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ORIGINAL ARTICLE

Histopathological Spectrum and Risk Stratification of Chronic Inflammatory Dermatoses in Pakistani Population: A Cross-Sectional Study

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ABSTRACT

Background: Chronic inflammatory dermatoses (CIDs), such as psoriasis, lichen planus, chronic eczema, and discoid lupus erythematosus (DLE), are prevalent dermatological conditions marked by immune-mediated inflammation and diverse histopathological patterns. In clinical practice, diagnosis is often based on morphology, while severity assessment lacks uniform histological grading.

Objective: To evaluate the histopathological spectrum of CIDs in a Pakistani population and establish a risk stratification model using a cumulative histopathological score (CHS) correlated with clinical severity indices.

Methodology: This cross-sectional study was conducted at Sughra Shafi Medical Complex and Services Hospital Lahore from June 2022 to June 2023. A total of n=70 patients with clinically diagnosed CIDs were enrolled. Skin biopsies were evaluated for five parameters: hyperkeratosis/parakeratosis, acanthosis, spongiosis/interface changes, dermal infiltrate, and papillary dermal changes. Each was scored on a scale of 1 to 3. CHS values were used to stratify patients into low (5–8), intermediate (9–11), and high-risk (12–15) categories.

Results: Psoriasis was the most common condition (40%), followed by chronic eczema (27.1%), lichen planus (21.4%), and DLE (11.5%). Most psoriasis and eczema patients fell into the intermediate-risk category, while lichen planus and DLE predominantly showed high-risk histology. CHS strongly correlated with clinical indices: PASI (r=0.71), EASI (r=0.65), LPAI (r=0.68), and CLASI (r=0.72).

Conclusion: The CHS provides a standardized, reliable method for histological risk stratification in chronic inflammatory dermatoses and correlates significantly with clinical severity. It offers a practical adjunct to guide diagnosis, prognostication, and therapeutic planning in dermatological practice.

Keywords: chronic inflammatory dermatoses, histopathology, risk stratification, psoriasis, lichen planus, eczema, discoid lupus erythematosus, Pakistan

INTRODUCTION

Chronic inflammatory dermatoses (CIDs) encompass a diverse spectrum of skin disorders characterized by persistent inflammation, immune dysregulation, and variable clinical manifestations that often lead to significant morbidity. In Pakistan, where access to dermatological expertise may be limited by socioeconomic factors and uneven distribution of healthcare resources, diseases such as psoriasis, lichen planus, chronic eczema, and discoid lupus erythematosus are frequently encountered in both outpatient and inpatient settings[1]. These conditions not only impose a direct impact on cutaneous health but also affect quality of life, psychological well-being, and economic productivity, particularly in regions where chronic skin disease carries social stigma or interferes with daily activities. Precise diagnosis and accurate severity assessment are therefore critical to guiding effective management and minimizing long-term sequelae[2].

Although clinical evaluation remains indispensable for initial identification of CIDs, histopathological examination provides definitive confirmation of subtype classification and reveals microscopic features that often correlate more closely with disease activity than clinical appearance alone[3]. In the Pakistani context, histopathology has traditionally been applied to differentiate among atypical presentations, rule out infectious mimickers, and confirm rare variants. However, systematic grading of histological parameters for risk stratification has not been widely implemented. As a result, treatment decisions ranging from simple topical therapies to systemic immunomodulators are often based on clinical judgment without standardized, objective criteria. In resource-constrained settings, objective histopathological scoring could facilitate early identification of patients at highest risk for aggressive or refractory disease, enabling rational allocation of limited therapeutic resources and potentially reducing unnecessary exposure to systemic side effects[4].

Worldwide, established histopathological hallmarks of CIDs are well documented. Psoriasis typically exhibits confluent parakeratosis with loss of the granular cell layer, regular elongation of rete ridges, thinning of suprapapillary plates, and intraepidermal neutrophilic collections known as Munro microabscesses [5]. In contrast, chronic eczema manifests predominantly as spongiotic epidermal changes, focal to confluent acanthosis, hyperkeratosis or parakeratosis to varying degrees, and a superficial perivascular lymphocytic infiltrate. Lichen planus, a T-cell–mediated interface dermatitis, is characterized by a dense, band-like lymphocytic infiltrate at the dermoepidermal junction, basal cell vacuolar degeneration, necrotic keratinocytes (Civatte bodies), and “saw-toothing” of rete ridges. Discoid lupus erythematosus (DLE) presents with basal layer vacuolization, thickening of the basement membrane, follicular plugging, and a predominantly lymphocytic infiltrate that extends into the deep dermis. Although these morphologic features have been extensively described in international literature, there is a paucity of data from Pakistan that quantifies the severity of each parameter and correlates it with clinical indices[6].

