## **IMAGES IN INFECTION**

## Not only fever and palmoplantar vesicular eruption

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Nail matrix arrest is commonly seen following a physiological stress, nutritional deficiencies, drug/chemotherapeutic exposures, infection, and systemic illnesses [1] such as hand-foot-mouth disease (HFMD). Here, we describe a case of onychomadesis due to HFMD. A 20-year-old girl, with past medical history unremarkable (no drug-, no prior trauma-, no paronychia, no onychomycosis-history was reported), presented with fever, sore throat, and palmoplantar vesicular eruption consistent with the diagnosis of HFMD, which had since resolve. However 3 weeks later, clinical examination revealed Beau's lines (transverse ridging of the nail plate) and onychomadesis over all the finger- and some of toe-nails. HFMD is a common benign self-limiting childhood viral illness associated with coxsackievirus A16 (CV-A16) and enterovirus 71 (EV-71) infections [2]. Atypical HFMD is a possible cause of onychomadesis (growth cessation of longer-term nail and/ or nail matrix causes nail shedding from the proximal portion) [3]. The incidence of this phenomenon was not reported [4]. It was first described in 2000 in five children, and it has since been associated to several enterovirus serotypes, especially CV-A16 [3]. The underlying mechanisms is still unclear. Davia et al. proposed that the virus,



Fig. 1 Prominent Beau's lines and onychomadesis of the fingers



Fig. 2 Prominent Beau's lines and onychomadesis of the fingers

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through direct action on the nail matrix keratinocytes, would probably lead to arrest it [1]. The temporal association, with 3–9 weeks interval, between disease and nail injury suggestes the causal relationship [1, 3, 4]. Complete nail regrowth is typically 1–4 months later [1]. Here, we would want to highlight some new aspects of an old disease



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Fig. 3 Prominent Beau's lines of the fourth finger of the right foot

and to emphasize the importance of an accurate differential diagnosis. (Figs. 1, 2 and 3).

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## References

- Davia JL, Bel PH, Ninet VZ, Bosch IF, Salazar A, Gobernado M. Onychomadesis outbreak in Valancia, Spain associated with hand, foot and mouth disease caused by enteroviruses. Pediatr Dermatol. 2011;28(1):1–5.
- 2. Wong SS, Yip CC, Lau SK, Yuen KY. Human enterovirus 71 and hand, foot and mouth disease. Epidemiol Infect. 2010;138(8):1071–89.
- Clementz GC, Mancini AJ. Nail matrix arrest following hand-footmouth disease: a report of five children. Pediatr Dermatol. 2000;17(1):7–11.
- Blomqvist S, Klemola P, Kaijalainen, Paananen A, Simonen ML, Vuorinen T, Roivainen M. Co-circulation of coxsackieviruses A6 and A10 in hand, foot and mouth disease outbreak in Finland. J Clin Virol. 2010;48:49–54.

