

Original article:

Assessment of Prevalence of Different Types of Cutaneous Lichen Planus among Known Population at a Tertiary Care Hospital: An Observational Study

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Abstract

Background: Lichen planus is a common disease with a worldwide distribution. The present study was planned to assess the prevalence of different types of cutaneous lichen planus.

Materials & Methods: The present study included assessment of prevalence of various types of cutaneous LP. A total of 50 Histopathological diagnosed cases of LP were included in the present study. Complete clinical examination of all the patients was carried out by experienced dermatologists. Routine hematological and biochemical investigations were carried out in all the patients.

Results: Erosive type of LP was the most common, found to be present in 50 percent of the patient population in the present study. Reticulate and vesicubullous were the next common types found to be present in 24 and 12 percent of the patient population respectively.

Conclusion: Females are affected more commonly by cutaneous lichen planus with erosive lichen planus is being the most common type of lichen planus.

Key words: Cutaneous, Lichen Planus, Prevalence.

INTRODUCTION

Lichen planus (LP) is a T-cell mediated disease, whose treatment, since first described by Sir William James Erasmus Wilson in 1869, is still disappointing and controversial. Reported options include topical and systemic corticosteroids, retinoids, azathioprine, dapsone, cyclosporine, griseofulvin, methotrexate, cyclophosphamide, hydroxychloroquine, tacrolimus, and interferon α . Several reports support the use of phototherapy for the treatment of LP, mostly different types of psoralen ultraviolet A (PUVA).¹⁻⁴

Cutaneous LP has been known to occur in variable frequency in different parts of the world. Variation in the prevalence of different forms of LP also occurs as per results from studies of the past literature.⁵⁻⁸ Hence; present study was planned to assess the prevalence of different types of cutaneous lichen planus.

MATERIALS & METHODS

The present study was conducted in the Department of Dermatology, Santosh Medical College & Hospital, Ghaziabad, Uttar Pradesh (India) and it included assessment of prevalence of various types of cutaneous LP. Ethical approval was obtained from institutional ethical committee. A total of 50 Histopathological diagnosed cases of LP

were included in the present study. Detailed demographic and clinical data of all the patients was assessed. Routine hematological and biochemical investigations were carried out in all the patients. All the data was summarized in Microsoft excel sheet and was analyzed by SPSS software.

RESULTS

A total of 50 patients with Histopathological diagnosis of LP were included in the present study. Mean age of the patients of the present study was 39.5 years. 40 percent of the patients belonged to the age group od 25 to 40 years, whereas 30 percent each belonged to the age group of less than 25 and more than 40 years respectively as shown in Table 1. Among these 50 patients, 30 were females while the remaining 20 were males as shown in **Graph 1**. Different types of LP encountered in the present study were Erosive, Reticulate, Hypertrophic and Vesiculobullous as shown in **Table 2**. Among these morphologic types, erosive type of LP was the most common, found to be present in 50 percent of the patient population in the present study. Reticulate and vesiculobullous were the next common types found to be present in 24 and 12 percent of the patient population respectively as shown in **Graph 2**.

Table 1: Age-wise and gender-wise distribution of patients in the present study

Parameter		Number of subjects	Percentage
Age group (years)	Less than 25	15	30
	25 to 40	20	40
	More than 40	15	30
Gender	Male	20	40
	Female	30	60

