

Foresee Your Next Patient

Delayed Nail Findings in Hand-Foot-and-Mouth Disease

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A 7-year-old boy with a history of eczema presented with painful peeling of his fingernails of several days' duration. He denied any trauma or other inciting injury to his fingernails. His mother had a history of a nail fungus that reportedly had been difficult to treat.

On examination, the patient was noted to have peeling of several fingernails from the proximal nail fold spreading distally (**Figure**). He had no current illness, and his vital signs were within normal limits. There was mild tenderness associated with manipulation of the affected nails. There was no associated nail discoloration, and his digits and palms were unaffected. His toenails were examined and had no abnormalities.

Of note, he had presented to the emergency department 1 month prior with an acute viral illness that had been associated with a rash and vesicles on the hands, feet, and mouth. A diagnosis of hand-foot-and-mouth disease (HFMD) was made, and he had been discharged with supportive care. It was presumed that the cause of the nail peeling, known as onychomadesis, was a late symptom of his previous coxsackievirus infection.

Discussion. Coxsackievirus infection—the cause of HFMD—can occur in persons of any age but most commonly occurs in those younger than 5 years of age.¹ Coxsackievirus types A and B are part of the nonpolio enterovirus family, of which more than 100 types can infect humans. HFMD is most commonly caused by coxsackievirus A16, but coxsackievirus A6 has been



implicated in numerous outbreaks of severe and atypical HFMD.² This variant tends to be associated with more widespread vesicles, and they often involve the less commonly associated perioral area, extremities, and trunk, but also the palms, soles, and buttocks. About half of all patients infected with coxsackievirus A6 will develop oral lesions, and acral desquamation and onychomadesis are more common compared with infection with other coxsackievirus serotypes. These patients are often febrile but do not have neurological symptoms or other complications.²

Onychomadesis refers to the separation of the nail plate at the proximal nail fold secondary to a severe insult that causes complete cessation of nail matrix activity. The nail matrix is the portion of the nail unit that is responsible for formation of the nail plate. Onychomadesis typically occurs several weeks after infection, often within 3 to 6 weeks. It can be caused by trauma, scarlet fever, Kawasaki disease, or (as in our patient's case) HFMD.² Other less typical pediatric causes include chemotherapy, neurological disorders, peritoneal dialysis, cutaneous T-cell lymphoma, pemphigus vulgaris, drug allergy, and keratosis punctata palmaris et plantaris. Immobilization from casting for fractures can also be a contributing factor for the development of onychomadesis. Medications such as antineoplastic agents, azithromycin, and retinoids have also been implicated.³

No intervention or follow-up is required, since the deformity will grow out along with the nail plate. This process can take as long as 6 to 18 months, given that nails grow on average 2 to 3 mm per month.⁴ ■

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