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Original Research

Assessment of depression, anxiety and stress in patients with oral lichen planus

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ABSTRACT:
Background: LP is a relatively common disorder of the stratified squamous epithelia that affects the skin, scalp, nails, and mucosa. The present study was conducted to assess depression, anxiety and stress in patients with oral lichen planus. **Materials & Methods:** 30histological confirmed cases of oral lichen planus of both genders were divided into 2 groups. Group I comprised of OLP cases and group II had healthy control subjects. Complete medical history and thorough physical examination was carried out. The psychometric evaluation was done using DASS-42. **Results:** Group I had 10 males and 20 females and group II had 11 males and 19 females. The mean value of depression in group I was 6.5 and in group II was 3.2, anxiety in group Iwas 7.5 and in group II was 4.9 and stress in group I was 11.2 and in group II was 6.8. The difference was significant ($P< 0.05$). **Conclusion:** DASS-42 questionnaire is internally consistent and valid measures of depression, anxiety, and stress. Psychiatric evaluation can be considered for patients with oral lichen planus.
Key words: anxiety, depression, Oral lichen planus

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INTRODUCTION

Oral lichen planus (OLP) is a common chronic inflammatory, psycho-mucocutaneous disease affecting about 1%–4% of the general population associated with psychoneuroendocrine, psychoimmunological comorbidities.[1] It occurs at any age, affecting both sexes with females being at higher risk for oral mucosal and genital involvement. It is an obstinate disorder baffling not only the patients but also the practitioner. Psychologically, the skin is an erogenous zone and channel for emotional discharge so that troubled skin could be a manifestation of unexpressed anger or an inner conflict due to external stress.[2]

LP is a relatively common disorder of the stratified squamous epithelia that affects the skin, scalp, nails, and mucosa.[3] The Depression Anxiety Stress Scale (DASS) is a 42-item self-report measure of anxiety, depression and stress developed by Lovibond and Lovibond. It requires no special skills to administer. Each of the three subscales of DASS is intercorrelated with one another.[4]Depression and anxiety have a non-specific factor of general distress in common. DASS-Stress is characterized by persistent tension, irritability, and a low threshold for becoming upset or frustrated (negative affect) and a tendency to overreact to stressful events.[5]The present study was conducted to assess depression, anxiety and stress in patients with oral lichen planus.

MATERIALS & METHODS

The present study comprised of 30histological confirmed cases of oral lichen planus of both genders. The consent was obtained from all enrolled patients.

Data such as name, age, gender etc. was recorded. Patients were divided into 2 groups. Group I comprised of OLP cases and group II had healthy control subjects. Complete medical history and thorough physical examination was carried out. The psychometric evaluation using DASS-42 was carried out. DASS-42 is a self-report questionnaire consisting of 42 symptoms divided into three subscales of 14 items: Depression scale, anxiety

scale, and stress scale. Participants rated the extent to which they had experienced each symptom over the previous week on a four-point scale ranging from 0 [did not apply to me at all] to 3 [applied to me very much, or most of the time].Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Groups	Group I	Group II
Status	OLP	Control
M:F	10:20	11:19

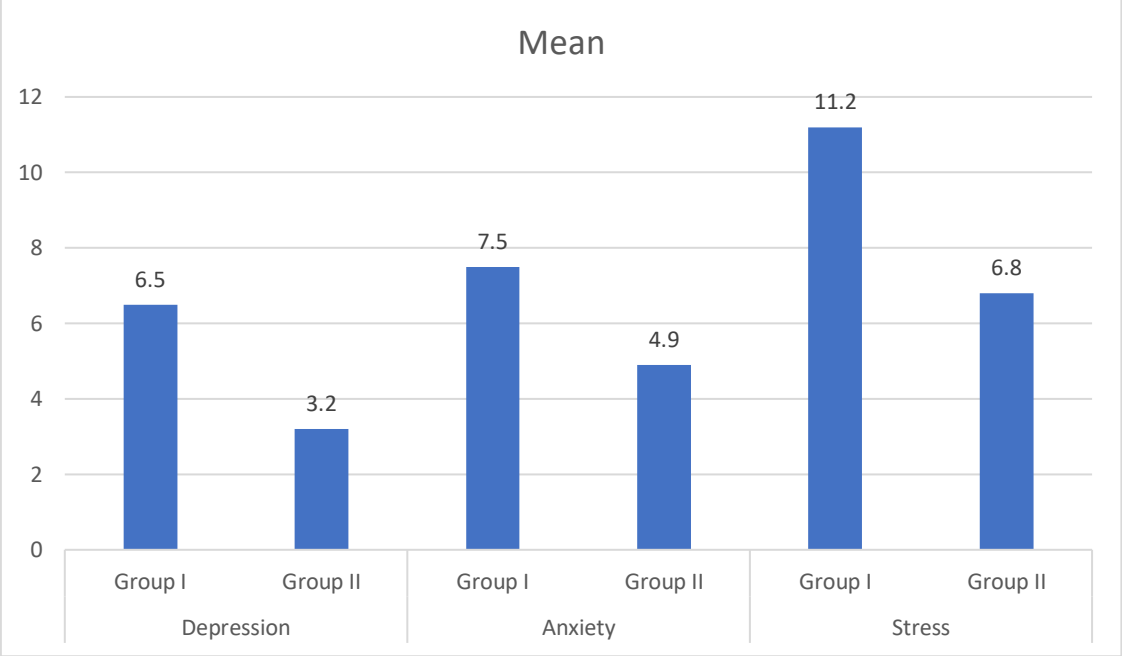
Table I shows that group I had 10 males and 20 females and group II had 11 males and 19 females.

