

# Usage of Systemic Therapies in Oral Lichen Planus

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## ABSTRACT

### INTRODUCTION

Oral lichen planus is a relatively common chronic inflammatory immunological reaction in which the epidermal or the epithelial basal cell layer damage produces mucocutaneous lesions of varying types. It varies in appearance from keratotic (reticular or plaque like) to erythematous or the ulcerative type. Even though the etiology for oral lichen planus is unknown, the immune system has a primary role in the development of the disease. The principal aim of treating oral lichen planus would be resolving the painful symptoms of the oral lesions and the long term follow-up to counter the chances of transformation in the course of the disease.

### AIM OF THE STUDY

The aim of the present study was to analyse the incidence rate in the usage of systemic therapies in oral lichen planus. Thereby providing better treatment options for a better outcome.

### MATERIALS AND METHODS

Retrospective analysis of all the cases (Oral lichen Planus under systemic therapies) was retrieved among the overall data of patients visiting Saveetha Dental College. The data was entered in Excel Spreadsheets. And the collected data was analysed using SPSS software version 19. Chi square test was used to statistically evaluate the results.

### RESULTS

In the present study carried out, it was found that corticosteroids was used in about (113.9 %) along with combinations of other medications such as histamine, steroid sparing and other supplement agents. And anti-histamine was used in (176.4 %) along with a combination of supplements. And only supplements were administered in about (70 %) of the patients. The results obtained were statistically significant ( $p < 0.005$ ).

### CONCLUSION

From the present study, it was found that anti histamines were the most commonly used drugs in combinations, followed by corticosteroid and other supplement therapy.

### KEYWORDS

Systemic therapies, Oral Lichen Planus, corticosteroids, anti-histamines, supplement therapies.

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**INTRODUCTION**

Oral Lichen Planus is a chronic inflammatory disorder that can cause local irritation and discomfort on the site of infection. Although a wide range of therapeutics is available in the market currently, data on the long term efficacy of treatment of this chronic inflammatory disease is limited. Oral Lichen Planus primarily affects the mucosal sites. The posterior buccal mucosa is the most frequently involved site, followed by the tongue, gingiva and the vermillion border of the lip. Oral Lichen Planus can also occur in non-oral epithelial surfaces such as the skin, genitalia, nails and the hair follicles. The oral form of the disease is the relatively commonest form and affects 1 % to 4 % of the population. The onset of the disease usually occurs in the fifth or the sixth decade of life, though all the age groups may also be affected. There is controversy still as to whether it most commonly occurs among the female population or the male population.<sup>1-6</sup>

Oral Lichen Planus is believed to be an autoimmune disorder mediated by the T-lymphocytes leading to inflammation and keratinocytes cell death. Exogenous factors may also contribute to the pathogenesis of the disease, for example patients with hepatitis infections have a higher prevalence of Oral Lichen Planus than the uninfected individuals. In the recent studies up to date other exogenous factors, such as contact allergens, particularly those used in dentistry (gold and mercury amalgam) have been implicated as a cause of the disease.<sup>7-12</sup>

Oral Lichen Planus occurs in several forms including atrophic, bullous, erosive, popular, pigmented, plaque like and the reticular forms. Reticular lesions are the most common, but the patients with the reticular lesions are generally found to be asymptomatic. Atrophic, bullous and the erosive form can cause discomfort ranging from mild to severe pain. Although Oral Lichen Planus can spontaneously regress, lesions eventually require treatment. The most commonly used agents are corticosteroids. Topical and Systemic medications include immunosuppressant such as cyclosporine and tacrolimus and topical or systemic retinoid. Despite the wide range of therapeutics used in the treatment of Oral Lichen Planus, data on the efficacy are limited. Previous study articles include that there was weak evidence for the effectiveness of our therapeutics classes (corticosteroids, cyclosporine, retinoid or phototherapy) when these agents were used individually. Our team has extensive knowledge and research experience that has translate into high quality publications.<sup>13-20</sup>

The aim of this study is to identify and analyse the systemic medications in Oral Lichen Planus, the current study was carried out for treatment and better follow up of the patients.

