Subcorneal Milia-Like Idiopathic Calcinosis Cutis: A Rare Presentation

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Dear Editor:

Milia-like idiopathic calcinosis cutis is a rare subtype of idiopathic calcinosis cutis¹. Clinically, the lesions are presented as round, yellow to white papules, mimicking milia. Histopathologic examination reveals calcified deposits surrounded by a well-demarcated rim in the papillary dermis, resembling a pseudocyst-like structure. An 11-year-old girl was presented with a yellow nodule on her palm. Histopathologically, the nodule had a unique subcorneal calcification. This is the first report of such subcorneal calcification.

An 11-year-old girl was presented with an asymptomatic, solitary, 3 mm, hard, yellow nodule on her left palm, which had developed 1 month ago. The patient had no history of trauma. The patient was otherwise healthy and there was no family history of cutaneous nodules. Physical examination revealed a solitary, 3 mm, yellow nodule on her left palm (Fig. 1). The nodule was hard and superficial. There were no other stigmata of Down syndrome, inherited disorders, connective tissue diseases, cutaneous neoplasms or infections. Laboratory findings, including serum calcium and phosphorus levels, were within normal limits. Histologic examination of the lesion showed granular basophilic deposits of calcium surrounded by a thin fibrous strip under the stratum corneum (Fig. 2). The calcium deposits stained black with

von Kossa stain. Calcium deposits were also noted in the stratum corneum and the stratum spinosum, but there were no calcium deposits within the dermis. The calcification was not in continuum with the acrosyringium. Calcified sweat ducts were not observed. In the 4 months since the punch biopsy, no signs of recurrence or new lesions have appeared.

Calcinosis cutis comprises several subtypes, including milia-like idiopathic calcinosis cutis. Milia-like idiopathic calcinosis cutis appear as smooth, round papules resembling milia, sometimes surrounded by erythema. Two-thirds of patients with milia-like idiopathic calcinosis cutis have shown an association with Down syndrome². Only 8 cases of milia-like idiopathic calcinosis cutis have been reported in patients without Down syndrome²⁻⁴. In addition, there are no cases of milia-like idiopathic calcinosis cutis, which have shown calcified deposits beneath the stratum corneum. Furthermore, previous reports of calcinosis cutis, including milia-like idiopathic calcinosis cutis, have demonstrated calcifications within

Fig. 1. An asymptomatic, solitary, 3 mm, hard, yellow nodule.

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Fig. 2. (A) Histologic examination of the lesion showed granular basophilic deposits of calcium surrounded by a thin fibrous strip under the stratum corneum (H&E, $\times 40$). (B) Higher magnification of the calcium deposit, fibrous rim and surrounding keratinocytes (H&E, $\times 100$).

the dermal layer¹⁻⁵. This is the first report of calcinosis cutis with subcorneal calcification. The pathogenesis of milia-like idiopathic calcinosis cutis is unclear. The role of eccrine sweat ducts has been suggested². Increased sweat calcium concentrations or low excretion may result in calcium deposition². However, calcified sweat ducts were not observed in our case. Some authors suggested local trauma as the cause⁵. Interestingly, in many cases of milia-like idiopathic calcinosis cutis, the lesions occurred on the hands and/or feet, which are areas prone to trauma². Although our patient had no history of trauma, the sudden development of a calcified nodule on the palm led us to suspect trauma as the causative factor.

We report a case of milia-like idiopathic calcinosis cutis in a girl without Down syndrome. Histopathologically, the lesion was characterized by homogenous basophilic granules directly beneath the corneal layer and surrounded by a fibrous strip. This case represents a unique form of the milia-like idiopathic calcinosis cutis.

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