Table II Assessment of DASS in both groups

DASS	Groups	Mean	P value
Depression	Group I	6.5	0.04
	Group II	3.2	
Anxiety	Group I	7.5	0.05
	Group II	4.9	
Stress	Group I	11.2	0.02
	Group II	6.8	

Table II, graph I shows that mean value of depression in group I was 6.5 and in group II was 3.2, anxiety in group I was 7.5 and in group II was 4.9 and stress in group I was 11.2 and in group II was 6.8. The difference was significant (P< 0.05).

Graph I Assessment of DASS in both groups



DISCUSSION

Lichen planus is not an infectious disease. The cause is unknown, but it is classified as an autoimmune disorder which may be precipitated or exacerbated by psychosocial stressors.[6] Patients with lichen planus experience stressful events before the onset of the disease and also a higher level of anxiety along with high salivary cortisol levels.[7] Andreasen was the first to point out in 1968 that OLP patients are found to be in conditions of stress leading to anxiety and depression.Clinical studies have shown that psychological stress can cause suppression of killer T cells and macrophages, both of which play important roles in skin-related immune reactions.[8,9] Field described the skin as the “shock organ” for emotional stress, manifesting in the form of several skin diseases. Clinical observations have identified psychological stress as either precipitating, aggravating or prolonging many skin diseases and the psychosomatic aspects of many disorders.[10] The present study was conducted to assess depression, anxiety and stress in patients with oral lichen planus.

We found that group I had 10 males and 20 females and group II had 11 males and 19 females. Kalkur et

al[11]assessed depression, anxiety and stress levels in patients with oral lichen planus. The psychometric evaluation using the Depression Anxiety Stress Scale (DASS)-42 questionnaire was carried out, by the same investigator on all members of group 1 (Oral Lichen Planus) and group 2 (Control). DASS-42 questionnaire consists of 42 symptoms divided into three subscales of 14 items: Depression scale, anxiety scale, and stress scale. Psychological assessment using DASS-42 reveals lichen planus patients showed higher frequency of psychiatric co morbidities like depression, anxiety and stress compared to control group.

We found that mean value of depression in group I was 6.5 and in group II was 3.2, anxiety in group I was 7.5 and in group II was 4.9 and stress in group I was 11.2 and in group II was 6.8. Hiremutt et al[12]evaluated the levels of psychological status and the impact of treatment on psychological status in OLP individuals and compare it with normal individuals. Forty OLP patients along with the same number of age- and gender-matched healthy controls were included in the study. HADS questionnaire was administered to all 40 OLP (start of therapy) and 40 non-OLP individuals. In the OLP Group (40 participants): 20 were given "active" intervention with Cyclosporine Oral Solution (Group A), 20 were given "placebo" intervention (Group P). HADS questionnaire was given to all the twenty participants of Group A and all twenty participants of Group P at the end of therapy. The questionnaire consisted of 14 questions; 7 questions pertaining to anxiety and 7 pertaining to depression. High level of anxiety (47.5%) and depression (85%) was observed in participants with OLP as compared to non-OLP (0%). After the active intervention, 14 participants were relieved of anxiety as compared to 8. Comparison of the prevalence of depression in OLP individuals before and after getting "active" intervention revealed that on getting active intervention the depression present in all 20; 1 (10%) mild and 9 (90%) frank came down to 1 (10%), and 4 (40%) mild. Five (50%) participants were completely relieved of depression.

Chaudhary[13] conducted an analytical age- and sex-matched double controlled study where the General Health Questionnaire-version 28 and the HADS were used to evaluate psychosocial stressors in terms of stress, anxiety, and depression, respectively. He found that significantly higher stress, anxiety, and depression levels were found in the OLP and positive control than the general population. These suggest that psychological stressors play an important role in the causation of OLP. It may be further hypothesized that these stressors form a starting point for the initiation of various autoimmune reactions, which have been shown to be contributory to the pathogenesis of OLP.

Porras-Carrique D et al[14] assessed prevalence of depression, anxiety, and stress in patients with oral lichen planus and their magnitude of association. They evaluated the quality of studies using a specific method for systematic reviews addressing prevalence questions. Fifty-one studies (which recruited 6,815 patients) met the inclusion criteria. Our results reveal a high prevalence of depression (31.19%), anxiety (54.76%), and stress (41.10%) in oral lichen planus. Furthermore, OLP patients presented a significantly higher relative frequency than control group without OLP for depression (OR = 6.15, 95% CI = 2.73–13.89, $p < 0.001$), anxiety (OR = 3.51, 95% CI = 2.10–5.85, $p < 0.001$), and stress (OR = 3.64, 95% CI = 1.48–8.94, $p = 0.005$), showing large effect sizes. Subgroups meta-analyses showed the relevance of the participation of psychologists and psychiatrists in the diagnosis of depression, anxiety, and stress in patients with OLP. Multivariable meta-regression analysis showed the importance of the comorbidity of depression-anxiety in patients with OLP.

CONCLUSION

Authors found that DASS-42 questionnaire is internally consistent and valid measures of depression, anxiety, and stress. Psychiatric evaluation can be considered for patients with oral lichen planus.

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