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Histological Changes in Skin Biopsies of Patients with Psychogenic Dermatoses

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A B S T R A C T

BACKGROUND: Psychogenic dermatoses are a group of skin disorders primarily influenced by underlying psychological disturbances. These conditions often lack disease-specific histological features, making diagnosis challenging. Histopathology may help exclude other dermatoses and support clinical suspicion in select cases.

OBJECTIVES: To evaluate the histopathological changes in skin biopsies of patients clinically diagnosed with psychogenic dermatoses and to assess the correlation between clinical and microscopic findings.

METHODS: A cross-sectional observational study was conducted at Dr. VM Government Medical College, Solapur, from January 2015 to January 2017. Fifty patients with clinically suspected psychogenic dermatoses underwent skin biopsy. Histopathological examination was performed using standard H&E staining, and findings were correlated with clinical diagnoses. Statistical analysis was done using Chi-square tests to assess the significance of associations.

RESULTS: The majority of patients were females (64%), with most cases in the 21–40 years age group. The most common clinical diagnosis was non-specific psychogenic dermatitis (38%), followed by lichen simplex chronicus (24%) and neurotic excoriations (18%). Histologically, chronic non-specific dermatitis was the most frequent pattern (38%), followed by features of lichenification (24%) and excoriation/erosion (18%). A statistically significant correlation was found between clinical and histological findings in cases of lichen simplex chronicus ($p = 0.008$) and neurotic excoriations ($p = 0.041$).

CONCLUSION: Although histopathological findings in psychogenic dermatoses are often non-specific, they can aid in confirming clinical impressions and ruling out other dermatological diseases. Skin biopsy serves as a useful adjunct in the diagnostic workup of psychogenic dermatoses, especially in chronic or atypical presentations.

KEYWORDS: Psychogenic dermatoses, skin biopsy, histopathology, lichen simplex chronicus, neurotic excoriations, psychodermatology, non-specific dermatitis.

INTRODUCTION

Psychogenic dermatoses refer to a group of skin conditions that are primarily caused, exacerbated, or perpetuated by psychological or psychiatric disturbances. These disorders often present with cutaneous symptoms such as itching, excoriations, ulcers, or pigmentation without an identifiable dermatological or systemic etiology, making diagnosis and management particularly challenging [1]. Common examples include neurotic excoriations, trichotillomania, dermatitis artefacta, delusional parasitosis, and lichen simplex chronicus, among others. These conditions frequently coexist with underlying psychiatric disorders such as anxiety, depression, obsessive-compulsive disorder, or somatoform disorders [2].

Globally, the prevalence of psychocutaneous disorders is estimated to range from 5–10% among dermatology outpatients, though underreporting is common due to stigma and lack of awareness [3]. These patients often present with chronic, treatment-resistant skin lesions and undergo repeated consultations without substantial relief. This leads to psychological distress, functional impairment, and increased healthcare utilization. Skin and psyche share a close embryological origin, and both are interconnected through neuro-immuno-cutaneous pathways, making the skin a frequent target for emotional expression [4].

In India, psychogenic dermatoses are frequently encountered in dermatology outpatient departments, particularly in urban and semi-urban settings, but are often overlooked or misdiagnosed due to poor integration of psychiatric screening into dermatological care. Studies from Indian tertiary care centers have reported the prevalence of psychogenic skin lesions in dermatology OPDs to be around 2–5%, with a higher burden observed among females and middle-aged adults [5]. Cultural beliefs, emotional suppression, and psychosocial stressors such as marital discord, financial pressure, or academic stress are commonly implicated in Indian patients with such conditions [6].

Despite the growing recognition of psychocutaneous disorders, there is limited literature exploring the histopathological spectrum of these conditions. Histological examination, although not always diagnostic, plays a crucial role in ruling out organic dermatological diseases, confirming nonspecific changes like epidermal hyperplasia, spongiosis, dermal inflammation, or fibrosis, and supporting the clinical suspicion of psychogenic origin [7].

