ORIGINAL RESEARCH PAPER

Pathology

HISTOPATHOLOGICAL ANALYSIS OF SCALY SKIN LESIONS OF NON-INFECTIOUS ETIOLOGY

KEY WORDS: Scaly lesion, Histopathology

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ABSTRACT

Papulosquamous diseases form the largest conglomerate group of skin disease and are characterized by scaly papules or plaques. The papulosquamous group of diseases include psoriasis, parapsoriasis, lichen planus, lichen nitidus, prurigo simplex, prurigo nodularis, pityriasis rosea, pityriasis rubra pilaris and many more. Most of the papulosquamous diseases are characterized by scaly papules, clinical confusion may result in their diagnosis. Hence, histopathology is considered as the gold standard in dermatological diagnosis. Histopathological diagnosis will help the dermatologist in instituting proper therapy and can vary the prognosis significantly.

AIM: To study the age and sex distribution and histopathological spectrum of non-infectious scaly skin lesions

METHODS: The skin biopsy of patients presenting with scaly and non infectious lesions received in the department of pathology will be microscopically analysed and evaluated.

RESULTS: Analysis of the skin biopsies from the study population (51 cases) show a wide histopathological spectrum with Psoriasis being the most common lesion accounting for about 27.9% followed by Lichen planus. Maximum number of patients were in the second decade with male preponderance. 70.60% of the cases show clinicopathological correlation.

CONCLUSION: Papulosquamous lesions are the most common disease encountered. Clinically these lesions present as scaly plaques, histopathological confirmation is necessary for treatment protocol.

INTRODUCTION

Skin is the largest organ in the body which has limited patterns of reaction in response to different pathological stimuli. Like other organ systems, proper clinical history and examination is important for skin diseases as well. Clinically different lesions may show similar histological patterns. Therefore, though histopathology is considered the gold standard in dermatological diagnosis, there exist few limitations and very often a definite 'specific' diagnosis is not possible. In such instances, the correlation of histo pathological findings with clinical findings will aid in arriving at a plausible diagnosis and thereby help in the disease treatment. Studies in pathology have documented the extent of spread of various skin lesions and have made significant contribution to the understanding of etiology and pathogenesis[1] Papulosquamous diseases form the largest conglomerate group of skin disease and are characterized by scaly papules or plaques. Scaly skin is the loss of the outer layer of the epidermis in large, thin flakes i.e. the outer layer of skin turns dry and peels away in large pieces like that of scales. Since papulosquamous diseases are all characterized by scaling papules, clinical confusion may result in their diagnosis. Therefore histopathological analysis is important for a more definitive differentiation. Separation of each of these conditions into different entities becomes[2] important because the treatment and prognosis is disease-specific. These lesions can also be associated with hypo and hyperpigmentation. The papulosquamous group of diseases include psoriasis, parapsoriasis, lichen planus, lichen nitidus, prurigo simplex, prurigo nodularis, pityriasis rosea, pityriasis rubra pilaris and many more. Certain conditions, like psoriasis mimic diverse dermatological conditions as they present with numerous clinical variants leading to diagnostic dilemma for the clinician. In such cases histopathological diagnosis will help the dermatologist in instituting proper therapy and can vary the prognosis significantly.

AIMS AND OBJECTIVES

1. To study the histopathological patterns of noninfectious erythematous papulosquamous lesions.
2. To estimate the age and sex distribution and frequency of various types of such lesions with respect to each other among skin biopsies.

MATERIALS AND METHODS

It is a retrospective study comprised of skin biopsies from 51 clinically diagnosed or suspected non-infectious, erythematous papulosquamous skin lesions which was received in the Department of pathology, B. J. Medical college, Ahmedabad between 1st January 2020 to 30 june 2021. Paraffin embedded tissue blocks and clinical details from requisition forms were retrieved. Sections are cut, stained with haematoxylene and eosin followed by microscopic examination. Cases included in the study were those with clinical features of non-infectious erythematous papulosquamous skin disorders. Inadequate skin biopsies, skin disorders with infective etiology and other skin lesions which are not papulosquamous disorder were excluded.

