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Oral Lichen Planus patients with anxiety levels: An evaluative assessment

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Abstract

Aim: Every race between the ages of 30 and 60 is affected by lichen planus, a chronic inflammatory mucocutaneous illness that affects the skin, mucous membranes, nails, and hair. The purpose of the current study is to assess the anxiety levels of patients with oral lichen planus. **Material & Method:** An analysis using a cross-sectional questionnaire was conducted to assess anxiety levels and their correlation with individuals suffering from lichen planus. A total of 440 patients were recruited to assess the relationship between anxiety level and oral lichen planus; 220 of these patients were assigned to the study group and had oral lichen planus signs and symptoms, while the remaining 220 patients were included as the control group. The Hamilton Anxiety Scale was used to evaluate the patients. **Results:** In the present study females were found to be more affected as compared to males and patients above 30 years of age were found to be more affected with increased anxiety levels. **Conclusion:** Patients experiencing oral lichen planus had high levels of anxiety, and dental professionals may want to think about using stress management therapy when counselling these patients.

Keywords : Aniexty,oral,lichen planus,stress

Introduction

A chronic inflammatory mucocutaneous disorder affecting the skin, mucous membranes, nails, and hair is called lichen planus. All races experience lichen planus between the ages of 30 and 60, with females predominating.[1] Erasmus Wilson(1869) was 1st to describe the disease as lichen planus the term is derived from the Greek word “Lichen” which means a tree moss or algae and the Latin word “Planus” which means flat.[2] Lichen planus most commonly affects the buccal mucosa, tongue, gingiva, labial mucosa, and vermillion border of the lower lip. T-mediated autoimmune phenomenon is involved in pathogenesis even

though the cause is unknown. Other etiologic factors that have been linked to the disease include genetics, dental materials, habits, trauma, food allergies, drugs, infectious diseases, diabetes, and immunodeficiency. Psychosomatic stressors have also been identified as significant factors.[3,4]

Patients with oral lichen planus frequently report that higher stress and anxiety levels accelerate the onset and worsening of their oral symptoms. Therefore, the purpose of this study is to ascertain how anxiety and oral lichen planus in Kanpur city are related.

Material & Methods

Over four months, a cross-sectional questionnaire study was conducted to assess anxiety levels and their correlation with lichen planus patients. A total of 440 patients who met the inclusion criteria of not smoking and having oral lichen planus signs and symptoms were included in the study to assess the relationship between anxiety level and the condition. Exclusions from the study were patients having a history of systemic disease, smoking, long-term corticosteroid use, and histopathologically identified lesions other than oral lichen planus. The Hamilton Anxiety Scale was used to evaluate the patients.

Out of 440 patients, 220 were enrolled with signs and symptoms suggestive of oral lichen plauns as the study group and the control group comprised 220 nonsmoker healthy patients who did not have any systemic disease and were on no long-term steroids therapy. The patients were comfortably seated in the dental chair and an oral examination was carried out after the primary oral lichen planus diagnosis was established based on clinical examination, patients were asked to fill out the Hamilton Anxiety Rating Scale(HAS) questionnaire which enlists 14 items that are anxious mood, tension, fear, insomnia, difficulty in concentration, depressed mood, general somatic symptoms, genitor-urinary symptoms, other autonomic symptoms and behavior during the form filling. Each point is defined by a series of symptoms which are rated on a 5-point scale, ranging from 0 to 4 which were inferred as:

- 0-not present
- 1-mild
- 2-moderate
- 3-severe
- 4-disabling

The higher the points scored higher the anxiety level. Afterward, an incisional biopsy was taken from the lesion area in patients with oral lichen planus. The oral lichen planus diagnosis

was established through a composite of accepted clinical and histopathological characteristics for the 220 patients in the study group.

Further statistical analysis was done using SPSS (Statistical Package for Social Sciences) Version 17 Statistical Analysis Software. The values were represented in numbers, Mean, and standard deviation. The level of significance (p-value) was used for analysis.

Results

A total of 440 subjects were enrolled in the study. The study group comprised 220 subjects of oral lichen planus, 146 males and 74 females, age ranging from 20 years to 60 years, while the control group comprised of 220 healthy subjects, 150 males and 70 females from 20years to 50 years. Table-1 shows the distribution of subjects in the study. Out of 220 subjects enrolled for study, there were 110 subjects in the study group (50%) while the remaining 110 subjects in the control group (50%).

Group	No of patients	Percentage
Study group	220	50
Control group	220	50

Table 1: Distribution of patients

Table-2 shows the gender distribution of the subjects in the study group and control group. In the study group there were 146 males(66.3%) and 74 females (33.6%) while in the control group there were 150 males (68.1%) and 70 females (31.8%). The number of females was higher than the males in both the study and the control group.

