

Palmoplantar Lichen Planus: An Uncommon Presentation of a Common Dermatosis

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Abstract:

Palmoplantar lichen planus is a rare variant of lichen planus that predominantly affects the palms and soles and often lacks classical clinical features. Due to its variable morphology and resemblance to other palmoplantar dermatoses, diagnosis is frequently delayed or missed. We report a case of a 23-year-old female presenting with violaceous papules over the palms and soles associated with oral mucosal involvement. Dermoscopic examination revealed fine white linear streaks, and histopathological analysis demonstrated features consistent with lichen planus. The patient showed significant clinical improvement following treatment with oral acitretin. This case highlights the importance of clinicopathological correlation in diagnosing atypical palmoplantar eruptions and emphasizes early recognition to avoid misdiagnosis and delayed treatment.

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Introduction

Lichen planus is a chronic immune-mediated inflammatory dermatosis affecting the skin, oral and genital mucosa, nails, and hair follicles, with a reported prevalence of approximately 0.5–2% in the general population [1,2]. Classical cutaneous lichen planus typically presents as pruritic, violaceous, polygonal, flat-topped papules involving the flexural surfaces of the extremities and trunk [2].

Several clinical variants of lichen planus have been described, including hypertrophic, annular, linear, bullous, actinic, pigmentosus, and mucosal forms [3–5]. Palmoplantar involvement is uncommon and

represents a diagnostically challenging variant due to the absence of classical morphological features [4,10]. Palmoplantar lichen planus may present with diverse morphologies such as hyperkeratotic plaques, punctate keratoses, erythematous papules, vesicular or ulcerative lesions, and diffuse keratoderma [10,14].

The thick stratum corneum over the palms and soles often masks characteristic features such as Wickham's striae, resulting in frequent misdiagnosis as palmoplantar psoriasis, eczema, tinea infections, verruca vulgaris, secondary syphilis, or palmoplantar keratoderma [6,12].

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Consequently, histopathological examination plays a pivotal role in establishing the diagnosis [7,13]. Reporting such cases contributes to increased awareness and improved diagnostic accuracy among clinicians.

Case Report

A 23-year-old female presented with a 15-day history of mildly pruritic violaceous lesions over both palms and soles. The lesions initially appeared on the right palm and gradually progressed to involve the left palm and bilateral soles. She also reported a two-month history of burning sensation in the oral cavity, particularly while consuming spicy food.

There was no history of systemic illness, recent drug intake, smoking, or alcohol consumption. General and systemic examinations were unremarkable.

Cutaneous examination revealed multiple well-defined erythematous to violaceous flat-topped papules measuring approximately 2–5 mm over the palmar surfaces and medial plantar arches. Occasional isolated lesions were also noted on the dorsal aspect of the hand, while the remainder of the dorsal surfaces were largely uninvolved (Figure 1a–1c). Oral examination revealed reticular white striations over the bilateral buccal mucosa.

Dermoscopy demonstrated fine white linear streaks over a violaceous background. A skin biopsy was obtained from a palmar lesion. Histopathological examination showed hyperkeratosis with wedge-shaped hypergranulosis, irregular acanthosis, basal cell vacuolar degeneration, saw-toothing of rete ridges, and a dense band-like lymphocytic infiltrate at the dermo-epidermal junction (Figure 2a, 2b), consistent with lichen planus.

Routine laboratory investigations and viral serology were within normal limits. Based on clinicopathological correlation, a diagnosis of palmoplantar lichen planus was made. The patient was started on oral acitretin after baseline evaluation and showed significant clinical improvement over subsequent follow-ups.

Discussion

Palmoplantar lichen planus is a rare variant of lichen planus, accounting for a small proportion of reported cases [4,10]. Unlike classical lichen planus, palmoplantar lesions often lack characteristic violaceous coloration and Wickham's striae due to the thick stratum corneum, leading to diagnostic difficulty [5,9].

The soles, particularly the medial plantar arch, are more commonly affected than the palms, while dorsal involvement is uncommon [10]. Oral mucosal involvement may coexist and can provide an important diagnostic clue, as observed in the present case [1,11]. The differential diagnosis includes palmoplantar psoriasis, chronic eczema, verruca vulgaris, secondary syphilis, and acquired palmoplantar keratoderma [6,12].

Histopathological features of palmoplantar lichen planus are similar to those of classical lichen planus and include interface dermatitis with basal cell degeneration, hypergranulosis, Civatte bodies, and a band-like lymphocytic infiltrate [7,13]. Management can be challenging, and treatment options include potent topical corticosteroids, systemic corticosteroids, retinoids, immunosuppressive agents, and phototherapy [14–16]. Systemic acitretin has demonstrated efficacy in resistant cases, as seen in our patient [10,17].

Early recognition of this rare variant is essential to prevent misdiagnosis, unnecessary treatments, and prolonged morbidity [18].

Conclusion

Palmoplantar lichen planus is an uncommon and diagnostically challenging variant of lichen planus. Due to its atypical presentation, histopathological examination is essential for accurate diagnosis. Increased clinical awareness and early institution of appropriate therapy can result in favorable outcomes.

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Figures

Figure 1a:
Multiple well-defined violaceous papules on bilateral palms.



Figure 1b:
Multiple well-defined violaceous papules on bilateral insteps



Figure 1c:
Single well defined violaceus papule over the dorsum of the hand



Figure 2a:

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Histopathology (H&E, 10x) showing wedge-shaped hyper granulosis and saw-toothing of rete ridges.

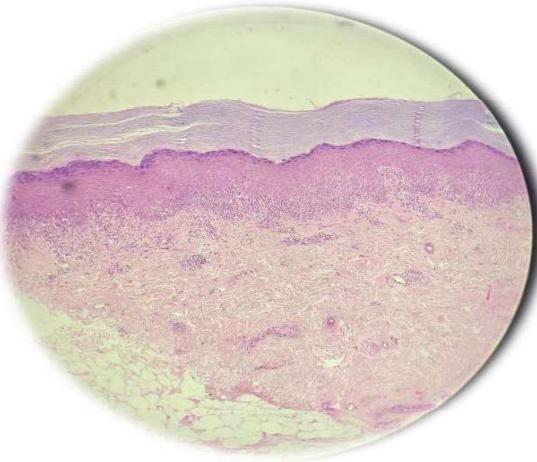
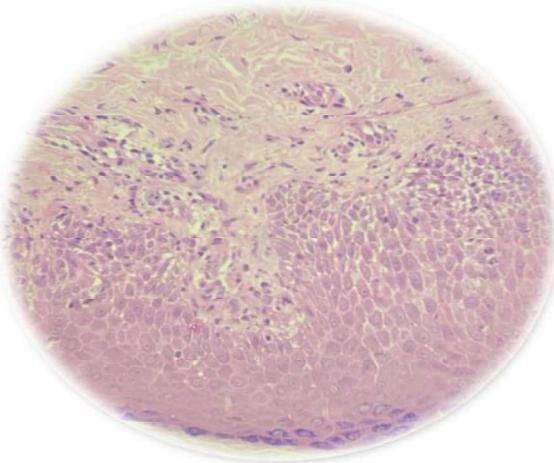


Figure 2b:

Histopathology (H&E, 40x) showing basal cell vacuolar degeneration and dense band-like lymphocytic infiltrate.



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