

Original research article

Correlation of the clinical diagnosis with histopathological diagnosis in papulosquamous lesions of the skin

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Abstract

Tissue reaction patterns are distinctive morphological patterns which categorize a group of cutaneous diseases. Within each of these histopathological categories there are diseases which may have similar or diverse clinical appearances and etiologies. Some diseases may show histopathological features of more than one reaction pattern at a particular time or during the course of their evolution. Such cases may be difficult to diagnose. Biopsy of clinically diagnosed/suspected cases of papulosquamous lesions was performed in the Department of Dermatology and sent to the Department of Pathology in 10% formalin. The specimen obtained was subjected for tissue processing after fixation. Among 49 cases of clinically diagnosed psoriasis, 85.71% correlated with the histological diagnosis and 14.28% showed no correlation. Among 44 cases of clinically diagnosed lichen planus, 90.9% correlated with the histological diagnosis and 9.1% showed no correlation. Among 03 cases of clinically diagnosed Pityriasis rubra pilaris, 66.6% correlated with histological diagnosis and 33.3% showed no correlation.

Keywords: Clinical diagnosis, histopathological diagnosis, papulosquamous lesions

Introduction

The papulosquamous lesions of skin are a group of heterogenous non-infectious erythematous scaly lesions characterized by papules and plaques ^[1].

Although histopathological study is considered the gold standard in diagnosing dermatological lesions, it has its limitations and very often a definite 'specific' diagnosis is not possible. In these cases correlation of histopathological findings with clinical findings will make a diagnosis possible ^[2].

Tissue reaction patterns are distinctive morphological patterns which categorize a group of cutaneous diseases. Within each of these histopathological categories there are diseases which may have similar or diverse clinical appearances and etiologies. Some diseases may show histopathological features of more than one reaction pattern at a particular time or during the course of their evolution. Such cases may be difficult to diagnose ^[3].

The pattern of inflammation refers to the distribution of the inflammatory cell infiltrate within the dermis and/or the subcutaneous tissue. There are several distinctive patterns of inflammation, their recognition assists in making a specific diagnosis ^[4].

There are many different reaction patterns in the skin, but the majority of inflammatory dermatoses can be categorized into six different patterns. For convenience, these will be called the major tissue reaction patterns. There are a number of other diagnostic reaction patterns which occur much less commonly than the major group of six, but which are nevertheless specific for other groups of dermatoses. These patterns will be referred to as minor tissue reaction patterns ^[5, 6].

Methodology

Biopsy of clinically diagnosed/suspected cases of papulosquamous lesions was performed in the Department of Dermatology and sent to the Department of Pathology in 10% formalin. The specimen obtained was subjected for tissue processing after fixation. Tissue sections were prepared from paraffin block and stained with haematoxylin and eosin followed by microscopic examination. Histochemical

special stains was used whenever necessary.

Type of Study: Prospective Study.

Inclusion criteria

1. Cases with clinical features of papulosquamous disorders attending skin OPD.
2. Cases which were already diagnosed and have discontinued treatment for 1 to 2 weeks in case of topicals and for 1 month in case of oral agents or phototherapy.

Exclusion criteria: Skin disorders with infective etiology and other skin lesions which are not papulosquamous disorders and patients on treatment.

Results

Table 1: Correlation of clinically diagnosed cases of psoriasis with histological diagnosis

Clinical diagnosis	Histopathological diagnosis			
Psoriasis	Psoriasis	Seborreic Dermatitis	Pityriasis Rosea	Chronic Eczema
49	42	03	02	02

Among 49 cases of clinically diagnosed psoriasis, 85.71% correlated with the histological diagnosis and 14.28% showed no correlation.

Table 2: Correlation of clinically diagnosed lichen planus with histological diagnosis

Clinical diagnosis	Histological diagnosis		
Lichen planus	Lichen planus	Lichenoid reaction	Keratosis pilaris
44	40	02	02

Among 44 cases of clinically diagnosed lichen planus, 90.9% correlated with the histological diagnosis and 9.1% showed no correlation.

Table 3: Correlation of clinically diagnosed cases of pityriasis rosea with histological diagnosis

Clinical Diagnosis	Histological Diagnosis	
Pityriasis Rosea	Pityriasis Rosea	Psoriasis
02	01	01

Among 02 cases of clinically diagnosed Pityriasis rosea, 50% correlated with histological diagnosis and 50% showed no correlation.

Table 4: Correlation of clinically diagnosed cases of pityriasis rubra pilaris with histological diagnosis

Clinical diagnosis	Histological diagnosis	
Pityriasis Rubra Pilaris	Pityriasis Rubra Pilaris	Follicular Psoriasis
03	02	01

Among 03 cases of clinically diagnosed Pityriasis rubra pilaris, 66.6% correlated with histological diagnosis and 33.3% showed no correlation.

Table 5: Correlation of clinically diagnosed cases of lichen nitidus with histological diagnosis

Clinical diagnosis	Histological Diagnosis	
Lichen Nitidus	Lichen Nitidus	Lichen Planus
02	02	00

Among 02 cases of clinically diagnosed Lichen nitidus, 100% correlated with the histological diagnosis.

Discussion

Table 6: Comparing correlation of clinical diagnosis and histopathological diagnosis in present study with other studies

Study	Clinical diagnosis	Total number of cases	Cases correlating with histological diagnosis no. (%)	Cases not correlating with histological diagnosis no. (%)
Agrawal <i>et al.</i> [7]	Lichen planus	10	06 (60%)	04 (40%)
Reddy <i>et al.</i> [8]	Lichen planus	24	21 (87.5%)	03 (12.5%)
Present study	Lichen planus	44	40 (90.1%)	04 (9.1%)

In present study out of 44 clinically diagnosed cases of lichen planus, 40 (90.1%) cases were confirmed histologically and 4 (9.1%) cases histologically had different diagnosis such as 2 cases of lichenoid reaction and 2 cases as keratosis pilaris. The clinical presentation varies and hence definitive diagnosis depends on histological diagnosis.

It is similar to study done by Reddy *et al.*

Conclusion

- Out of 49 clinically diagnosed cases of psoriasis, 42 were histologically confirmed and other 07 cases had different diagnosis. The clinicopathological correlation was seen in 85.71% of cases.
- Out of 44 clinically diagnosed cases of lichen planus, 40 were histologically confirmed and other 4 cases had different diagnosis. The clinicopathological correlation was seen in 90.9% of cases.

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