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### Title

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### Permalink

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### Journal

Dermatology Online Journal, 21(5)

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### Publication Date

2015

### DOI

10.5070/D3215024713

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Letter

**Palmoplantar hyperkeratotic lesions: a rare presentation of lichen planus**

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Dermatology Online Journal 21 (5): 18

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**Abstract**

Palmoplantar lichen planus is a localized and rare subtype of lichen planus (LP) often underdiagnosed. Several morphological types of palmoplantar lesions have been defined in LP. We present an unusual case of the palmoplantar hyperkeratotic variant of LP. Histopathology examination confirmed our diagnosis. We emphasize the importance of this rare entity in the differential diagnosis of palmoplantar dermatoses.

**Introduction**

Lichen planus (LP) is a common chronic inflammatory papulosquamous disease characterized by violaceous polygonal pruritic papules that commonly affects the flexures of the wrists, legs, and oral and genital mucosa. Palmoplantar lichen planus is a rare subtype. In this report, we describe a 51-year-old man who presented with highly pruritic hyperkeratotic plaques on his palms and soles. Previous diagnoses of palmoplantar psoriasis, eczema, and tinea manuum were made on clinical appearance. The correct diagnosis was confirmed histologically.

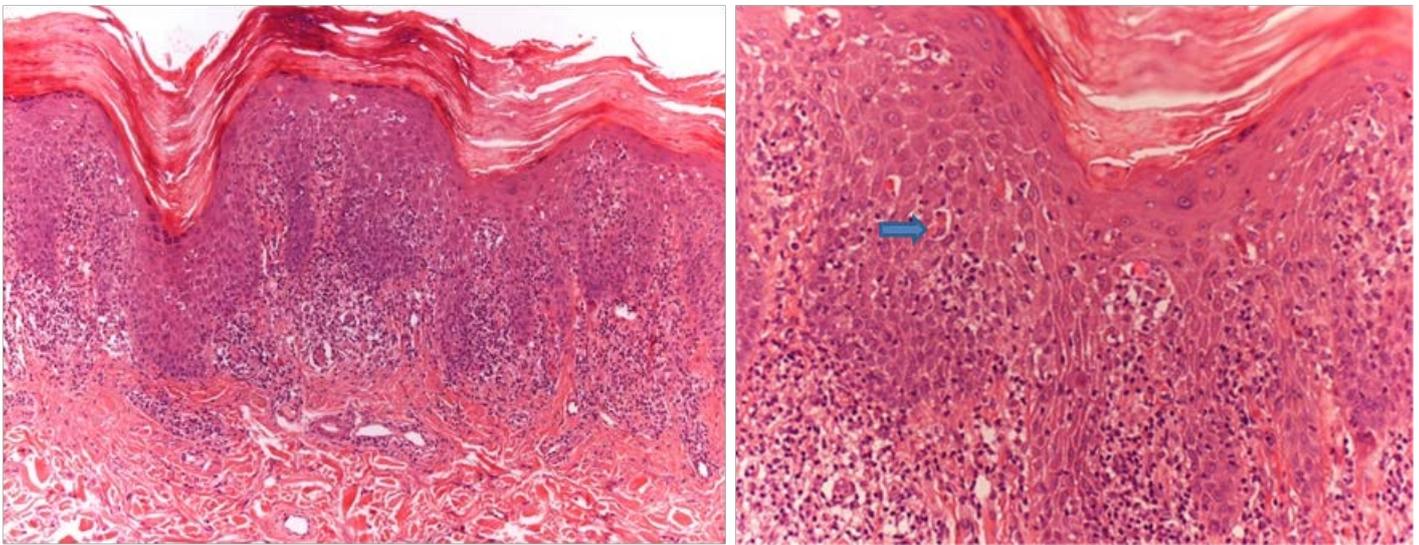
**Case synopsis**

A 51-year-old man presented with a 2-year history of mildly pruritic plaques on both palms and fingertips. The condition was characterized by recurrent outbreaks of hyperkeratotic papules, which later coalesced to form plaques. In the last months, similar lesions developed on the soles. No other significant health problems, drug usage, or family history of similar disorders were noted. He had tested positive for contact allergy to nickel. He had been treated with topical antifungals, corticosteroids, and calcipotriene without relief. Physical examination showed numerous hyperkeratotic plaques with a polycyclic distribution and erythematous border with islands of healthy skin. The lesions of the hands involved the palms fingertips, and thenar eminences (Figure 1). On both soles we observed erythema and yellowish hyperkeratotic plaques. These plaques were symmetrical and located on plantar surface of the inner arch and heels (Figure 2). On complete examination of the skin we observed red-purple papules on the legs. The leg papules were asymptomatic. The hair, nails, and oral mucosa were unremarkable. A complete blood cell count and serological tests for hepatitis B and C, syphilis, and antinuclear antibodies were negative.

