

A study of clinical profile and factors associated with lichen planus at tertiary health care centre

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Abstract

Background: Lichen planus(LP) is a subacute or chronic dermatosis that may involve skin, mucous membranes, hair follicles, and nails. It presents with various variants. This study was conducted to study the clinical profile and associated risk factors of Lichen Planus. **Aim and objective:** To study the clinical profile and factors associated with lichen planus inpatients at tertiary health care centre. **Material and methods:** Present study was a cross sectional study carried out in a tertiary care center in department of Dermatology. Total 100 patients clinically diagnosed as Lichen Planus were studied. Data collected with pretested questionnaire. Data analysed with appropriate statistical tests. **Results:** Mean age of the patients was 33.54 ± 3.76 years. Majority of the patients were from age group of 31-40 years (51%). Majority of the patients complained of itching (48%). Most common skin involved areas were shin (31%), forearm (25%) and flexor wrist (20%). In our study 4% cases were associated with hypertension while other associated diseases were vitiligo (3%), diabetes mellitus (3%).

Key Word: lichen planus.

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INTRODUCTION

Lichen planus is an inflammatory condition that can affect the skin, hair, nails and mucous membranes. It is characterized by erythematous to deep purple lichenoid, planar, polygonal papules with thin, translucent and densely adherent scales. Lesions most commonly occur on the skin, oral mucosa and genital areas. Lichen planus is usually self-limited and most commonly resolves spontaneously 1 to 2 years after onset.¹ The prevalence is believed to be < 1 % of general population with most of the cases occurring in the 3rd to 6th decade of life.² Lichen Planus is rare in children.³ Clinical Variants of Lichen Planus ²are Annular lichen planus, Linear lichen planus,

Atrophic lichen planus, Vesiculobulbous lichen planus, Erosive and ulcerative lichen planus, Follicular lichen planus. And Lichen planus pigmentosus. Lichen planus occurs when immune system attacks cells of the skin or mucous membranes. In some people, certain factors may trigger lichen planus. Like Hepatitis C infection, HSV 2, HIV, Certain pigments, chemicals and metals, Nonsteroidal anti-inflammatory drugs (NSAIDs), Certain medications for heart disease, high blood pressure or arthritis. Pathogenesis of LP is uncertain. Dense infiltrate of T-lymphocytes in the papillary layer of dermis can induce apoptosis of basal keratinocytes ⁴and is known as one of the most characteristic features of LP. CD4+ and CD8+ T- lymphocytes can be found in the infiltrate of LP, and CD8+ is predominant in lesions.⁵ Squamous cell carcinoma has been noted to occur in chronic mucosal and paramucosal lesions of Lichen Planus but direct pathogenetic relationship has not been established.⁶ Malignant transformation of cutaneous lichen planus occurs in less than 1% of cases.¹ Present study was conducted to study the clinical profile and factors associated with lichen planus in patients at tertiary care centre.

MATERIAL AND METHODS

Present study was a cross sectional study carried out in a tertiary care center in department of Dermatology. Study population was patients suffering from lichen planus. Inclusion criteria: 1. Patients clinically diagnosed as lichen planus. 2. Patients above age of 18 years and below 60 years. Exclusion criteria: 1. Patients below 18 years and above 60 years 2. Patients not willing to participate. After inclusion and exclusion criteria total 100 patients were studied during a period of one year who visited out patient department of Dermatology. Study was approved by ethical committee of the institute. A valid written consent was taken from the patients after explaining the study to them. Data was collected using pretested questionnaire. Data collection included sociodemographic profile of the patients. Detailed history and detailed clinical examination was done. Present symptoms were recorded. Data was analysed using appropriate statistical tests.

