%)	7(28%)	4(16%)
28-38	10(38.46%)	4(15.38%)	6(23.06%)	6(23.06%)
38-48	15(42.85%)	9(25.71%)	8(22.85%)	3(8.57%)
48-58	24(80%)	4(13.33%)	1(3.33%)	1(3.33%)
58-68	2(28.57%)	3(42.85%)	1(14.28%)	1(14.28%)
More than 68 years	3(42.85%)	1(14.28%)	2(28.57%)	1(14.28%)

majority of the participants were females constituting of 61% of the study group and male subjects with 39 % of the sample size.

Table 1: Gender wise distribution of the subjects

Gender	Number (%)
Male	50 (38.46%)
Female	80 (61.54%)

Table 2 depicts the age range of different study groups with major participants were of 38-48 years of range (26.92%) and least from 58 years and above aged subjects (5.38%) respectively

Table 2: Age wise distribution of the subjects

Age(in years)	Number (%)
Less than 28 years	25 (19.23%)
28-38	26 (20%)
38-48	35 (26.92%)
48-58	30(23.09%)
58-68	7 (5.38%)
More than 68 years	7 (5.38%)

Table 3 illustrates the prevalence of psychiatric disorders in both sexes, schizophrenia was most prevalent disorder followed by bi polar disorders and depressive illness followed by unidentified psychosis. A significant number of female subjects showed presence of unidentified psychosis.

showed presence of burning mouth syndrome and only 4% in males respectively. Leukoplakia was diagnosed in both the groups contributing 14 to 18% of both the study groups (male and female).

Table 5 demonstrates the presence of oral mucosal lesions in different age ranges. All the age range of the study population lichen planus was most prevalent disorder followed by aphthous ulcer and leukoplakia, and very few subjects were diagnosed with burning mouth syndrome in all the study groups. Lichen planus was mostly diagnosed in (80%) subjects of 48-58 years of age, while aphthous ulcer were diagnosed with 48-68 years age group.

DISCUSSION

The present study was conducted to assess the oral health of psychiatric patients of Biratnagar city to highlight the association of stress related disorders in oral mucosal lesions which is often deserted aspect. There are many evidences that patients suffering from mental illnesses are more vulnerable to dental neglect and poor health.⁸ General characteristics of study subjects in our studies showed that highest proportion of study subjects was in the age group of 38-48 years with an average age of 39 years, which was similar to the results of Shah et al and Manish et al.^{9,10} A total of around 62 % subjects were females as compared to 38% of male subjects with a ratio of 1.3:1 which is similar to the study by Ramon et al, depicting the high incidence of stress related disorders in female subjects than males.¹¹ Highest proportion of study subjects were from age range of 38-48 years which was in contrast to the studies by Manish et al and Shah et al were maximum population was of 15-24 years of age range.^{9,10} Key attributions to this finding are mainly due to demographic variations. In case of psychiatric disorders schizophrenia was present in 38% of the subjects followed by depressive illness and anxiety disorders affecting 23 and 21% of the study population respectively, out of these schizophrenia finding was consistent with results of Morels et al.² Etiology behind this consistency is correlated with drugs used to treat schizophrenia and other disorders that causes propagation of oral mucosal lesions that includes Oral lichen planus and aphthous ulcers.¹³

Oral lichen planus (OLP) was diagnosed in 38% of the study subjects in male population and 25% in female subjects which was consistent with the findings of Khasbage et al.⁴ OLP was associated more in older age range from 38-48, 48-58 and other elderly population of the study subjects which was in accordance to the studies by Kaur et al.¹

Recurrent Aphthous Ulcer (RAS) was associated in 40% of the female subjects and 25% of the male subjects and was observed in higher age range individuals constituting of 42% and 25% of the study subjects and was consistent with the study of Yang et al.⁵ A substantial proportion of the study population was diagnosed with leukoplakia consisting of 19% of female population and 14% of male population. Maximum subjects were of 68 years and above age range which was also present in study by Dagli et al.¹² Burning mouth syndrome (BMS) was observed in 25% of the female subjects and 8% in male subjects with maximum subjects of 28-38 years age range similar to study by Kaur et al.¹

It is well established fact the lichen planus is one of very

common mucocutaneous disorder with more attribution towards female subjects and stress plays a major etiological factor, one of the key factors is high levels of salivary cortisol in OLP patients than any other mucosal lesions. Salivary cortisol is the main human glucocorticoid, is considered to be a biological marker of stress and anxiety. Sharp cusp is one of the local factors involved in the propagation of OLP.² Oral symptoms mainly includes bilateral white patches (reticular form) with burning sensation and pain and may persist for several years with periods of exacerbation and quiescence. During periods of exacerbation, there is increased erythema, ulceration with severe pain also it has been attributed that drugs used for treatment of stress related drugs also has a major role in etiology OLP.⁴

Recurrent aphthous ulcers RAS, categorized by rounded shallow painful ulcers with a yellowish gray pseudomembranous center and a well-defined erythematous border, is one of the common ulcerative disease of the oral cavity. Apart from dental etiologies such as local trauma by sharp cusp, overhanging margin restorations, Tobacco consumption psychological stress has a very crucial role in implication of the disease. Stress is believed to cause aggregation of leucocytes by activating the immuno regulation at the site of inflammation leading to painful condition.^{1,5}

Burning mouth syndrome (BMS) is mostly associated with glossopyrosis, but affects other mucosal surfaces such as labial and buccal mucosa in oral cavity, and foremost causative factor is related stress which is in accordance with sleep related disorders also. Exact etiology is still unknown, however, hormonal imbalance, menopause, sleep apnea have been implicated. Female predilection is associated with BMS, which was also present in our study. Many experimental studies have revealed the increase in plasma norepinephrine level that relates to stress.¹³

Leukoplakia is one of the most prevalent oral mucosal disorders, having classified as potentially malignant disorders.¹⁴ One of the key ascription is consumption of smokeless form of tobacco in this part of the world is very common practice. Apart from dental etiology stress is one of the key factors in pathogenesis of leukoplakia; elevation of salivary cortisol level is indicated with psychosomatic disorders. However association of leukoplakia with stress related disorders is reported in very few studies, considering demographic variation, leukoplakia is one of the common mucosal disorder with high malignant potential.¹² Further studies in above mentioned subjects with larger sample size should be conducted, so to have suitable correlation with stress related disorders and leukoplakia.

Purpose of the current study was to associate oral mucosal lesions with psychiatric disorders, which is one of the major causes of poor oral hygiene that leads to plethora of disorders, proper evaluation with timely intervention is key factor for improving overall health and betterment of the society. Since some of our study subjects were of bipolar disorders and others were diagnosed with unidentified psychosis, so only clinical diagnosis was made, biopsy was not advisable in such

class of subjects

Since the current study was carried out in a single tertiary care in outpatient department, it is advisable to perform several studies with large sample size and greater demographics so as to establish correlation of oral mucosal lesions with stress.

CONCLUSION

Oral mucosal lesion reduces the quality of life of patients, due to their malignant potential, the role of stress and other psychogenic factors cannot be ruled out. The present study

highlights the association of stress and anxiety in development of oral mucosal lesions in patients with psychiatric disorders.

ACKNOWLEDGEMENT

The authors are grateful to the managing director and Institutional review committee of Nobel Medical College in Biratnagar for allowing them to conduct their research.

CONFLICT OF INTEREST: None

FINANCIAL DISCLOSURE: None

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