Graph 1: Graphical presentation of demographic data

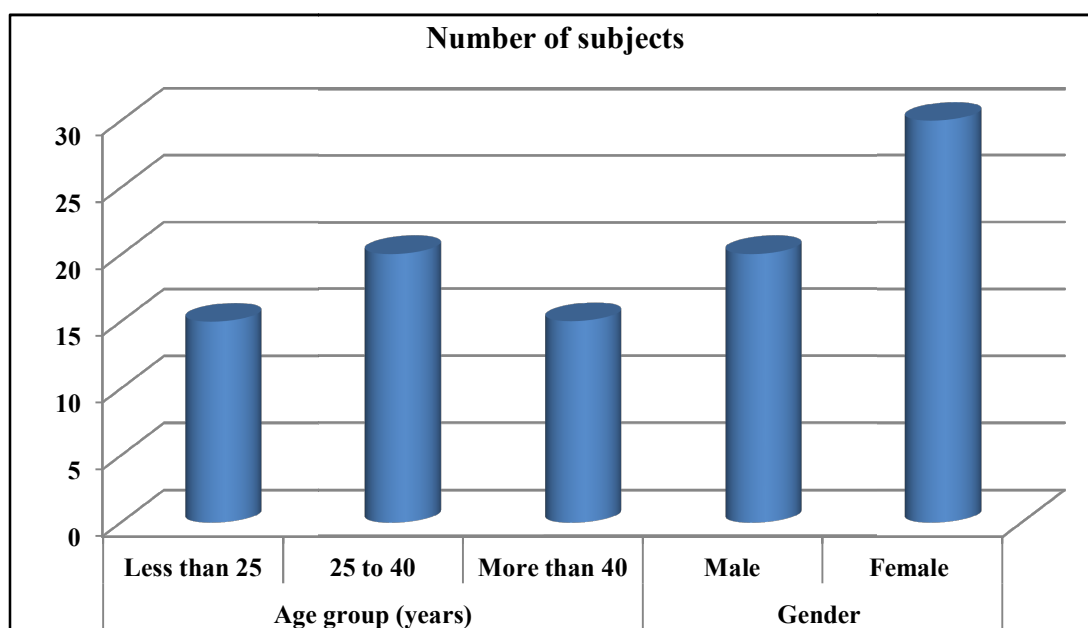
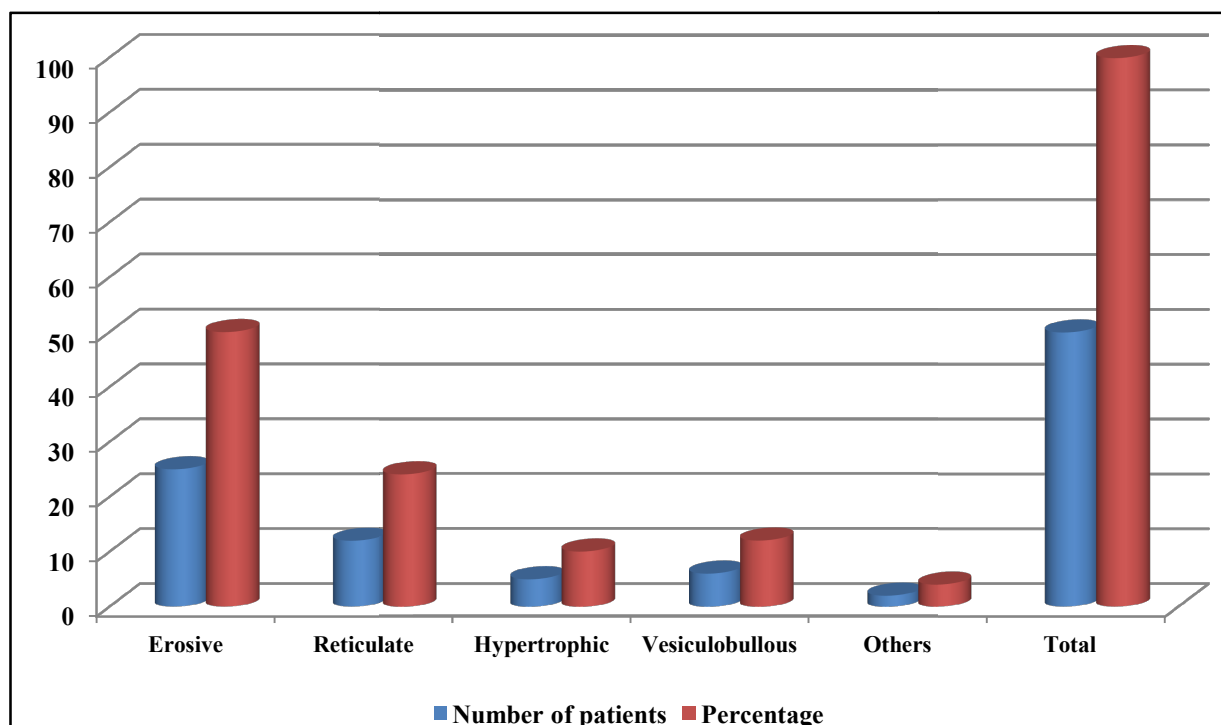