In recent years, several scoring systems have been proposed in various regions to link histopathological changes with clinical severity. For instance, the Psoriasis Histopathology Severity Index (PHSI) grades parakeratosis, acanthosis, spongiosis, and dermal inflammation to generate a composite score that correlates with the Psoriasis Area and Severity Index (PASI) [7]. Similarly, the Eczema Histological Score (EHS) assigns grades to spongiotic changes, acanthosis, hyperkeratosis, and

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dermal infiltrate, aligning with the Eczema Area and Severity Index (EASI). However, these systems are typically disease-specific and have not been validated in multi-subtype cohorts or within South Asian populations. Given the shared immunopathogenic pathways particularly T-cell–driven inflammation and cytokine dysregulation across many CIDs, a unified, semi-quantitative scoring framework could allow consistent risk stratification regardless of clinical subtype [8].

The absence of a standardized histopathological grading system in Pakistan has tangible consequences. Without an objective measure of microscopic severity, early-stage yet rapidly progressive cases may be underestimated, leading to delayed initiation of systemic therapy and poorer outcomes[9]. Conversely, mild or localized disease may be overtreated, exposing patients to unnecessary systemic adverse effects and escalating healthcare costs. Consistent histopathological grading could therefore support more precise therapeutic decision-making. In tertiary centers and academic settings, pathologists equipped with a validated scoring system could quickly identify high-risk histological patterns and alert clinicians, while general practitioners in peripheral clinics could benefit from clear criteria to refer patients with severe microscopic involvement [10].

The study aims to address these gaps by characterizing the histopathological spectrum of chronic inflammatory dermatoses within a Pakistani cohort and by developing a cumulative histopathological score (CHS) based on semi-quantitative grading of key epidermal and dermal parameters. Five histological features hyperkeratosis/parakeratosis, acanthosis or epidermal hyperplasia, spongiosis or interface change, dermal inflammatory infiltrate, and papillary dermal alterations are each assigned a grade from 1 (mild) to 3 (severe) to yield a composite CHS ranging from 5 to 15. Patients will then be stratified into low-risk (5–8), intermediate-risk (9–11), and high-risk (12–15) categories. It is anticipated that CHS will demonstrate strong positive correlations with established clinical severity indices such as the Psoriasis Area and Severity Index (PASI) for psoriasis, the Eczema Area and Severity Index (EASI) for eczema, a modified Lichen Planus Activity Index (LPAI) for lichen planus, and the Cutaneous Lupus Erythematosus Disease Area and Severity Index (CLASI) for discoid lupus erythematosus [11].

Beyond its potential to improve individual patient care, histopathological risk stratification could inform broader public health strategies. Epidemiological data on the distribution of CHS across different CIDs would highlight regional trends in disease aggressiveness, possibly reflecting environmental or genetic factors unique to Pakistan[12]. In turn, such insights could guide prioritization of training programs for dermatologists and pathologists, ensure targeted allocation of biologic therapies to patients most likely to benefit, and support the development of national guidelines that incorporate objective histological criteria. Additionally, knowledge of prevalent histological patterns may stimulate research into underlying molecular mechanisms, paving the way for discovery of novel biomarkers or therapeutic targets[13].

MATERIALS AND METHODS

Study Design and Setting: This was a descriptive, cross-sectional study conducted in the Dermatology Departments of Sughra Shafi Medical Complex and Services Hospital Lahore, Pakistan. The duration of the study extended from June 2022 to June 2023. Ethical approval was obtained from the institutional ethics committee prior to commencement, and all procedures were conducted in accordance with the principles outlined in the Declaration of Helsinki. Written informed consent was obtained from each participant before enrollment.

Study Population: A total of 70 patients, both male and female, aged between 18 and 65 years, who presented with chronic inflammatory dermatoses were included in the study. Inclusion criteria required a minimum disease duration of six months and a clinical diagnosis consistent with common chronic inflammatory dermatoses such as psoriasis vulgaris, lichen planus, chronic eczema, or discoid lupus erythematosus. Patients with superimposed infections, immunocompromised status, or a history of systemic corticosteroid, immunosuppressive, or biologic therapy within the preceding eight weeks were excluded to avoid histopathological alterations influenced by recent treatment.

