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Pitted Plaques of Palms and Soles

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Abstract

Porokeratosis is a chronic and progressive disorder of keratinization. Punctate porokeratosis is grossly described as multiple minute keratotic projections over the palmoplantar region. On histology, it is characterized by the presence of cornoid lamellae. Here, we report a case of localized punctate palmoplantar porokeratosis in a 28-year-old male, considering its rarity of pitted presentation.

Keywords: Cornoid lamella; Porokeratosis; Punctate

Dear Editor,

Porokeratosis is a chronic and progressive disorder of keratinization characterized by annular plaques with hyperkeratotic borders.[1] Porokeratosis has been classified morphologically into many subdivisions and histologically characterized by parakeratotic cornoid lamellae.[2]

Punctate porokeratosis is a relatively rare form, described by Rahbari et al., in 1977 as multiple papular hyperkeratotic projections over palmoplantar region.[3]

Herewith, we report a case with an unusual pitted appearance of punctate porokeratosis localized to the palmoplantar region.

A 28-year-old male presented with lesions over the bilateral palms and soles progressing over a year associated with pruritus. Local examination revealed well defined hyperpigmented plaques of size approximately 5 x 2 cm with multiple irregularly arranged white pits with fine adherent scaling over bilateral palmar and plantar aspect of hand and feet (Figure 1 A, B). A differential diagnosis of adventitial lichen planus, porokeratotic eccrine ostial and dermal duct nevus and punctate palmoplantar keratoderma was considered. However, histopathological examination of the palmar lesion revealed a fairly thick superficial perivascular patchy lichenoid lymphocytic infiltration; in the centre the epidermis displays cornoid lamella with the absence of a granular layer and few dyskeratotic cells beneath it (Figure 2).

Patient was started on capsule acitretin 25mg daily along with topical keratolytic and emollients with a resolution of lesions over 3 months without any side effects.

Punctate porokeratosis is an uncommon variation of porokeratosis which is marked by seed-like hyperkeratotic papular lesions with raised margins over palms and soles. Histology reveals cornoid lamellae, which are indicative of porokeratosis with a thin or absent granular layer.[1,2]

Punctate porokeratosis has interchangeably been used with terms such as porokeratosis palmaris plantaris et disseminate, spiny keratoderma, and punctate

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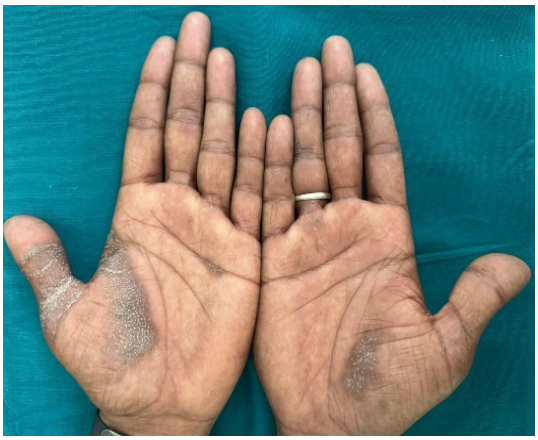

Figure 1A: Hyperpigmented plaque with multiple tiny white pits and surface fine adherent scales over palms

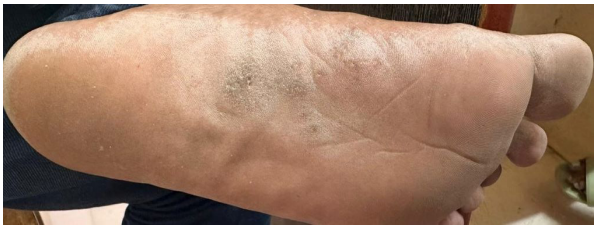

Figure 1B: Pitted plaques over sole

porokeratotic keratoderma on the basis of histology and has been assumed by some as the same entity.[3,4]

Porokeratosis palmaris plantaris et disseminate (PPPD) is a progressive form of porokeratosis involving palms, soles and non glabrous areas.[1,3]

Spiny keratoderma is an autosomal dominant condition that may present similarly to punctate porokeratosis but is associated with underlying malignancy, type 2 diabetes or kidney disease and also lacks dyskeratotic keratinocytes, which are seen in porokeratosis.[5]

Other differentials for punctate porokeratosis include keratotic punctate of palmar creases, arsenical keratosis, porokeratotic eccrine ostial and dermal duct nevus (PEODDN), Dariers disease, Cowden disease, pitted keratolysis, and punctate palmoplantar keratoderma.

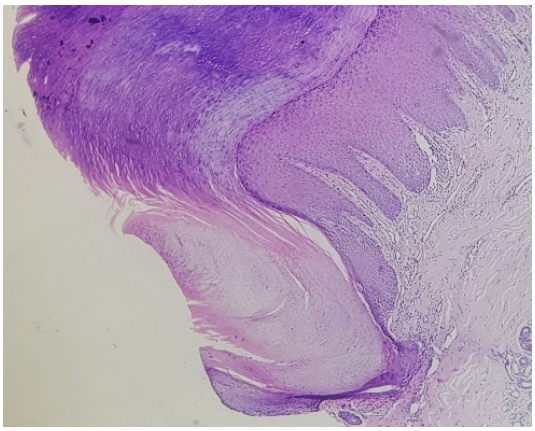

Figure 2: Histopathological examination (Haematoxylin and eosin stain) shows cornoid lamella where the floor lacks granular layer with dyskeratoses, while the walls show hypergranulosis (40x).

Keratosis punctate of palmar creases is limited to palmar creases.[3,5]

Arsenical keratosis is associated with arsenic exposure and also involves mucosa and other sites with mees lines of nails. Histopathological examination includes compact hyperkeratosis, parakeratosis, acanthosis, papillomatosis, and vacuolated keratinocytes with or without atypia.[5]

PEODDN is a rare benign hamartoma of eccrine sweat glands with linear distribution, typically congenital. On histology cornoid lamella is seen in eccrine ostia.[6]

Punctate palmoplantar keratoderma is an autosomal dominant condition that varies on histology as it shows massive orthohyperkeratosis, hypergranulosis, and acanthosis.[2,4]

No satisfactory treatment has yet been proposed, and it is associated with recurrences. There is no documented risk of any malignant transformation in punctate porokeratosis.[4,5]

There are several case reports of palmoplantar porokeratosis. However, this case depicts a rare pitted presentation of localized palmoplantar porokeratosis, which adds to the clinical dilemma.

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