

Silent COVID-19: what your skin can reveal

Clinical manifestations of coronavirus disease 2019 (COVID-19) are rare or absent in children and adolescents;^{1,2} hence, early clinical detection is fundamental to prevent further spreading. We report three young patients presenting with chilblain-like lesions who were diagnosed with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection. Two of them were asymptomatic and potentially contagious. Skin lesions, such as erythematous rashes, urticaria, and chicken pox-like vesicles, were reported in 18 (20.4%) of 88 patients with COVID-19 in a previous study.³ These symptoms developed at the onset of SARS-CoV-2 infection or during hospital stay and did not correlate with disease severity.³ In our cases, lesions involved the acral sites, especially the dorsum of the digits of the feet, beginning as erythematous-violaceous patches that slowly evolved to purpuric lesions and then to blisters and ulceronecrotic lesions, with final complete return to normal. Burning and itching were also present with some of the lesions. Informed consent was obtained from the parents of patients 1 and 2 and from patient 3 himself.

Patient 1 was a 14-year-old boy who presented to the hospital with erythematous-violaceous lesions involving the dorsum of all digits of both feet. After 7 days, a few red macules and papules appeared on the lateral and plantar aspect of both feet and a small ulcer developed on the fifth digit of the left foot (figure). Because a family member had tested positive for SARS-CoV-2, the patient

underwent nasopharyngeal swab and was found positive for SARS-CoV-2 on RT-PCR. The lesions disappeared in the following 7 days.

Patient 2 was a 14-year-old boy with no known contact with COVID-19 cases who had been asymptomatic since the beginning of the skin disease, for which his parents requested a teledermatology consultation. Manifestations consisted of small erythematous-violaceous lesions on the dorsum of almost all digits of the feet, some of which were characterised by necrotic aspects with blackish crusts (appendix). The lesions lasted 20 days, with complete healing. Nasopharyngeal swab taken by the family's paediatrician 2 days after the skin manifestations appeared was positive for SARS-CoV-2.

Patient 3 was an 18-year-old boy whose grandfather had COVID-19 pneumonia. After 2 days with fever (38.5°C), the boy reported the appearance of chilblain-like lesions involving the distal part of all digits of the feet (appendix). Skin manifestations remained unchanged for 10 days, suddenly disappearing without treatment. Nasopharyngeal swab taken 4 days after the skin manifestations appeared was positive. The patient was otherwise asymptomatic.

Acute acro-ischaemic manifestations along the course of SARS-CoV-2 infection seem to be different from classic acrocyanosis, erythema pernio, and vasculitis; however, they could represent a cutaneous expression of the typical thrombotic pattern of COVID-19 due to hyperinflammation⁴ and altered coagulation and endothelial damage.⁵

During this time, children and adolescents with chilblain-like lesions



Figure: Chilblain-like lesions on patient 1's left foot

who are otherwise asymptomatic should undergo SARS-CoV-2 testing, which could help early detection of silent carriers.

We declare no competing interests.



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See Online for appendix

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