Onychomadesis after hand-foot-and-mouth disease

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A seven-year-old boy presented with a four-week history of nail shedding. The patient developed nail changes three weeks after recovering from hand-foot-and-mouth disease diagnosed by rectal swab, which was positive for human enterovirus 71. Initially, a grey-white patch appeared on the bottom of his nails and spread. Then, beginning with the lunulae, his nails shed over the course of two weeks from the bottom to the free border of the nail. Meanwhile, fresh, thin pink nails grew slowly. Physical examination showed that multiple fingernails and toenails had shed completely or partially (Figure 1). Beau lines, horizontal grooves running across the nail plates, were noted. Some nails showed a cloudlike, grey-white colour. No periungual rashes or swelling were found. We diagnosed onychomadesis following hand-foot-and-mouth disease.

Figure 1: Partial or complete nail shedding in a seven-year-old boy who had hand-foot-and-mouth disease eight weeks earlier. Panels A–C show new nail growth, panels A, B and D show Beau lines (white arrows), and panels D and E show grey-white colour changes (black arrows).

Hand-foot-and-mouth disease typically manifests as fever and vesicles involving the hands, feet and mouth, mainly affecting children older than five years.[1] Enterovirus 71 and coxsackievirus A16 are the most common causative agents among a dozen enteroviruses associated with the condition.[1,2] Onychomadesis is a late complication that occurs four to six weeks after the illness onset.[2,3] It is usually self-limited and requires no treatment.[4] Nail abnormalities range from leukonychia and Beau lines to partial or complete nail shedding.[5] The pathogenesis of onychomadesis associated with hand-foot-and-mouth disease is incompletely understood. It may involve brief inhibition of nail-matrix proliferation caused by periungual inflammatory reactions or enteroviruses affecting the nail matrix more directly.[5]

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