Table 2: Prevalence of different forms of LP

Type of LP	Number of patients	Percentage
Erosive	25	50
Reticulate	12	24
Hypertrophic	5	10
Vesiculobullous	6	12
Others	2	4
Total	50	100

Graph 2: Graphical presentation of prevalence of different forms of LP



DISCUSSION

Lichen planus is a chronic inflammatory mucocutaneous disease which frequently involves the oral mucosa. In the majority of patients with oral lichen planus (OLP) there is no associated cutaneous lichen planus or lichen planus at other mucosal sites.^{8, 9} In the present study, a total of 50 patients with Histopathological diagnosis of LP were included in the present study. Mean age of the patients of the present study was 39.5 years. Maticic M et al determined the prevalence of LP and other cutaneous manifestations in a cohort of patients infected with HCV from low HCV endemic area of Slovenia, to correlate findings with chosen biological variables and to assess the role of interferon (IFN)-based treatment of HCV infection in cutaneous manifestations. Methods A total of 171 consecutive

HCV-seropositive patients and 171 HCV-seronegative age- and gender-matched controls were studied prospectively. Prevalence of cutaneous manifestations, comparison between study patients and controls and correlation of skin findings with demographic, biochemical, virological and liver histologic findings as well as IFN-based therapy were assessed. Overall presence of LP in HCV-seropositives was 2.3%; although LP was not found in controls, the difference was not statistically significant ($P = 0.123$). Significantly higher than in controls was the prevalence of pruritus (31.0%, $P < 0.001$), dry skin (16.4%, $P < 0.001$) and hair loss (9.9%, $P < 0.001$). In IFN-based treatment naïves, skin findings were more frequent compared with controls, but not significantly, with no correlation to chosen biological variables. Current IFN-based treatment was significantly connected to pruritus ($P < 0.001$) and dry skin ($P < 0.001$). Compared with treatment naïves, in post-treated patients pruritus, dry skin and hair loss ($P < 0.001$) were significantly more common. LP was not significantly related to HCV infection. Prevalence of pruritus, dry skin and hair loss was significantly higher in post-compared with pre-treated patients.¹⁰

In the present study, 40 percent of the patients belonged to the age group of 25 to 40 years, whereas 30 percent each belonged to the age group of less than 25 and more than 40 years respectively. Among these 50 patients, 30 were females while the remaining 20 were males. Pavlotsky F et al summarized their experience with UVB in a relatively large study group looking specifically into predictive factors for complete response and the long-term relapse rates. A retrospective analysis of 50 patients with generalized cutaneous lichen planus, treated by broad or narrow band UVB. Seven and 43 patients were treated by broad and narrow band UVB, respectively. Complete response was achieved in 70% and 85% of those were still in remission after a median of 34.7 months. The complete response rate and the need for higher cumulative exposure doses were not influenced by sex, age, skin type, presence of additional diseases, failure of previous treatment or disease duration. This is a retrospective non-randomized analysis of a usually self-limiting disease. UVB is a safe and efficient treatment option for generalized cutaneous lichen planus.¹¹ Different types of LP encountered in the present study were Erosive, Reticulate, Hypertrophic and Vesiculobullous. Among these morphologic types, erosive type of LP was the most common, found to be present in 50 percent of the patient population in the present study. Reticulate and vesiculobullous were the next common types found to be present in 24 and 12 percent of the patient population respectively. Daramola OO et al evaluated the presentation of cutaneous lichen planus in anti-HCV seropositive and seronegative Nigerians. Fifty-seven Nigerians with cutaneous lichen planus were carefully examined to determine the form of lichen planus present. All were screened for the presence of anti-HCV by second-generation enzyme-linked immunosorbent assay (ELISA) and grouped as anti-HCV seropositive or anti-HCV seronegative patients. Nine patients were anti-HCV positive. Seven of these seropositive patients had hypertrophic lichen planus. Hypertrophic lichen planus in Nigerians is more prevalent with HCV infection.⁹

CONCLUSION

Under the light of above obtained data, it can be concluded that females are affected more commonly by cutaneous lichen planus with erosive lichen planus is being the most common type of lichen planus. However; further studies are recommended.

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