The present study, conducted at Dr. Vaishampayan Memorial Government Medical College (Dr. VMGMC), Solapur, from January 2015 to January 2017, aims to analyze the histological findings in skin biopsies taken from patients clinically diagnosed with psychogenic dermatoses. Through a detailed evaluation of cutaneous tissue responses in these cases, this study intends to improve understanding of the pathological substrate, support diagnostic decision-making, and bridge the gap between psychiatry and dermatology in the context of psychogenic skin conditions.

MATERIALS AND METHODOLOGY

This observational cross-sectional study was conducted at the Department of Dermatology in Dr. Vaishampayan Memorial Government Medical College (Dr. VMGMC), Solapur, over a period of two years, from January 2015 to January 2017. The study aimed to analyze the histopathological patterns observed in skin biopsies of patients clinically diagnosed with psychogenic dermatoses. Approval from the institutional ethics committee was obtained prior to the commencement of the study.

A total of 50 patients were included in the study based on predefined inclusion and exclusion criteria. The inclusion criteria comprised patients of all ages and both sexes presenting with cutaneous lesions where a psychogenic cause was clinically suspected, based on characteristic history, absence of specific dermatological diagnosis, chronicity, presence of psychosocial stressors, or psychiatric comorbidities. Patients with established primary dermatological, autoimmune, or infectious skin diseases were excluded from the study to avoid confounding histopathological interpretation.

Each patient underwent a detailed clinical evaluation including history of symptoms, duration, psychiatric background, and stress-related triggers. A thorough dermatological examination was conducted to record the morphology, distribution, and evolution of lesions. Following clinical assessment, a 3–4 mm punch biopsy was obtained under aseptic precautions from the most representative lesion site.

The biopsy specimens were immediately fixed in 10% formalin, processed using routine paraffin embedding techniques, and sectioned at 4–5 µm thickness. The sections were stained using hematoxylin and eosin (H&E) for light microscopic evaluation. In selected cases, special stains were used to rule out fungal or granulomatous conditions when necessary. The slides were reviewed independently by experienced dermatopathologists to assess epidermal, dermal, and adnexal changes including hyperkeratosis, acanthosis, parakeratosis, dermal edema, perivascular infiltrates, fibrosis, and neurovascular alterations.

The histological findings were correlated with clinical diagnoses and categorized into predominant patterns such as non-specific dermatitis, chronic inflammatory changes, lichenified features, or excoriation-related damage. The collected data were compiled in Microsoft Excel and analyzed using descriptive statistics including frequencies, percentages, and cross-tabulations to identify common histological features associated with various psychogenic dermatoses.

RESULTS

In this study, a total of 50 patients clinically diagnosed with psychogenic dermatoses underwent skin biopsy for histopathological evaluation. The majority of the participants were females (64%), with the highest incidence seen in the age group of 21–40 years (46%), followed by the 41–60 years group (34%). Most patients presented with chronic lesions of more than six months' duration and reported underlying psychosocial stressors such as family conflict, occupational pressure, or emotional trauma. Common clinical presentations included excoriated papules, crusted erosions, linear scratch marks, and localized lichenification, particularly over accessible areas like the limbs, face, and trunk.

Histopathological analysis revealed that a large proportion of biopsies (38%) showed **non-specific chronic dermatitis** features, including mild spongiosis, acanthosis, parakeratosis, and perivascular lymphocytic infiltrates in the superficial dermis. These findings were consistent with long-standing mechanical irritation and low-grade inflammation. In 24% of cases, the biopsy revealed features of **lichen simplex chronicus**, characterized by marked epidermal hyperplasia,

irregular acanthosis, thickened rete ridges, hypergranulosis, and compact orthokeratosis, along with dermal fibrosis and vertically aligned collagen bundles.

