



Photos in Pediatrics

Green nail syndrome

Giovanni Corsello and Davide Vecchio

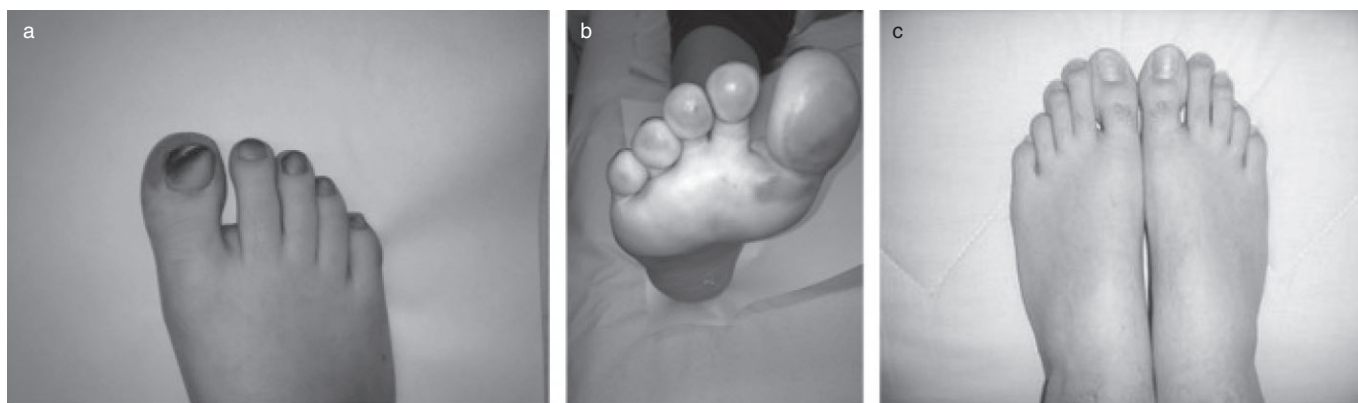
Department of Sciences for Health Promotion and Mother and Child Care, Pediatric Unit, University of Palermo, Palermo, Italy

Fig. 1 (a) Green discoloration of the right toenails; (b) exudative/erythematous skin lesions; (c) after 5 weeks of treatment.

A 8-year-old boy with HIV infection due to perinatal exposure was admitted to the Pediatric Department because of green discoloration of the right toenails (Fig. 1a). Exudative/erythematous skin lesions on the lower surface at sites of pressure burden, and probably co-generated by the extensive use of unventilated athletic shoes, were also noted (Fig. 1b). At the time of diagnosis the patient was under combined antiretroviral therapy: CD4 cell count was 576 cells/ μ L and HIV-RNA was $>100\,000$ copies/mL.¹ Mycological examination of the affected nail scrapings was done, and fungal infection was excluded on microscopy and culture. Bacteriology indicated *Pseudomonas aeruginosa* on Gram stain and culture of the exudate and unguis fragments. Green nail syndrome is a paronychia infection caused by *P. aeruginosa*, a Gram-negative bacterium.² This condition clinically presents as a greenish-black, greenish-brown or greenish-yellow discoloration of the nail. Furthermore *P. aeruginosa* has a characteristic sweet, fruity odor due to its production of trimethylamine and pyocyanin, a greenish-blue pigment that diffuses into the underside of the nail plate, accounting for the green discoloration

Correspondence: Davide Vecchio, MD, Department of Sciences for Health Promotion and Mother and Child Care, Pediatric Unit, University of Palermo, via Alfonso Giordano, 3, 90127 Palermo, Italy. Email: davide.vecchio@unipa.it

Received 10 April 2014; revised 22 June 2014; accepted 15 July 2014.

characteristic of this condition.^{2,3} Although commonly seen, the treatment for this disorder remains challenging, and is quite complex in HIV infection, due to the lack of controlled studies assessing systemic or topical treatments.^{4,5} Based on immunological status, the patient was treated topically with neomycin/polymyxin B galenic unguentum applied twice daily, rubbing it gently onto the affected nails and the surrounding skin. Complete resolution was achieved within 5 weeks (Fig. 1c).

References

- 1 Panel on Antiretroviral Therapy and Medical Management of HIV-Infected Children. *Guidelines for the Use of Antiretroviral Agents in Pediatric HIV Infection*. [Cited 30 December 2013.] Available at: <http://aidsinfo.nih.gov/contentfiles/lvguidelines/pediatricguidelines.pdf>
- 2 Hengge UR, Bardeli V. Green nails. *N. Engl. J. Med.* 2009; **360**: 1125.
- 3 Tosti A, Piraccini BM. Biology of nails and nail disorders. In: Wolff K, Goldsmith L, Katz S, Gilchrist B, Paller A, Leffell D (eds). *Fitzpatrick's Dermatology in General Medicine*, 7th edn. McGraw-Hill, New York, 2008; 778–94.
- 4 Rallis E, Pappas V, Fletmetakis A, Katsambas A. *Pseudomonas* fingernail infection successfully treated with topical nadifloxacin in HIV-positive patients: Report of two cases. *AIDS* 2010; **24**: 1087–8.
- 5 Rigopoulos D, Rallis E, Gregoriou S *et al.* Treatment of *pseudomonas* nail infections with 0.1% octenidine dihydrochloride solution. *Dermatology* 2009; **218**: 67–8.