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Original Research Article

Histomorphological Evaluation of Lichen Planus in a Rural Population: A Retrospective Hospital Based Study.

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Abstract

Context: Lichen planus is a common inflammatory disorder,that commonly affects skin,nail,mucous membrane and hair. The morphology, distribution and colour of lichen planus is usually variable clinically.

Aim: The aim of the study is to analyse varied clinical presentations and its histopathological correlation.

Material and Methods: A retrospective study conducted in the department of pathology SMVMCH from May 2015 to 2017 june in a histopathologicaly diagnosed cases of Lichen planus which was, received in our department.

Results: Lichen planus occurred in all age groups but commonly seen in middle age to elderly. Equal male and female distribution, majority (28.2%), of patients presented as hypopigmented papule, 79% had hypergranulosis in histology, commonly seen in the lower extremities and clinico- histolpathological correlation diagnostic accuracy was 41.1%.

Conclusion: This study emphasize, the need for clinical examination, detailed history, and as lichen planus presents with various clinical manifestations. Histopathology serves as diagnostic tool and rules out other lesions which mimic lichen planus.

Keywords: Lichen Planus; Pruritis; Dermatosis.

Introduction

Lichen planus is a subacute or chronic dermatosis that may involve skin, mucous membranes, hair follicles, and nails where the etiology is unknown. It is a violaceous, flattopped, shiny, polygonal papules vary in size from pinpoint to a centimeter or more. On set is usually insidious, flatten after few months, replaced by pigmentation [1].

Lichen planus also affects mucous membrane like oesophagus, vagina and oral cavity. The manifestation of oral Lichen planus varies, it includes popular, erosive, atrophic, reticular and bullous oral lesions [1].

It can also affect nail and hair follicles. Malignant transformation accounts for 0.3%.

Histologically, shows irregular acanthosis, orthokeratosis, wedge shaped hypergranulosis, vacuolar alteration of basal layer, band like dermal lymphocytic infiltration, civatte bodies and melanin incontinence [1].

It is self limiting process and the management is challenging. Usuallybenign, recurrences and exacerbations do occur for many years. Few studies

quoted that lichen planus with chronic inflammatory reaction associated with dyslipidemia and has increased incidence of cardiovascular diseases with increased mortality [2-13]. Some of the literatures showed it has propensity to develop a squamous cell carcinoma in less than 1% of oral mucosal lesion [4-13]. Very few studies are available regarding the histomorphological patterns of lichen planus with difficulty in diagnosing clinically. Hence this prompted us to undergo this study and this is aimed to analyse the varied clinical presentations and its histopathological correlation with its different patterns.

Materials and methods

The current study was a descriptive and retrospective study conducted in the department of pathology SMVMCH from May 2015 to 2017 june. The material included in this study were histopathologically diagnosed cases its blocks were retrived and stained with H & E and the patterns were studied with its clinical correlation. Other cutaneous lesion were excluded from this current study, Since, this study was descriptive and retrospective study and the values were expressed in percentage. Hence, the data were analyzed by using software Statistical Package for Social Science (SPSS), version 16.0 and results were expressed in percentage.

Results

There were 39 lichen planus cases were encountered during the study period, clinical presentations varied from erythematous papule, hypopigmented macule and patches. Lichen planus occurred in all age groups but commonly seen in middle age to elderly age group which was shown in Table 1. Equal distribution is seen in both males and females shown in Table 2. Most common clinical presentation was Hypopigmented papule (28.2%), followed by hyperpigmented plaque and violaceous papule Table 3. Most of the lesions were distributed in the lower extremities (35.9%). followed by trunk and body (23.1%) have shown in Table 4.

The common features observed in histology were hyperkeratosis,hypergranulosis,acanthosis followed by dense lymphoplasmacytic infiltrates and civatte bodies with vacuolar degeneration shown in Table 5.

Table 1: Distribution of cases according to Age.