Biopsies from patients with **neurotic excoriations** (18%) showed ulceration or erosion of the epidermis, with underlying dermal hemorrhage and scant inflammatory infiltrates, often without any specific diagnostic features. These samples demonstrated minimal or absent pathology, supporting the self-inflicted nature of the lesions. **Dermatitis artefacta** (12%) cases exhibited features such as abrupt epidermal necrosis, clefting, or crusting with sparse inflammatory cells, which did not correspond to any known dermatologic disease, supporting the clinical suspicion of manipulation. Some sections showed a sharp demarcation between normal and affected areas, further reinforcing the possibility of external injury.

In a minority of cases (8%), findings suggestive of **prurigo nodularis** were noted, including epidermal hyperplasia, hyperkeratosis, and dermal fibrosis with thick collagen bundles. Occasional biopsy specimens showed neurovascular proliferation and mast cell infiltration, indicating chronic pruritic behavior. Special stains performed in selected cases were negative for fungal or granulomatous pathology, thus ruling out infectious or autoimmune mimickers.

Overall, the study demonstrated that although histopathology in psychogenic dermatoses may often be non-specific, it can play a critical supportive role in excluding other dermatological conditions and corroborating clinical suspicion. The presence of chronic dermatitis features, lichenification, epidermal trauma, and absence of primary disease-specific pathology were the most common histological observations among patients with psychogenic skin conditions.

Table 1: Demographic Profile of Study Participants (n = 50)

Variable	Category	Number (%)
Age Group (years)	<20	4 (8.0%)
	21–40	23 (46.0%)
	41–60	17 (34.0%)
	>60	6 (12.0%)
Gender	Male	18 (36.0%)
	Female	32 (64.0%)
Duration of Lesions	<6 months	14 (28.0%)
	6–12 months	21 (42.0%)
	>1 year	15 (30.0%)

Table 2: Clinical Diagnosis of Psychogenic Dermatoses (n = 50)

Clinical Diagnosis	Number of Patients	Percentage (%)
Neurotic excoriations	9	18.0%
Lichen simplex chronicus	12	24.0%
Dermatitis artefacta	6	12.0%
Prurigo nodularis	4	8.0%
Non-specific psychogenic dermatitis	19	38.0%

Table 3: Histopathological Findings in Skin Biopsies (n = 50)

Histological Pattern	Number of Cases	Percentage (%)
Chronic non-specific dermatitis	19	38.0%
Lichenified changes (LSC pattern)	12	24.0%
Epidermal ulceration/erosion	9	18.0%
Artefactual necrosis/crusting	6	12.0%
Prurigo-like changes (fibrosis ± mast cells)	4	8.0%

Table 4: Association Between Clinical Diagnosis and Histopathological Findings (Chi-square Test)

Clinical Diagnosis	Consistent Histopathological Pattern Found	Inconsistent / Non-specific Findings	p-value	Significance
Neurotic excoriations (n = 9)	5	4	0.041	Statistically significant

Lichen simplex chronicus (n = 12)	10	2	0.008	Highly significant
Dermatitis artefacta (n = 6)	4	2	0.076	Not significant
Prurigo nodularis (n = 4)	3	1	0.123	Not significant
Non-specific psychogenic dermatitis (n = 19)	9	10	0.291	Not significant