RESULTS

In the present study, a total of 51 biopsies taken from the study group of patients was studied in the Department of Pathology, B. J. Medical college, Ahmedabad between 1st January 2020 to 30 june 2021. The objectives of the study include the age and sex distribution of patients clinically presenting with scaly skin lesions of non-infectious etiology which are tabulated in the Table 1 and Table 2 respectively.

Table 1: Age Distribution Of Patients Studied

Age in years	No. of patients	%
<10	1	2.0
10-20	9	17.6
21-30	13	25.5
31-40	5	9.8
41-50	11	21.6
51-60	5	9.8
>60	7	13.7
Total	51	100.0

In the present study, maximum numbers of cases were found to be in second decade i.e., (21-40) years comprising of 25.5% of the study population. Minimum number of cases is found to in the age group of less than 10 years.

Table 2: Gender Distribution Of Patients Studied

Gender	No of patients	%
Female	25	49.0

Male	26	51.0
Total	51	100.0

The incidence of scaly skin lesions of noninfectious etiology in the present study shows 51% of the affected individuals are males and 49% are females.

Table 3: The Spectrum Of Clinical Diagnosis With Gender Co-relation In The Study Population

Clinical Diagnosis	Gender		Total
	Female	Male	
Psoriasis	8	15	23(45.1%)
Parapsoriasis	1	1	2(3.9%)
Lichen planus	10	6	16(31.3%)
Hypertrophic Lichen planus	1	2	3(5.88%)
Lichen nitidus	1	1	2(3.9%)
Pustular psoriasis	1	0	1(2%)
Erythrodermic psoriasis	1	1	2(3.9%)
Pityriasis rosea	1	1	2(3.9%)
Total	24	27	51(100%)

Out of 51 patients studied, 23 patients were clinically diagnosed as Psorisasis,16 patients as Lichen planus, 2 as Parapsoriasis, 3 cases as Hypertrophic lichen planus and 2 case lichen nitidus and 2 case each as Pustular psoriasis, erythrodermic psoriasis, pityriasis rosea.

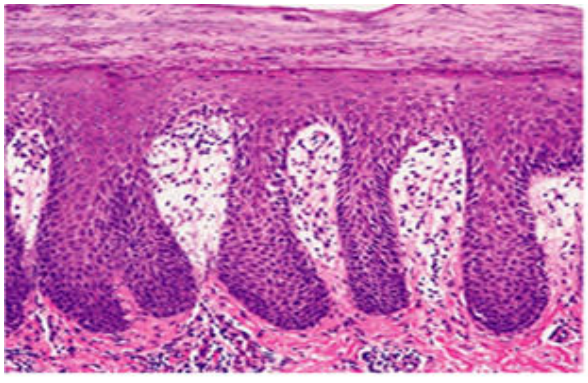
Table: 4 Histopathological Correlation With Clinical Correlation

HISTOPATHOLOGICAL DIAGNOSIS	CLINICAL DIAGNOSIS
CORRELTED	36(70.6%)
NOT CORRELTED	15(29.4%)
TOTAL	51(100%)S

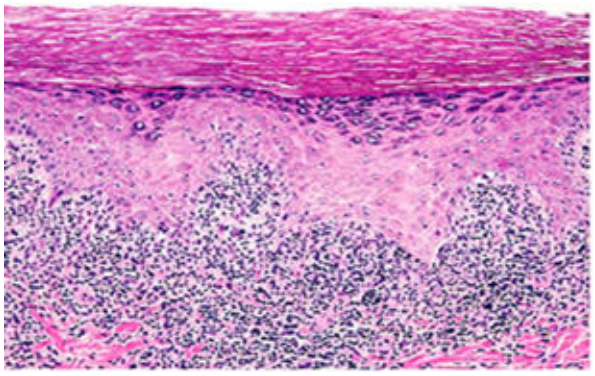
Out of 51 patients, histopathological diagnosis of 36 patients (70.60%) correlates with the clinical diagnosis. Histopath ological diagnosis of 15 patients (29.40%) does not correlate with the clinical diagnosis