Gender	Control group n(%)	Study group n(%)
Male	150 (68.1%)	146 (66.3%)
Female	70 (31.8%)	74 (33.6%)

Table 2: Gender distribution of patients in study and control group

Table -3 shows the distribution of age in the study group and the control group. Among the study group there were 146 subjects (41.8%) with age ≤30 years and 74 subjects (58.2%) with age ≥ 30 years. The mean age in study group was 41.58 ± 13.9years whereas the mean age was in control group was 32.08 ± 10.08years. The overall mean age was 37.01±12.9 years. The criteria for 30 years were taken as mean as it was the median age and in the present study there were more of subjects in the age of ≥ 30 years in the study group, difference between both groups was statistically significant.

Age group (in years)	Number of patients

≤ 30years of age	146 (41.8%)
≥ 30 years of age	74(58.2%)

Table 3: Age distribution of patients

The mean anxiety levels (HAS Score) in the study group is 13.08±3.21 units while in the control group the mean anxiety level is 6.27± 4.03 units. In the present study, the mean anxiety level was greater in the statistically significant study group.

Discussion

At 0.5% to 2% of the general population, lichen planus is a chronic autoimmune inflammatory dermatologic illness affecting the mouth cavity. Women are more likely to be impacted than males, and patients between the ages of 30 and 70 are the ones who typically experience it.[1] Numerous research investigations have reported that individuals diagnosed with lichen planus exhibit symptoms of worry and tension. There has been a proposal linking psychosomatic elements to oral lichen planus, suggesting that patients may experience increased anxiety and psychological changes. These conditions may serve as etiologic factors for oral lichen planus; on the other hand, the illness and its complications may be the cause of the psychological issues.[5]

Many studies have used a variety of questionnaires, including the Anxiety Hospital and Depression (HAD) scale, Catell 16 PF, Hamilton Anxiety Scale, Spielberger State-Trait Anxiety Inventory, profile of mood states, Cornell Medical Index, etc., to try and identify and quantify the stress, anxiety, and depression levels of these alterations in patients.[5] Few studies have been conducted to explore the possibility of psycho-somatization in oral lichen planus by evaluating the psychological personality profiles. However, Koray et al, in their study enrolled 80 patients comprising 40 study groups and 40 normal healthy subjects as the control group, which was found similar to the current study.[5]

Vallejo GP et al found a mean HAS score of 11.8±5.70 units among the oral lichen planus patients.6 However, Collel G et al, using HAS and Hamilton depression scale confirmed that patients with oral lichen planus had high scores in both tests whereas Koray et al using Spielberger's state and trait anxiety inventory found mean levels of state anxiety to be 48.54±9.7 with the study group and 39.45±7.5 units in the control group while the mean values of trait anxiety were 49.77±13.02 in the study group.[5,6,7] Thus higher levels of anxiety were present in oral lichen planus patients as compared to the control patients. Rojo-Moreno JL et al[8] used several psychometric tests to analyse the psychological factors in oral lichen planus patients. Using Spielberger's state and trait anxiety inventory, anxiety state and

anxiety trait were 56.58 and 58.05 respectively in oral lichen planus patients while in the control group it was 42.42 and 42.06 respectively and higher anxiety level was seen in the oral lichen planus patients than the control subjects. However, Chaudhary S[9] used a general health questionnaire and Hospital Anxiety and Depression Scale to assess the anxiety levels, which came to 5.53 units in oral lichen planus patients which was higher as compared to the control group (2.78 units). Mean anxiety and depression scores were also higher in the oral lichen planus group which were 5.8 and 4.1 respectively showing higher stress, anxiety, and depression whereas Macleod[10] used a general health questionnaire for psychological assessment of oral lichen planus patients, the mean value was 4.1±3.9 in study subjects and in control subjects 2.7±3.5 but statistically no significant difference was seen and found no greater anxiety among the oral lichen planus patients than the healthy patients.

In the present study, higher anxiety scores were seen in the oral lichen planus as compared to the healthy controls. Also HAS score ≥10.5 is significantly associated with oral lichen planus. Although there is no substantial evidence that oral lichen planus has any correlation with psychiatric disorders. Thus, the evaluation of anxiety levels which reflects the stress response seems a promising parameter in the investigation of oral lichen planus, so the patient needs supportive psychological treatment with the conventional treatment methods.

Conclusion

The illness known as oral lichen planus is complex. There are several etiological variables that can impact the pathogenesis of oral lichen planus, including inadequate immunity, stress, and anxiety. Based on the current investigation, we discovered that patients with oral lichen planus had noticeably greater anxiety levels. Dental professionals may think about the advantages of stress management counselling in addition to managing patients with lichen planus and may even consider referring patients to the appropriate source. Psychological testing and psychiatric examinations can be used as an additional tool in the treatment of oral lichen planus.

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