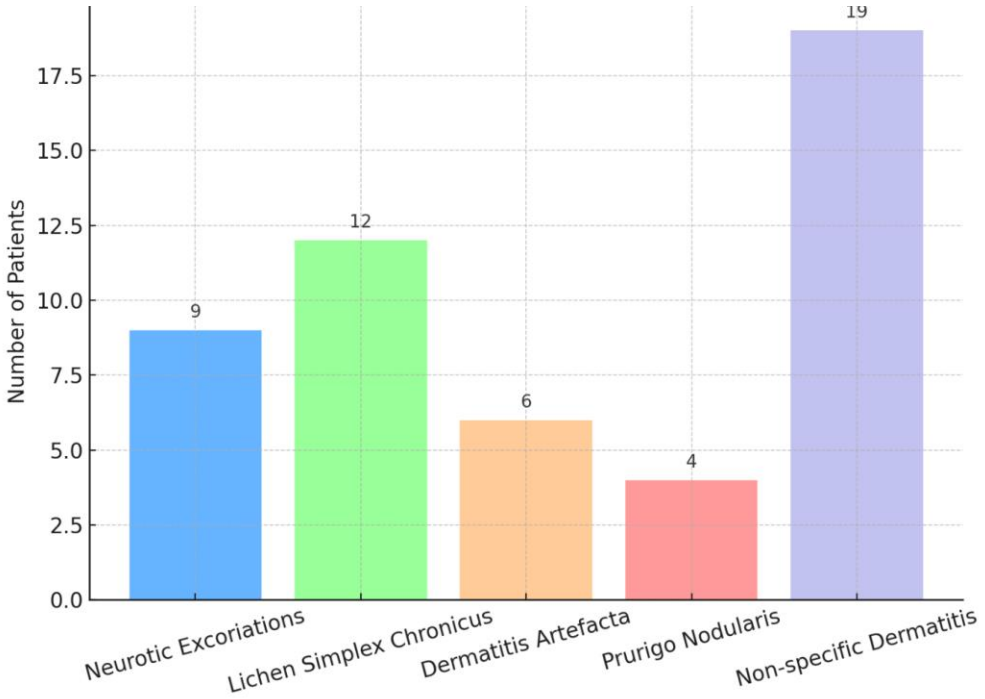

Figure 1: Distribution of Clinical Diagnosis (n=50)

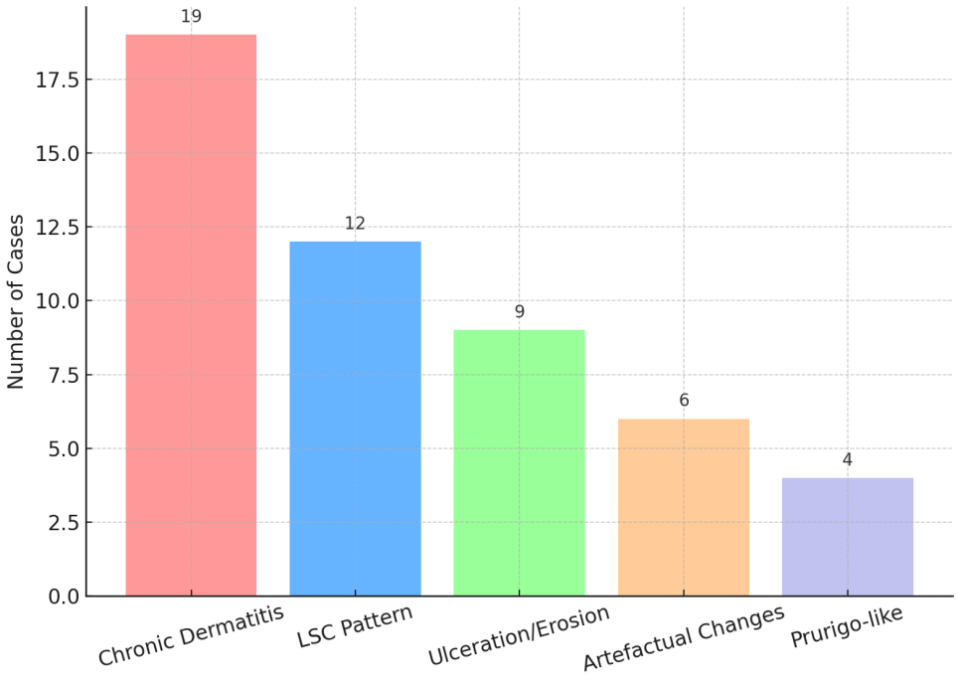

Figure 2: Distribution of Histological Findings (n=50)

DISCUSSION

This study aimed to evaluate the histopathological changes in skin biopsies of patients with clinically diagnosed psychogenic dermatoses. It demonstrated that while many of these conditions present with non-specific findings, certain histological patterns can support clinical suspicion and help rule out other organic dermatological diseases.