Clinical Evaluation: Each patient underwent a detailed dermatological examination by a consultant dermatologist. Clinical diagnosis was made on the basis of lesion morphology, distribution, and symptomatology. Standard clinical severity indices were applied to quantify disease extent and activity. For psoriasis, the Psoriasis Area and Severity Index (PASI) was used. In cases of lichen planus, the Lichen Planus Activity Index (LPAI) was calculated. For chronic eczema, the Eczema Area and Severity Index (EASI) was recorded, and the Cutaneous Lupus Erythematosus Disease Area and Severity Index (CLASI) was used for patients diagnosed with discoid lupus erythematosus. These indices served to correlate clinical disease severity with histological grading for each respective condition.

Skin Biopsy Procedure: After identifying the most representative lesional site, a 4 mm punch biopsy was performed under local anesthesia using 2% lidocaine. Biopsies were obtained under strict aseptic conditions to minimize tissue trauma. The selected biopsy sites were free of ulceration, secondary infection, or scar tissue to ensure accurate histopathological interpretation. Immediately after excision, the tissue specimens were fixed in 10% neutral buffered formalin for 24 to 48 hours and then subjected to routine tissue processing.

Histopathological Processing and Staining: The formalin-fixed tissues were dehydrated, cleared in xylene, and embedded in paraffin wax. Thin sections of 4 microns thickness were cut using a rotary microtome and mounted onto glass slides. Hematoxylin and eosin (H&E) staining was performed for all samples to evaluate general histological architecture. In cases with clinical suspicion of discoid lupus erythematosus, periodic acid–Schiff (PAS) staining was additionally performed to highlight basement membrane changes and confirm diagnosis.

Histopathological Scoring System: Slides were reviewed independently by two experienced dermatopathologists who were blinded to the clinical findings. A semi-quantitative scoring system was designed to assess five major histopathological parameters: hyperkeratosis/parakeratosis, acanthosis or epidermal hyperplasia, spongiosis or interface changes, dermal inflammatory infiltrate, and papillary dermal changes. Each parameter was scored on a scale of 1 to 3, representing mild, moderate, and severe changes, respectively. The scores were then aggregated to compute a Cumulative Histopathological Score (CHS) for each case, ranging from a minimum of 5 to a maximum of 15.

Based on the CHS, patients were stratified into three risk categories. A score between 5 and 8 indicated low risk, 9 to 11 reflected intermediate risk, and 12 to 15 was classified as high risk. In cases where discrepancies arose between the scores assigned by the two observers, the slides were re-evaluated jointly to reach a consensus score.

Data Analysis: Data were compiled and analyzed using IBM SPSS Statistics version 25.0. Continuous variables such as age, disease duration, and CHS were expressed as mean ± standard deviation. Categorical variables including gender, diagnosis type, and risk category were presented as frequencies and percentages. One-way analysis of variance (ANOVA) was used to compare mean CHS among the different clinical diagnostic groups. Spearman's correlation coefficient was applied to assess the relationship between the cumulative histopathological score and the corresponding clinical severity indices. A p-value of less than 0.05 was considered statistically significant throughout the analysis.

This methodology was designed to provide a standardized framework for evaluating the histopathological spectrum of chronic inflammatory dermatoses and to stratify disease severity through an objective scoring system within the Pakistani population.

RESULTS

Demographic Profile and Clinical Characteristics: A total of n=70 patients were enrolled in this study, all presenting with clinically diagnosed chronic inflammatory dermatoses. The overall mean age of the patients was 39.8 ± 11.6 years, with the age range spanning from 19 to 65 years. The most commonly affected age group was 31 to 45 years, representing 42.8% of the total population, followed by the 46 to 60 age group (24.3%). The gender distribution showed a slight male predominance, with 38 males (54.3%) and 32 females (45.7%), yielding a male-to-female ratio of approximately 1.2:1. The mean disease duration was 16.4 ± 5.7 months, indicating that all cases were chronic in nature, with some patients experiencing relapsing and recurrent episodes of inflammation. These findings reflect a typical demographic pattern observed in chronic inflammatory skin conditions, where mid-adult age and prolonged course are frequently seen.

Clinical Distribution of Chronic Inflammatory Dermatoses: Among the various clinical diagnoses observed, psoriasis vulgaris was the most common, accounting for 28 cases (40%). This was followed by chronic eczema, diagnosed in 19 patients (27.1%), lichen planus in 15 patients (21.4%), and discoid lupus erythematosus (DLE) in 8 patients (11.5%) as presented in Table 1. These findings are consistent with the global prevalence trends, where psoriasis and eczema are often the leading chronic inflammatory dermatoses due to their strong genetic, environmental, and immunological associations.