Histopathology revealed irregular acanthosis, a band-like lymphohistiocytic infiltrate at the dermal-epidermal junction (Figure 3), and individual necrotic keratinocytes (Figure 4). Based on findings, a diagnosis of lichen planus was made. After treatment with systemic steroids the lesions resolved. Three months later, recurrence was observed. Treatment with systemic acitretin was initiated with clearing, but the patient stopped this treatment because of intolerance. He then started topical clobetasol propionate and retinoic acid and cleared after 2 months.



**Figure 1.** Clinical image showing hyperkeratotic lesions involving both palms, lateral margins of the fingers, and the fingertips. **Figure 2.** Hyperkeratotic yellowish plaques with erythematous border in soles.



**Figure 3.** A histological image shows dense band-like infiltration in the papillary dermis, irregular acanthosis, and wedge-shaped hypergranulosis (hematoxylin and eosin, original magnification X 40) **Figure 4.** Civatte body (arrow) in the epidermis (hematoxylin and eosin, original magnification X 100).

## Discussion

Involvement of the palms and/or soles in LP is rare. This is more common in men between the third and fifth decade, although it has sometimes been reported in children [1, 2]. There are many clinical types of palmoplantar LP: erythematous scaly plaques, yellowish hyperkeratotic papules, diffuse keratoderma, ulcerated lesions, vesicle-like or petechia-like eruptions, or scaly and hyperkeratotic well-defined and erythematous plaques, as our case [1, 3, 4]. The lesions are more frequently located on the soles than on the palms, especially the internal plantar arch. Lesions on hands are seen on the lateral margins of the fingers and hand surfaces. However, they are less likely to affect the fingertips. In our patient, fingertips were affected significantly. Because various morphological patterns of palmoplantar lesions in LP have been described, it is difficult to diagnose it correctly at first and histopathological examination is essential for a definitive diagnosis. Palmoplantar LP shows characteristic histopathology very similar to that described in the literature for other sites: wedge-shaped hypergranulosis, irregular acanthosis, necrotic keratinocytes (Civatte body), dense band-like lymphocytic infiltration in the papillary dermis, and vacuolar alteration of the basal layer [1, 2]. The differential diagnosis for palmoplantar LP includes verruca vulgaris, psoriasis, punctate palmoplantar keratoderma, hyperkeratotic eczematous dermatitis, tinea, and secondary syphilis [5, 6]. Palmoplantar lichen planus is quite resistant to treatment. Topical and intralesional steroids, tacrolimus, and tazarotene are the first-line treatments and in resistant cases, acitretin, cyclosporine, or enoxaparin are used [7, 8, 9].

## Conclusion

We present a new case of the hyperkeratotic variant of palmoplantar lichen planus, an infrequent type of lichen planus. This report highlights the importance of considering this entity in the differential diagnosis of more common palmoplantar inflammatory diseases. Since clinical features may not be suggestive of LP, biopsy is necessary to establish the diagnosis.

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