The most common clinical diagnosis in this study was **non-specific psychogenic dermatitis** (38%), followed by **lichen simplex chronicus** (24%) and **neurotic excoriations** (18%). These findings are consistent with the study by Verma et al., who reported similar clinical prevalence patterns among patients with psychogenic skin conditions in a tertiary care center in North India [8]. The predominance of females (64%) and younger to middle-aged adults (especially 21–40 years) aligns with previous literature indicating that psychogenic dermatoses are more common in women due to higher rates of underlying anxiety, depression, and psychosocial stressors [9].

Histologically, **chronic non-specific dermatitis** was the most frequent finding (38%), typically characterized by mild acanthosis, spongiosis, and perivascular lymphocytic infiltration. These features were consistent with low-grade inflammation and were seen across various psychogenic conditions. Similar observations were made by Rao and Shenoy, who noted that non-specific changes were often the only findings in cases of neurotic excoriations and dermatitis artefacta [10].

In patients with **lichen simplex chronicus**, histopathology revealed classical features such as irregular acanthosis, hyperkeratosis, and dermal fibrosis, which strongly correlated with clinical diagnosis. A highly significant association ($p = 0.008$) was found between lichenified clinical lesions and their corresponding histological features in this study. This correlation was also highlighted by Nayak et al., who emphasized the diagnostic value of biopsy in long-standing lichenified psychogenic lesions [11].

Neurotic excoriations, on the other hand, showed minimal or absent pathological features in several cases. Biopsies often revealed ulceration or excoriation with mild inflammatory infiltrate but no disease-specific findings. This aligns with the findings of Barua et al., who described the histopathological profile of neurotic excoriations as often non-diagnostic, emphasizing that the diagnosis remains largely clinical [12].

In cases of **dermatitis artefacta**, histology showed necrosis, crusting, and abrupt disruption of normal epidermal architecture. These abrupt and irregular changes without a unifying disease pattern suggest external trauma or manipulation. Banerjee et al. reported similar histological findings in patients with factitious skin lesions, noting sharp demarcations and lack of coherent dermatoses-specific pathology [13].

A small proportion of patients (8%) showed **prurigo-like histological changes**, including dermal fibrosis and vertical collagen bundles, which were consistent with chronic itching and scratching behavior. Although not specific, these findings helped in supporting chronicity and excluding other differential diagnoses.

Importantly, this study found statistically significant associations between clinical diagnosis and histological findings in cases of lichen simplex chronicus and neurotic excoriations. However, for other diagnoses such as dermatitis artefacta and non-specific dermatitis, histopathology was less contributory. This highlights the selective utility of biopsy in psychogenic dermatoses: not for confirming the psychogenic origin, but for ruling out mimicking dermatological diseases and supporting clinical impressions when patterns align.

Overall, the findings reinforce that while histopathological evaluation in psychogenic dermatoses often yields non-specific results, it remains a valuable adjunct in excluding other conditions and in validating clinical suspicion, especially in treatment-resistant or chronic cases.

CONCLUSION

This study highlights that while histopathological findings in psychogenic dermatoses are often non-specific, they can still provide valuable supportive evidence in clinical diagnosis. The most frequently observed changes included features of chronic non-specific dermatitis, lichenification, epidermal erosion, and artefactual disruption. A significant correlation was found between clinical diagnosis and histopathological patterns, particularly in cases of lichen simplex chronicus and neurotic excoriations. Although skin biopsy may not always confirm a psychogenic etiology, it remains an important tool to rule out other organic dermatoses, document chronicity, and reinforce clinical suspicion. The integration of histopathology with clinical judgment is essential for accurate diagnosis, especially in patients with atypical, treatment-resistant, or self-inflicted skin lesions.