Age	Number of cases	Percent
0 to 10 years	1	2.6%
11 to 20 years	8	20.5%
21 to 30 years	8	20.5%
31 to 40 years	6	15.4%
41 to 50 years	10	25.6%
Above 50 years	6	15.4%
Total	39	100.0%

Table 2: Distributionof cases as per Gender

Sex	Frequency	Percent
Male	19	48.7%
Female	20	51.3%
Total	39	100.0%

Table 3: Distribution of Lichen planus disease as per clinical presentation

Clinical Signs	Frequency	Percent
Erythematous papule	1	2.6%
Hyperpigmented macule	1	2.6%
Hypopigmented papule	11	28.2%
Hypopigmented patch	3	7.7%
Hyperpigmented plaque	9	23.1%
Violaceous plaque	7	18.0%
Violaceous Papule	7	17.9%
Total	39	100.0%

Table 4: Site wise distribution of cases.

SITE	Number	%
Upper limb	5	12.8
Lower limb	14	35.9
Scalp	1	2.6
Trunk and body	9	23.1
Lateral Malleolus	1	2.6
Fore head	2	5.1
Oral	1	2.6
Hip	1	2.6
Both upper limb and lower limb	5	12.8

Lichen planus commonly seen in the lower extremeties(35.9%).

Table 5: Histopathological changes observed in Lichen planus.

Histopathological Findings	Present	Absent	Percent
Acanthosis	26 (66.7)	13 (33.3)	33.3%
Civatte bodies	1 (2.6)	38	97.4%
Hypergranulosis	31 (79.5)	8	20.5%
Hyperkeratosis	26 (66.7)	13	33.3%
Lympho-plasmocytic infiltrates (Dermal inflammation)	36 (92.3)	3	7.7%

Histopathologically the common features are Hyperkeratosis, irregular acanthosis, hypergranulosis and dermal inflammation.

Discussion

Lichen planus associated with so many complications and 0.3% it is associated with malignant transformation. Apart from that recent studies observed it is leading to dyslipidemia and cardiovascular risk. In our current study majority of the Lichen planus cases (39) were reported in the age group of 21-50 years. These findings were concordant with the study done by Singh and Kanwar et al [1].

Equal gender distribution was found in our study and it was not concordant with the study done by S.D. Chavhan et al. [2].

In the current study, the incidence was 0.3%. However increased incidence was observed in many other Indian studies. Papular Lichen planus was the commonest in our study and it is accordance with the other study [3]. This study shows high cutaneous involvement which is concurrent with the study done by Ozuguz P et al. [4]. In the present study hyperkeratosis (66.7%), hypergranulosis (79.5%), acanthosis with saw toothing of rete ridges (66.7%), civatte bodies were seen in 2.6% of cases and band like dermal lymphocytic infiltrate along with melanin incontinence (92.3%) were seen. Our findings were similar with the studies done by Chavhan et al. [2]. and Bangaru et al. [5].

In the current study the clinical details were confirmed with other papulosquamous lesions which is concurrent with Chavhan et al. [2]. and most of their histopathological diagnosis were correlated with the clinical diagnosis and our study emphasizes the need for clinical details with differentials since lichen planus has various clinical presentions and morphological patterens. Hence, histopathological examination is mandatory and will be very useful for the proper diagnosis of Lichen planus and its different histomorphological patterns and also to prevent malignant transformation and cardiovascular risks.

Conclusion

The overlapping clinical features of the lichen planus with other papulosquamous lesions made a problem in diagnosis clinically. Histopathology can aid a additional support for arriving at a proper diagnosis and helps to opt early treatment to the patients. However, some morphological patterns are specific to this entity and its observation will give a conclusive diagnosis.

Some of the recent studies quoted that Lichen planus is a systemic disease associated with dyslipidemia and also have increased cardiovascular risk. So, the proper diagnosis can also helps to prevent its ongoing complications.

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Conflict Of Interest: No conflict of interest.

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