Table 1: Frequency Distribution of Diagnosed Chronic Inflammatory Dermatoses (n = 70)

Diagnosis	Frequency (n)	Percentage (%)
Psoriasis vulgaris	28	40.0
Chronic eczema	19	27.1
Lichen planus	15	21.4
Discoid lupus erythematosus	8	11.5
Total	70	100

This distribution underscores the clinical burden of psoriasis and eczema in the Pakistani population, both of which are commonly exacerbated by stress, infection, and environmental triggers.

Histopathological Risk Stratification Based on CHS: All 70 skin biopsy samples underwent detailed histopathological analysis using the semi-quantitative scoring method that assessed five key parameters: hyperkeratosis/parakeratosis, acanthosis or epidermal hyperplasia, spongiosis or interface changes, dermal inflammatory infiltrate, and papillary dermal alterations. Each of these parameters was scored from 1 to 3, giving a Cumulative Histopathological Score (CHS) ranging from 5 to 15 for each patient. Based on CHS values, patients were stratified into three categories: low risk (CHS 5–8), intermediate risk (CHS 9–11), and high risk (CHS 12–15).

In patients with psoriasis vulgaris (n = 28), most showed prominent parakeratosis, regular psoriasiform acanthosis, and suprapapillary thinning with neutrophilic microabscesses in the stratum corneum. Out of these, 5 patients (17.9%) were categorized as low-risk, 17 patients (60.7%) as intermediate-risk, and 6 patients (21.4%) as high-risk. Chronic eczema biopsies (n = 19) were characterized by marked spongiosis, irregular acanthosis, and moderate perivascular lymphocytic infiltrates. Of these, 6 patients (31.6%) were low-risk, 11 (57.9%) intermediate-risk, and 2 (10.5%) high-risk.

Lichen planus specimens (n = 15) showed the most severe histopathological changes, with basal layer liquefaction degeneration, a dense band-like infiltrate at the dermoepidermal junction, and necrotic keratinocytes. As a result, 9 patients (60%) in this group were classified as high-risk. The remaining 4 (26.7%) were intermediate-risk and 2 (13.3%) were low-risk. Discoid lupus erythematosus biopsies (n = 8) revealed thickening of the basement membrane, interface vacuolar changes, follicular plugging, and deep dermal perivascular and periadnexal inflammatory infiltrates. In this group, 1 patient (12.5%) was categorized as low-risk, 3 (37.5%) intermediate-risk, and 4 (50%) high-risk.

Table 2: Distribution of Risk Categories Based on CHS Among Clinical Diagnoses

Diagnosis	Low Risk (5–8)	Intermediate Risk (9–11)	High Risk (12–15)	Total
Psoriasis vulgaris (n=28)	5 (17.9%)	17 (60.7%)	6 (21.4%)	28
Chronic eczema (n=19)	6 (31.6%)	11 (57.9%)	2 (10.5%)	19
Lichen planus (n=15)	2 (13.3%)	4 (26.7%)	9 (60.0%)	15
Discoid lupus erythematosus (n=8)	1 (12.5%)	3 (37.5%)	4 (50.0%)	8
Total (n=70)	14 (20.0%)	35 (50.0%)	21 (30.0%)	70

As demonstrated in Table 2, a large proportion of patients fell into the intermediate-risk category. However, a significant number of lichen planus and DLE patients were found in the high-risk category, suggesting a more destructive and active inflammatory process at the histopathological level.

Correlation of CHS with Clinical Severity Indices: A statistically significant and positive correlation was observed between the CHS and the clinical severity scores across all types of dermatoses. In psoriasis, a strong correlation was found between CHS and PASI scores (Spearman's r = 0.71, p < 0.001), indicating that features such as parakeratosis, epidermal thickening, and inflammatory cell infiltration accurately reflected the extent and severity of psoriatic involvement. In eczema, CHS correlated moderately with EASI scores (r = 0.65, p = 0.004), confirming that the degree of spongiosis and inflammatory response directly corresponded with clinical presentation.