LIMITATIONS

This study had certain limitations that should be considered while interpreting the findings. Firstly, the sample size was relatively small (n = 50), which may limit the generalizability of results to the broader population. Secondly, the diagnosis of psychogenic dermatoses was primarily clinical and did not always involve formal psychiatric evaluation, which could have added diagnostic clarity. Thirdly, the subjective nature of patient-reported stressors and the absence of standardized psychological assessment tools may have introduced variability. Additionally, histopathological interpretation in some cases was limited by sampling from late-stage or poorly preserved lesions, which may not reflect early pathological changes. Lastly, as this was a single-center study, regional or ethnic variations in disease presentation and histological response could not be assessed.

RECOMMENDATIONS

Based on the findings of this study, it is recommended that skin biopsy should be considered as a supportive diagnostic tool in selected cases of psychogenic dermatoses, particularly when clinical features are atypical or when there is a need to exclude other dermatological conditions. Dermatologists should be encouraged to adopt a multidisciplinary approach by collaborating with psychiatrists for comprehensive evaluation and management. The development of standardized clinical criteria and histopathological checklists for psychogenic skin disorders could improve diagnostic consistency. Larger, multicentric studies with integrated psychiatric assessment are needed to better understand the clinicopathological spectrum of these conditions. Early recognition and appropriate counseling can reduce the burden of chronicity and improve patient outcomes in psych dermatological practice.

REFERENCES

1. Koo JY, Lee CS. Psychodermatology: A practical manual for clinicians. *Curr Probl Dermatol.*2010;35:103–115.
2. Gupta MA, Gupta AK. Psychiatric and psychological co-morbidity in patients with dermatologic disorders: Epidemiology and management. *Am J Clin Dermatol.* 2003;4(12):833–842.
3. Jafferany M. Psychodermatology: A guide to understanding common psychocutaneous disorders. *Prim Care Companion J Clin Psychiatry.* 2007;9(3):203–213.
4. Misery L, Shourick J, Dumont M. Neuro-immuno-cutaneous system: A new concept for understanding the psychoneuroimmunology of the skin. *Dermatol Clin.* 2005;23(3):629–637.
5. Sarkar R, Kanwar AJ. Psychodermatology: Indian perspective. *Indian J Dermatol Venereol Leprol.*2005;71(5):296–302.
6. Salunke AS, Chandrasekhar HR, Prabhu S. Psychocutaneous disorders in Indian dermatology practice: A prospective study of 100 patients. *Indian J Psychol Med.* 2014;36(1):61–64.
7. Yadav S, Narang T, Kumaran MS. Utility of skin biopsy in psychodermatological conditions: A retrospective review. *Indian Dermatol Online J.* 2017;8(3):172–177.
8. Verma SB, et al. Clinical profile of psychogenic dermatoses in Indian patients. *Indian J Dermatol VenereolLeprol.* 2012;78(1):42–47.
9. Koo JY, Lebwohl A. Psychodermatology: the mind and skin connection. *Am Fam Physician.* 2001;64(11):1873–1878.
10. Rao GRR, Shenoy RK. Histopathological patterns in psychogenic skin lesions: a review of 50 cases. *Indian J Dermatol.* 2010;55(4):347–351.
11. Nayak N, Jena D, Das AL. Clinicopathological correlation in lichen simplex chronicus of psychogenic origin. *J Clin Diagn Res.* 2015;9(9):WC01–WC04.
12. Barua S, Hazarika D, Saikia UK. Neurotic excoriation: a clinicopathologic study. *Indian J Psychiatry.* 2016;58(1):69–72.
13. Banerjee S, Naskar B, Ghosh S. Histopathological insights into dermatitis artefacta: experience from a teaching hospital. *J Pak Assoc Dermatol.* 2018;28(2):180–184.