

A Case of Solitary Porokeratosis Mimicking Circumscribed Palmar Hypokeratosis

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Dear Editor:

Porokeratosis is a primary disorder of epidermal keratinization, characterized by annular plaques with an atrophic center and hyperkeratotic edges¹. Circumscribed palmar or plantar hypokeratosis (CPH) was first described in 2002 by Pérez et al.² Clinically, CPH presents as patches of depressed skin most commonly on the thenar or hypothenar areas of the palm in middle-aged or elderly individuals³.

A 65-year-old man presented with an asymptomatic skin lesion on the right palm for 1 year. He denied any history of trauma, burn, or exposure to a chemical agent. On physical examination, a 3-mm, well-demarcated, erythematous, and depressed macule was seen on the center of the right palm (Fig. 1). A 4-mm punch biopsy was performed for its diagnosis and excision. Microscopic examination revealed a stair-like decrease in the thickness of the stratum corneum, leading to a central area of thinning (Fig. 2A, B). These findings are analogous to CPH. However, there was a parakeratotic column (cornoid lamella) on the margin of the lesion. Moreover, below the cornoid lamella, the granular layer was thinned and vacuolated keratinocytes were present. The underlying upper dermis revealed mild inflammatory infiltrates. Although some features of the macule mimicked those of CPH, these clinical and histological findings were consistent with a diagnosis of porokeratosis. At his first follow-up, the palmar macule had clinically resolved after the punch biopsy.

The histopathologic patterns of porokeratosis are distinctive. A biopsy specimen from the margin of the lesion revealed hyperkeratotic stratum corneum with a thin column of poorly stained parakeratotic cells. The cornoid lamella is the hallmark of all porokeratosis variants⁴. The underlying keratinocytes are edematous with spongiosis, and the upper dermis may show lymphocytic infiltration. The granular layer underlying the cornoid lamella is either absent or markedly reduced but is of normal thickness in other areas of the lesion⁵. In the central part of porokeratosis, the epidermis may be normal, hyperplastic, or atrophic. Histopathologic findings in our case corresponded to these findings.

Since the first description of porokeratosis, different variants including porokeratosis of Mibelli (PM) and punctate porokeratosis (PP) have been subsequently recognized⁴.



Fig. 1. Atrophic circular macule measuring 3×3 mm with a well-demarcated border on the center of the right palm, and close-up view.

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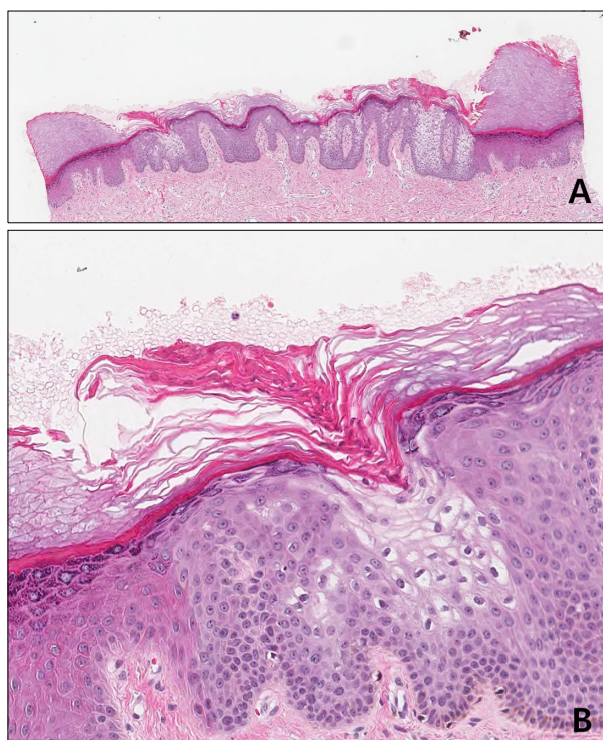


Fig. 2. (A) Histological analysis of the 4-mm punch biopsy specimen obtained from the patient shows an abrupt decrease in stratum corneum (H&E, $\times 40$), (B) cornoid lamella on the margin of the lesion. And hypogranulosis and edematous changes of keratinocytes on the underlying epidermis (H&E, $\times 200$).

PM, the most common variant, is characterized by a single plaque or a small number of plaques of varying sizes, and it usually begins during infancy or childhood. The well-demarcated hyperkeratotic border is usually more than 1

mm in height⁵. Although our patient had a solitary lesion, he was middle-aged and the border of the lesion was thin. In contrast, PP is a rare variant of porokeratosis. It is characterized by multiple minute and discrete punctate, hyperkeratotic seed-like lesions, commonly surrounded by a thin raised margin located along the palmoplantar surfaces⁵. However, our patient only had a single lesion. In conclusion, we diagnosed this case as porokeratosis. However, we could not classify this condition as being a particular variant of porokeratosis, like PM or PP. In addition, some clinical and pathologic features resembled CPH. We would like to present this unusual case, as it had partial features of both PM, and PP and mimicked CPH.

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