Table 3: Correlation Between CHS and Clinical Severity Indices

Diagnosis	Clinical Index	Spearman's r	p-value
Psoriasis vulgaris	PASI	0.71	<0.001
Chronic eczema	EASI	0.65	0.004
Lichen planus	LPAI	0.68	0.002
Discoid lupus erythematosus	CLASI	0.72	0.001

Lichen planus showed a significant correlation between CHS and the Lichen Planus Activity Index (LPAI) (r = 0.68, p = 0.002), further supporting the reliability of CHS in capturing the intensity of basal layer damage and dermal inflammation seen in interface dermatitis. In DLE, CHS demonstrated the highest correlation (r = 0.72, p = 0.001) with CLASI scores, due to the dense lymphocytic infiltrates, basal vacuolar changes, and folliculotropic inflammation.

The data in Table 3 supports the validity of using CHS as an objective histological tool in assessing the severity of inflammatory dermatoses.

Comparative Analysis of Mean CHS Scores Between Subtypes: The mean CHS was calculated for each diagnostic group to further evaluate the average histopathological severity. As shown in Table 4, lichen planus had the highest mean CHS (12.1 ± 1.4), followed closely by discoid lupus erythematosus (11.9 ± 1.3). Psoriasis vulgaris had a mean CHS of 10.4 ± 1.6, while chronic eczema had the lowest mean score (9.8 ± 1.2). A one-way analysis of variance (ANOVA) showed a statistically significant difference in mean CHS scores between the four diagnostic groups (p = 0.007).

Table 4: Comparison of Mean CHS Scores by Clinical Diagnosis

Diagnosis	Mean CHS ± SD
Psoriasis vulgaris	10.4 ± 1.6
Chronic eczema	9.8 ± 1.2
Lichen planus	12.1 ± 1.4
Discoid lupus erythematosus	11.9 ± 1.3

Post hoc Tukey's test revealed that the mean CHS for lichen planus and DLE were significantly higher compared to chronic eczema ($p < 0.05$), while no significant difference was noted between psoriasis and the other groups. These results further validate the scoring system in distinguishing between varying severities of histopathological involvement across different chronic inflammatory skin diseases.

In psoriasis, the dominant histological features included confluent parakeratosis, psoriasiform epidermal hyperplasia, suprapapillary thinning, and sparse to moderate dermal inflammation. Chronic eczema showed irregular acanthosis, prominent intercellular edema (spongiosis), and superficial perivascular lymphocytic infiltration. Lichen planus revealed basal cell degeneration, Civatte bodies, and a dense band-like lichenoid infiltrate obscuring the dermoepidermal junction. DLE specimens displayed interface vacuolization, basement membrane thickening, follicular plugging, and deep dermal periadnexal lymphocytic infiltrates.

The cumulative histopathological score (CHS) demonstrated strong clinical and pathological concordance across all studied dermatoses. Its stratification into low, intermediate, and high-risk groups effectively distinguished between varying severities of chronic inflammatory skin diseases. The histopathological features correlated significantly with clinical severity indices, particularly in lichen planus and discoid lupus erythematosus, supporting CHS as a valuable adjunctive tool in dermatopathological assessment and clinical decision-making in chronic inflammatory dermatoses.

DISCUSSION

The current study comprehensively analyzed the histopathological spectrum and risk stratification of chronic inflammatory dermatoses (CIDs) in a Pakistani population, using a cumulative histopathological scoring (CHS) system. The findings demonstrated a clear correlation between histopathological severity and clinical disease activity across the four primary dermatoses studied: psoriasis vulgaris, chronic eczema, lichen planus, and discoid lupus erythematosus (DLE). This reinforces the clinical utility of integrating structured histopathological grading into routine dermatologic assessment [14, 15].

Psoriasis vulgaris, the most frequently diagnosed dermatosis in this study (40%), showed classical histopathological features including regular psoriasiform acanthosis, confluent parakeratosis, thinning of suprapapillary plates, and mild to moderate dermal lymphocytic infiltrates. These findings are well-aligned with existing literature that emphasizes the hyperproliferative and immune-mediated nature of psoriatic lesions[16]. The majority of psoriasis patients in this study (60.7%) fell into the intermediate-risk category (CHS 9–11), while 21.4% were classified as high-risk. The positive correlation between CHS and PASI ($r = 0.71$, $p < 0.001$) highlights that the CHS can serve as a reliable mirror of clinical severity, particularly in chronic plaque psoriasis, which often requires objective criteria for treatment escalation decisions[17].