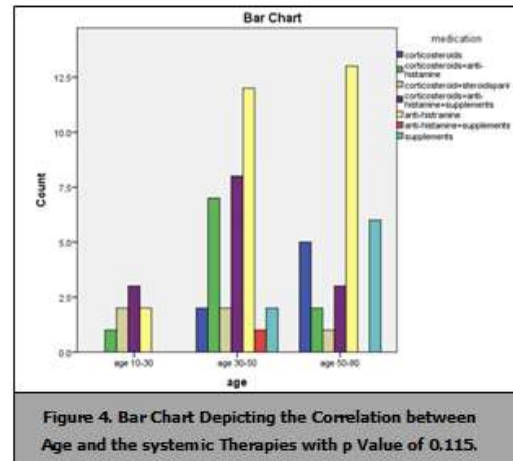
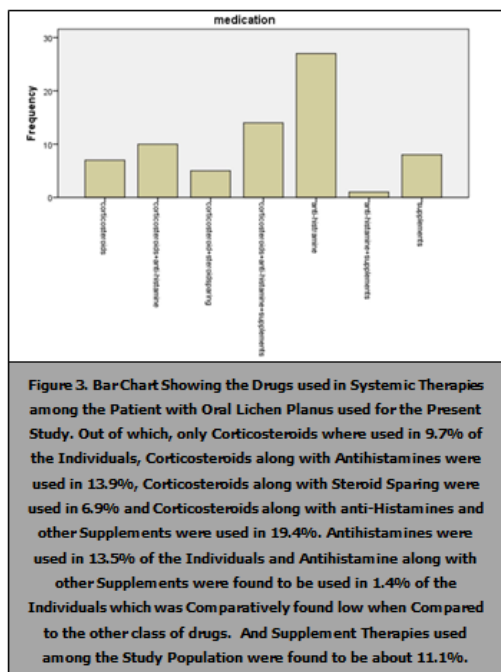
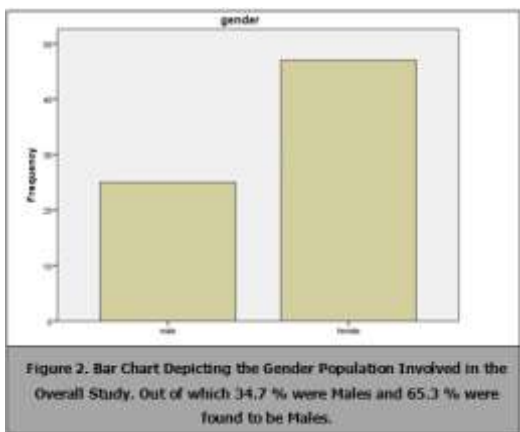
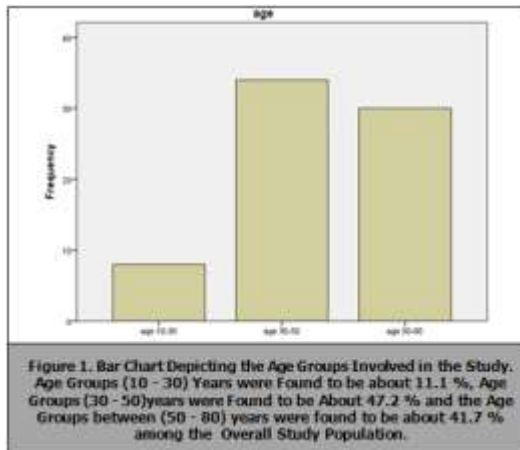
**MATERIALS AND METHODS**

The present study is a retrospective study carried out in a hospital setting under a specific population predominantly South Indian population. It is a single centred study with a small sample size. It was carried out with the approval of the Institutional Review Board approval. In this study, data of the patients were collected by complete analysis of the data of 86000 patients between June 2020 to March 2021 from patient management software (DIAS). Data including patients name, age, gender, drugs used in patients with Oral Lichen Planus were been collected. And for further analysis the collected data was cross verified by another examiner. The collected data was tabulated using Excel Spread sheets and the data was analysed using SPSS software version 19. The statistical study used in the study was Chi square test with p value less than 0.005 and confidence interval of 95 %.

**RESULTS AND DISCUSSION**

In the present study, it was found that (34.7 %) male population and (65.3 %) female population were involved in the study. Age groups of (10 - 30) years were found to be about (11.1 %), age group (30 - 50) years were found to be about (47.2 %) and age groups (50 - 80) years were found to be about (41.7 %). It was found that the corticosteroids were used in (9.7 %) of the individuals, corticosteroids along with antihistamines were used in (13.9 %), corticosteroids along with antihistamines were used in (6.9 %) and corticosteroids along with antihistamines and supplements were used in (19.4 %). An overall of (49.9 %) of corticosteroids were being used in the study groups. Antihistamines were used in about (37.5 %) and anti-histamines and supplements were being used in about (1.4 %). An overall of (38.9 %) of antihistamines were used. And an overall of (11.1 %) of supplements were found to be administered in the study groups.

In the correlation between gender and the systemic therapies, it was observed that antihistamines were more commonly used among the female population than the male population, followed by corticosteroids and supplements. Whereas, the corticosteroids along with combination therapy (corticosteroid + anti-histamines + supplements) has higher usage rate followed by anti-histamines and supplements. In the correlation between the age and the systemic therapies used in Oral Lichen Planus it was observed that antihistamines were the most commonly used among the age groups (30 - 50) years and also (50 - 80) years followed by the corticosteroids and the supplements. Whereas, corticosteroids along with the combination therapies had a higher usage prevalence among the age groups (10 - 30) years of age (Figures 1 - 4).



Despite the chronicity of Oral Lichen Planus, clinical trials to assess the new therapies have been reported after the follow up intervals and thereby providing incomplete information on the efficacy of the therapies. The long term follow ups allows observing the pattern of response and exacerbation of Oral Lichen Planus. Patterns of response and relapse has been a characteristic feature which in most patients could be controlled but not eradicated in most of the cases. The acquisition and maintenance of the responses in the oral lesions were the result of application of graded approach to drug administration, in which the intensity of the individual therapy is varied to achieve lesion regression and at the same time limit the oral and systemic toxicity.<sup>21-28</sup>

The ladder approach to selecting the treatment has another dimension, patient soften continued to respond to the topical treatments, over the patients treated with systemic therapies. Gradually as the systemic agents took hold, topical agents were being tapered by the patients to control the expense and increase the convenience of usage. However, topical therapies were always encouraged to reduce the dosage of the systemic therapies being used.

In the previous studies, it was observed that about 65 % of the patients had complete responses treated either with the topical and the systemic medications. Systemic corticosteroids were avoided as a long term treatment option because of the toxic effects in patients revering the drug therapies. Few other studies showed that topical medication showed complete response in a long term follow up basis.

**CONCLUSION**

It can be concluded from the present small sampled retrospective study, corticosteroids were the most commonly used drugs in the systemic therapies among the patients with Oral Lichen Planus. Out of which, anti-histamines were the most commonly used class of drugs followed by other drugs in combination therapies.

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