

Nail Changes and Periungual Dermatitis in a Finger of a Seven-Year-Old Girl

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Case Presentation

A 7-year-old girl was referred for a 1-year history of dermatitis restricted to the distal pulp of the left fourth finger. She denied sucking the finger and had no history of atopic dermatitis. Previous patch tests had ruled out allergic contact dermatitis to the most important contact allergens. The clinical examination revealed eczematous changes restricted to the tip of the fourth finger, characterized by mild erythema, scales, and fissures. The nail plate was raised due to mild subungual hyperkeratosis and onycholysis. A diagnosis of parakeratosis pustulosa was suspected, and the treatment with potent topical corticosteroids led to clinical improvement, with almost complete resolution of skin signs observed within one month. No recurrences were seen at the 6-month follow-up visit.

Teaching Point

Parakeratosis pustulosa is a typical and exclusive pediatric condition, more commonly seen in girls aged 5 to 7 years. It frequently affects a single finger, typically the thumb or index finger, and manifests with mild eczematous changes of the pulp along with psoriasiform nail changes [1]. It is considered a possible clinical presentation of eczema or psoriasis [1]. The condition usually begins with pustules or vesicles, followed by eczematous changes, and may progress to pulpitis, though rarely. Nail alterations develop after the skin inflammatory changes and include mild subungual hyperkeratosis and onycholysis, often more pronounced on one side of the nail. Differential diagnosis includes onychomycosis, nail sucking, chronic paronychia, and eczema. Patch test helps to exclude allergic contact dermatitis. The course

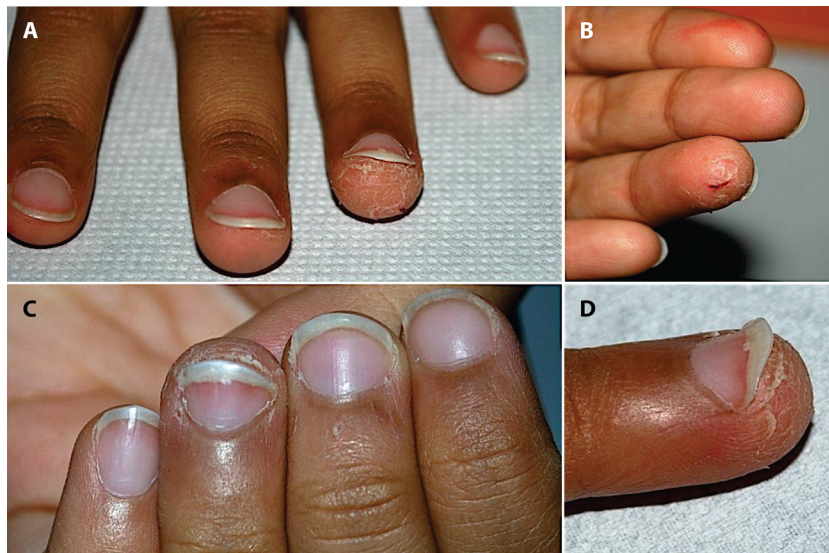


Figure 1. (A, B) Eczematous changes of the distal pulp of the left fourth finger, (B, C) associated with subungual hyperkeratosis and (C, D) onycholysis.

of parakeratosis pustulosa is chronic with spontaneous remission over time. In some patients it can evolve into nail psoriasis, typically mild [2].

References

1. Tosti A, Peluso AM, Zucchelli V. Clinical features and long-term follow-up of 20 cases of parakeratosis pustulosa. *Pediatr Dermatol.* 1998;15(4):259–63. doi: 10.1046/j.1525-1470.1998.1998015259.x. PMID: 9720686.
2. Richert B, André J. Nail disorders in children: diagnosis and management. *Am J Clin Dermatol.* 2011 Apr 1;12(2):101-12. doi: 10.2165/11537110-000000000-00000. PMID: 21348541.