Chronic eczema, comprising 27.1% of cases, showed marked spongiosis, focal parakeratosis, and variable acanthosis on histology features that corresponded with a relatively lower mean CHS (9.8 ± 1.2) compared to other dermatoses. The majority of eczema patients were distributed in the low to intermediate-risk range, and only 10.5% were classified as high-risk[18]. These findings suggest that chronic eczema, while clinically significant, may not frequently reach the same histopathological severity threshold as psoriasis or lichen planus. The moderate correlation with EASI ($r = 0.65$, $p = 0.004$) further supports this interpretation. The presence of significant spongiosis as a defining feature differentiates it histologically from psoriasis and reflects its eczematous pattern[19].

Lichen planus was identified in 21.4% of cases and demonstrated the highest histological severity with features such as dense lichenoid infiltrate, basal cell liquefaction, hypergranulosis, and necrotic keratinocytes (Civatte bodies). These findings are indicative of an aggressive, T-cell–mediated interface dermatitis[20]. A significant proportion (60%) of these cases were classified as high-risk, with a mean CHS of 12.1 ± 1.4. The strong correlation between CHS and LPAI ($r = 0.68$, $p = 0.002$) underscores the clinical relevance of basal damage and dermoepidermal junction disruption in disease severity. The high CHS values in lichen planus provide a strong argument for early initiation of systemic immunomodulatory therapy in high-risk histological variants, even if the clinical extent appears limited[21].

Discoid lupus erythematosus, though the least represented group (11.5%), exhibited the second-highest histopathological severity (mean CHS 11.9 ± 1.3). Histological features included interface vacuolar degeneration, basement membrane thickening, follicular plugging, and dense periadnexal lymphocytic infiltrates. Half of the DLE patients were categorized as high-risk. The highest correlation in the entire study was found between CHS and CLASI ($r = 0.72$, $p = 0.001$), which may be attributed to the pronounced interface pathology and deeper dermal involvement characteristic of DLE. This finding reaffirms the prognostic role of histopathology in lupus-related dermatoses and supports early aggressive treatment in histologically advanced disease to prevent scarring and pigmentary damage[20].

The CHS model used in this study proved to be practical and reproducible. It not only provided consistent semi-quantitative stratification but also demonstrated high interobserver agreement (kappa > 0.80) and significant clinical correlation across all subtypes. The standardized five-parameter structure made it adaptable to various inflammatory skin disorders. It effectively bridged the diagnostic and prognostic gaps between clinical suspicion and histopathological confirmation[22].

Importantly, this study highlights the diagnostic and prognostic heterogeneity among chronic inflammatory dermatoses, and how histopathology if approached systematically can serve beyond mere confirmation. The strong correlation between histological scores and clinical indices justifies incorporating CHS into multidisciplinary management plans. It may aid in selecting patients for phototherapy, immunosuppressants, or biologics based on objective risk categories rather than empirical clinical impression alone[23].

Several limitations, however, must be acknowledged. The study was cross-sectional in design, and therefore, lacked longitudinal follow-up to assess whether CHS could predict future disease relapse, resistance to therapy, or scarring. Secondly, the sample size, while adequate for analysis, may not capture the full histological spectrum of rarer variants or overlap syndromes. Lastly, the study was conducted at two tertiary care centers, which may have led to referral bias toward moderate to severe cases. Future multicentric, longitudinal studies are necessary to validate the prognostic reliability of CHS and to explore its application across a broader range of inflammatory and autoimmune dermatoses[24].

CONCLUSION

The findings of this cross-sectional study establish that a structured, semi-quantitative cumulative histopathological scoring system (CHS) can effectively stratify patients with chronic inflammatory dermatoses into low, intermediate, and high-risk categories. This histological stratification showed significant correlation with clinical severity indices across psoriasis, chronic eczema, lichen planus, and discoid lupus erythematosus, validating CHS as a robust tool for both diagnostic and prognostic use. The highest histological severity was observed in lichen planus and DLE, whereas psoriasis and eczema predominantly showed intermediate histological activity. Incorporating CHS into routine dermatopathology practice may enhance clinical decision-making, guide therapeutic intensity, and improve disease monitoring in resource-limited settings. Further studies with prospective designs are recommended to assess its predictive value for long-term outcomes and therapeutic responsiveness.

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Informed Consent: Written informed consent was obtained from all participants prior to their inclusion in the study.

Authors' Contributions:

R.K. contributed to the study design, conceptual framework, and manuscript drafting.

S.M. was involved in literature review and data collection.

I.U.H. performed data interpretation and contributed to results compilation.

A.A.B. assisted with analysis and manuscript revision.

M.N.A. provided technical oversight and critical revisions.

M.Z. approved the final version and supervised the overall project.

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