

# Slow-growing, Asymptomatic, Annular Plaques on the Bilateral Palms

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A 77-year-old woman presented with slow-growing, asymptomatic, annular plaques on the bilateral palms of many years' duration. There was no history of trauma or local infection. Prior treatment with over-the-counter creams was unsuccessful. A 3-mm punch biopsy of the lesion on the right palm was performed.

## WHAT'S THE DIAGNOSIS?

- a. Bowen disease
- b. circumscribed palmar hypokeratosis
- c. dermatophytosis
- d. palmoplantar porokeratosis
- e. palmoplantar psoriasis

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The authors report no conflict of interest.

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## THE DIAGNOSIS:

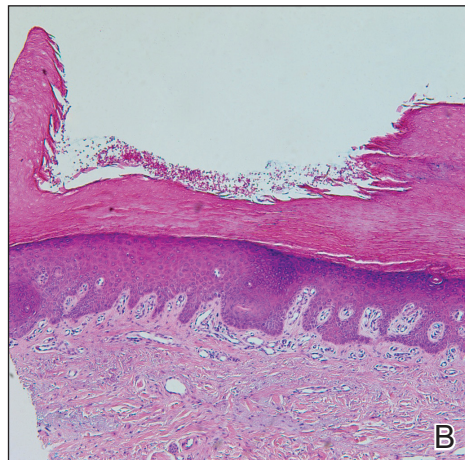
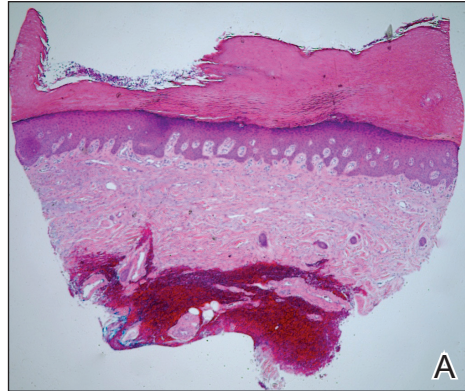
## Circumscribed Palmar Hypokeratosis

Circumscribed palmar hypokeratosis is a rare, benign, acquired dermatosis that was first described by Pérez et al<sup>1</sup> in 2002 and is characterized by annular plaques with an atrophic center and hyperkeratotic edges. Classically, the lesions present on the thenar and hypothenar eminences of the palms.<sup>2</sup> The condition predominantly affects women (4:1 ratio), with a mean age of onset of 65 years.<sup>3</sup>

Although the pathogenesis of circumscribed palmar hypokeratosis is unknown, local trauma generally is considered to be the causative factor. Other hypotheses include human papillomavirus 4 and 6 infection and primary abnormal keratinization in the epidermis.<sup>3</sup> Immunohistochemical studies have demonstrated increased expression of keratin 16 and Ki-67 in cutaneous lesions, which is postulated to be responsible for keratinocyte fragility associated with epidermal hyperproliferation. Other reported cases have shown diminished keratin 9, keratin 2e, and connexin 26 expression, which normally are abundant in the acral epidermis. Abnormal expression of antigens associated with epidermal proliferation and differentiation also have been reported,<sup>3</sup> suggesting that there is an altered regulation of the cutaneous desquamation process.

Histologically, circumscribed palmar hypokeratosis is characterized by an abrupt reduction in the stratum corneum (Figure), forming a step between the lesion and the perilesional normal skin.<sup>2,3</sup> The clinical appearance of erythema is due to visualization of dermal blood circulation in the area of corneal thinning and is not a result of vasodilation. The dermis is uninvolved, and inflammation is absent. The differential diagnosis includes psoriasis, Bowen disease, prokeratosis, and dermatophytosis.<sup>3</sup>

Circumscribed palmar hypokeratosis is a chronic condition, and there are no known reports of development of malignancy. Treatment is not required but may include cryotherapy; topical therapy with corticosteroids, retinoids, urea, and calcipotriene; and photodynamic therapy. Circumscribed hypokeratosis should be included in the differential diagnosis of palmar lesions.



Abrupt, well-demarcated decrease in the thickness of the stratum corneum in circumscribed palmar hypokeratosis (A)(H&E, original magnification  $\times 4$ ). No notable inflammation was evident in the dermis (B) (H&E, original magnification  $\times 10$ ).

## REFERENCES

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