



HISTO-MORPHOLOGICAL STUDY OF LICHEN PLANUS

Pathology

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KEYWORDS

Lichen planus, Basal cell carcinoma, Lichenoid dermatitis

INTRODUCTION

Lichen planus (LP) is a chronic inflammatory and immune mediated disease that affects the skin, nails, hair, and mucous membranes. Cutaneous lichen planus (CLP) most commonly involves the flexor surfaces of the extremities and presents as small itchy violaceous papules in middle-aged adults. "Pruritic, Purple, Polygonal, Planar, Papules, and Plaques" are the traditional 6 "P's" of LP.

The frequency of LP varies from 0.1% to 4% depending upon the population studied; a particularly high prevalence rate has been noted in the Indian Subcontinent^{1,2}.

MATERIALS AND METHODS

This study was conducted in the Department of pathology in Sree Balaji Medical College and Hospital over a period of 1 year from April 2015 to May 2016. A total of 50 cases were analysed in our study. 42 cases were clinically diagnosed as lichen planus. 40 cases were diagnosed to be lichen planus by both clinically and histopathologically and 2 cases were diagnosed as lichenoid dermatitis (HPE). 8 cases with clinical diagnosis other than lichen planus turned out to be lichen planus by histopathology.

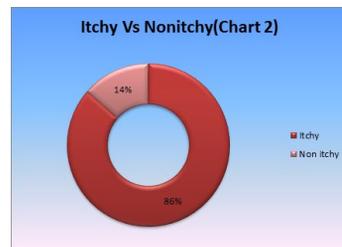
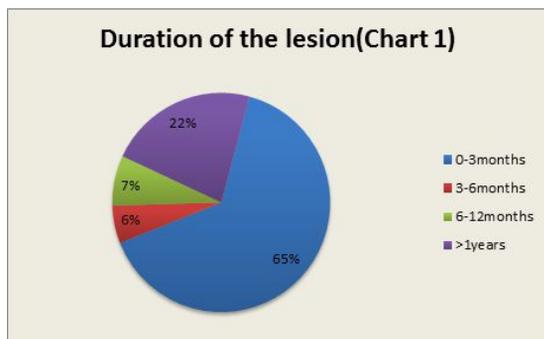
Clinical features like age, sex, presenting complaints and site of lesion were provided by dermatology department & skin biopsy of the patient was sent to pathology department for histopathological diagnosis in 10% neutral buffered formalin. Haematoxylin and eosin stained sections of skin biopsy were prepared to assess the histopathological diagnosis.

OBSERVATIONS AND RESULTS

Among 48 cases, 39 cases were of Classical type, 4 cases were Hypertrophic, 2 cases were Lichen planus pigmentosa, 1 case was ulcerative, 1 case was follicular and 1 case was of Bullous type of Lichen planus.

The occurrence of Lichen planus was observed to be more in females in a younger age group whereas males are more affected in their elderly age of more than 50 years.

In present study showed, 65% of patients suffered from LP for a duration of less than 3 months. Six Patients (6%) had a duration of 3-6 months. 7% had a duration of 6-12 months. 22% of patients suffered for a duration of more than 1 year (Chart 1)



Out of 48 patients, 41 patients presented with itchy type of lesion and 7 patients had non-itchy nature (Chart 2).

Clinico-histopathological correlation:

Out of 48 cases, 44 cases were diagnosed as lichen planus clinically of which 40 cases were diagnosed as lichen planus and 2 cases were diagnosed as lichenoid dermatitis. 8 cases with clinical diagnosis other than lichen planus (psoriasis -4 cases, BCC-1, Naevus -1, prurigo nodularis -1 & paraneoplastic pemphigus-1) were proven to be lichen planus by histopathology.

Statistical Analysis Of Clinico-Histopathological Correlation Of Lichen Planus (Table 1)

CLINICAL LICHEN PLANUS	HISTOLOGICAL DIAGNOSIS			TOTAL
	LP	LP	OTHER THAN LP	
		40	0	
		8	2	10
TOTAL		48	2	50

Clinically and histologically correlated cases were 40.

True positive (TP) - 40, False positive (FP) - 0, False negative (FN) - 8 & True negative (TN) - 2

Sensitivity = (TPX100)/(TP+FN) = 83%
 Specificity = (TNX100)/(TN+FP) = 100%
 Diagnostic accuracy = (TP+TN) X 100 / (TP+FP+TN+FN)
 Sensitivity = 83%
 Specificity = 100% & Diagnostic accuracy = 84%.

DISCUSSION

Many morphological variants of lichen planus are described which may create confusion in the diagnosis. Histopathology is required for the confirmation of the diagnosis.

Clinical features when considered alone may not be reliable as they are variable with both disease duration and treatment.

In our study, the youngest patient was 4 years old & oldest patient was 93 years old. Similar findings were seen in the Shankar Gouda Ireddy et al³, in the year 2014, & Asmita parihaar et al⁴, in 2015.

In the Present study, lower limb was the most common site of onset with 69.7% of cases, followed by upper limb (15.6%), oral mucosa

(8.3%), trunk (3%), face (2%) and scalp(1%) respectively, A similar observation has been reported in various studies and venous stasis has been offered as a likely explanation by Altman and Perry et al. , 1961, Singh and Kanwar et al⁵ , 1976 & Bhattacharya et al² , 2000.

In present study, most of the patients had itching (85.4%) which is the predominant symptom. Similar results were observed by Salah A Abdallat et al⁶ ,(83.6%), Bhattacharya et al² , (79.3%) and Kacchawa Dilip et al⁷ ,(83.6%).

In our study, the most common histological findings were orthokeratosis (100%), acanthosis (95%), Pointed rete pegs(88%), Hyper granulosis (93%), basal cell vacuolar degeneration (100%), Band like inflammatory cell infiltrate(97%), pigment incontinence (100%), civatte bodies (41%) and Max Joseph spaces (31%), similar findings were observed by Lakshmi priya G et al⁸ , and Bangaru et al⁹.

CONCLUSION

The rarity of the variants and their atypical presentations make their timely diagnosis and management more difficult in the clinical setting. The histopathological examination remains the goal standard in diagnosis and helps in differentiating its variants.

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