RESULTS

Total number of patients studied were 100. Mean age of the patients was 33.54 ± 3.76 years. Majority of the patients were from age group of 31-40 years (51%) followed by 41 to 50 years (22%). In lichen planus male preponderance was seen (males 78% and females 28%). Majority of the patients complained of itching (48%). Other complaints of the patients were skin lesions (41%) and disfigurement (11%). Table 2 shows distribution of patients according to duration of illness. Most of the patients we studied had history of illness since 1 year (53%). 24 % of the patients had duration of illness from 1 year to 3 years. 18 patients diagnosed as lichen planus with one month duration. Duration of illness >3 years contributed 5%. Figure 1 shows distribution of patients according to skin involvement. Most common skin involved areas were shin (31%), forearm (25%) and flexor wrist (20%). Trunk skin showed 11% involvement. Least involved parts were thigh (6%) and dorsal hand (7%). Figure 2 shows distribution of patients according to clinical findings. Popular eruption was mild in 7%, moderate in 52% and severe in 41% cases. Scaly lesions were observed as 21% mild, 53% moderate and 26% severe. Pigmentations were observed as 62% moderate lesions and 38% severe lesions. In our study 4% cases were associated with hypertension while other associated diseases were vitiligo (3%), diabetes mellitus (3%), discoid lupus erythematosus (2%), rheumatoid arthritis (1%). It showed familial history on 10% patients.

Table 1: distribution of patients according to age

Sr no	Age of patient (years)	No of patients	Percentage
1	18-30	18	18
2	31-40	51	51
3	41-50	22	22
4	51-60	09	9

Table 2: Distribution of patients according to duration of illness

Sr no	Age of patient (years)	No of patients	Percentage
1	1 day – 1 month	18	18
2	1 month – 12 months	53	53
3	13 months- 36 months	24	24
4	> 36 months	05	5

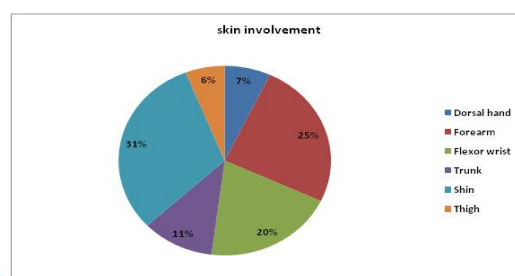


Figure 1: Distribution of patients according to skin involvement

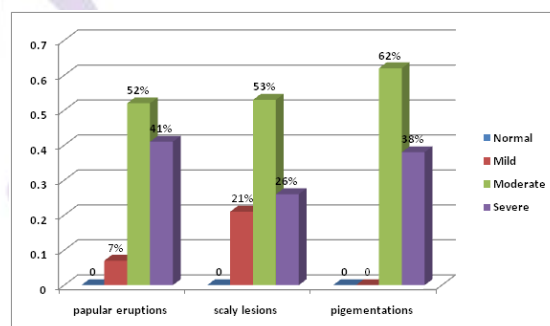


Figure 2: Distribution of patients according to clinical findings

DISCUSSION

In our study Mean age of the patients was 33.54 ± 3.76 years. Majority of the patients were from age group of 31-40 years (51%). Similar findings were seen in previous studies.⁷⁻¹⁰ Our study showed male preponderance was seen (males 78% and females 28%). Similarly Nnoruka EN *et al*¹¹ in Africa and Khondker L *et al*¹² in Bangladesh showed male preponderance. Most of the patients we studied had history of illness since 1 year (53%). 24 % of the patients had duration of illness from 1 year to 3 years. Contrary to our findings Kanwar *et al*⁷ showed majority patients in age group of 6 months to 3 years. Most common skin involved areas were shin (31%), forearm (25%) and flexor wrist (20%). Trunk skin showed 11% involvement. Least involved parts were thigh (6%) and dorsal hand (7%). Similar findings were seen in Nnoruka EN *et al* where limb involvement was observed in 69.2% patients. In our study 4% cases were associated with

hypertension while other associated diseases were vitiligo (3%), diabetes mellitus (3%), discoid lupus erythematosus (2%), rheumatoid arthritis (1%). It showed familial history on 10% patients. Its association with vitiligo in 3% cases suggests the role of auto-immunity in pathogenesis of LP. Similarly such association with various factors was observed in previous studies.^{13,14}

CONCLUSION

Lichen Planus was most commonly observed in middle aged men. it has various variants. Associated risk factors were hypertension, diabetes mellitus etc.

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