Microscopy

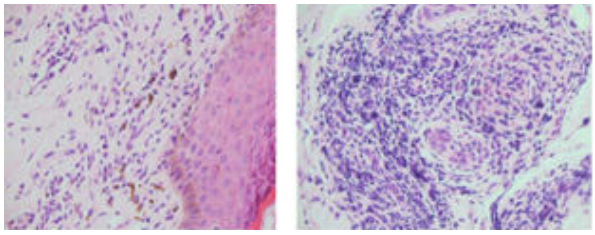
LAYERS OF EPIDERMIS17



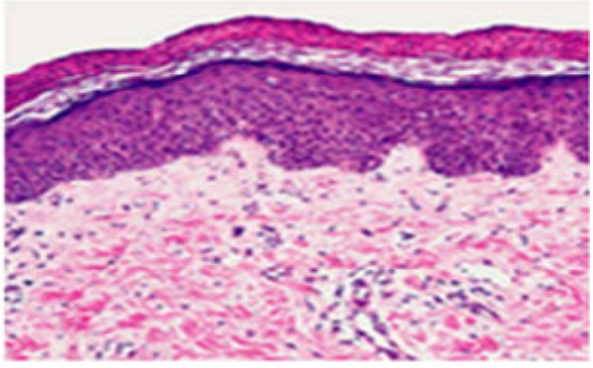
HISTOPATHOLOGY OF PSORIASIS



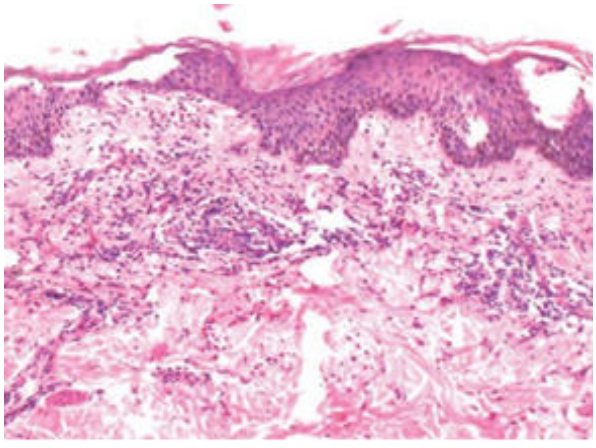
HISTOPATHOLOGY OF LICHEN PLANUS



HISTOPATHOLOGY OF LICHEN STRIATUS 57



HISTOPATHOLOGY OF PARAPSORIASIS



HISTOPATHOLOGY OF PITYRIASIS ROSEA

DISCUSSION

The accurate diagnosis of any non-infectious scaly skin lesion is important for its effective treatment and evaluation of its prognostic significance. Most of these scaly skin lesions have a similiar clinical presentation, hence the histopathological study is considered as the gold standard for the evaluation of these lesions. The present study was conducted to determine the age and sex incidence of scaly non-infectious skin lesions and its clinical correlation. Fifty one patients who came with complaints of scaly skin lesions and clinically thought to arise from an non-infectious etiology were subjected to biopsy and evaluated histopathologically.

COMPARISON OF SEX DISTRIBUTION IN DIFFERENT STUDIES

STUDY	MALE	FEMALE
Grace et al	60.25%	39.75%
Rajasekhar et al	77.5%	22.5%
Present study	51%	49%

Studies by Grace et al and Rajasekhar et al study show that the incidence of non infectious scaly skin lesions is higher in males as in concordance with our present study which shows a slightly higher incidence (51%) in males.

CLINICAL AND HISTOPATHOLOGICAL CORRELATION INVARIOUS STUDIES

STUDY	CORRELATION
GRACE et al	97.52%
YOUNAS et a	76.30%
PRESENT STUDY	70.60%

In Grace et al study 97.52% of clinical diagnosis was compatible with that of the histopathological diagnosis. Younas et al study showed 76.30% compatibilty while our study has 70.60% clinico-histopathological diagnosis compatibility.

CONCLUSION

Papulosquamous lesions are the most common skin disease encountered. These present clinically as a scaly skin lesion with pigment alteration. The most common of this group being Psoriasis vulgaris followed by Lichen planus. This study reiterates that these lesions show a definite male preponderance with maximum patients in their second decade (20-30 years). Histopathological confirmation is mandatory for the treatment protocol, since most of the papulosquamous lesion have similar clinical presentation.

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