



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Medical imagery

Periungual desquamation in a Japanese adult recovering from severe COVID-19



ARTICLE INFO

Article history:

Received 2 October 2020
 Received in revised form 8 October 2020
 Accepted 10 October 2020

Keywords:

Periungual desquamation
 COVID-19
 SARS-CoV-2

ABSTRACT

We report a case of a 50-year-old Japanese male who developed periungual desquamation in hands and feet during the recovery phase of severe COVID-19. Because coronary lesions have been reported during the recovery phase of severe COVID-19 in children, as well as for Kawasaki disease, caution may also be necessary in adults.

© 2020 The Author(s). Published by Elsevier Ltd on behalf of International Society for Infectious Diseases. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

A 50-year-old Japanese man was admitted to our hospital with a 14-day history of fever and sudden dyspnea. The patient was diagnosed with severe coronavirus disease (COVID-19) based on positive test results of RNA polymerase chain reaction for severe acute respiratory syndrome coronavirus. He was started on mechanical ventilation and extracorporeal membrane oxygenation (ECMO). He received ECMO for 23 days and was tracheostomized on hospital day (HD) 37. His general condition improved by HD 54. On HD 61, periungual desquamation appeared on the fingers of his left hand (Figure 1A), left palm (Figure 1B), and both feet (Figure 1C). He satisfied the diagnostic criteria for Multisystem Inflammatory Syndrome in Children (MIS-C) other than age (Centers for Disease Control and Prevention, 2020). There were no other

conditions that potentially present the periungual desquamation, such as Kawasaki disease (KD) and toxic shock syndrome, during hospitalization. His results for bedside echocardiography, electrocardiogram, and chest X-ray revealed no abnormalities within 4 months of admission.

Severe COVID-19 in children has been reported to present with KD-like symptoms, MIS-C, and some of these have periungual desquamation during the recovery period (Feldstein et al., 2020; Shaigany et al., 2020). Coronary artery lesions (CALs) have been reported during recovery from MIS-C (Dufort et al., 2020; Feldstein et al., 2020). Therefore, it may be necessary to thoroughly assess adults with severe COVID-19 and periungual desquamation for CALs.



Figure 1. Periungual desquamation in an adult patient with severe COVID-19. Periungual desquamation appeared in the fingernails (A) and palm (B) of the left hand and in both feet (C).

Funding source

This research was supported by Japan Agency for Medical Research and Development [grant numbers JP20he0822003].

Ethical approval

The patient provided consent for the publication of his clinical case details.

Conflict of interest

The authors state that they have no conflict of interest.

Acknowledgment

We thank all the clinical staff at the National Center for Global Health and Medicine for their dedicated clinical practice and patient care.

References

Center for Disease Control and prevention. Information for Healthcare Providers about Multisystem Inflammatory Syndrome in Children (MIS-C) Available from <https://www.cdc.gov/mis-c/hcp/?fbclid=IwAR2kN6U-iGO50qPdAb-PM1ZQyIHb-jDR9tDTIq0HMaXhwANPgGs0C4M0UAI> [Accessed 5 October 2020]. 2020.

Dufort EM, Koumans EH, Chow EJ, Rosenthal EM, Muse A, Rowlands J. New York State and Centers for Disease Control and Prevention Multisystem Inflammatory Syndrome in Children Investigation Team. Multisystem inflammatory syndrome in children in New York State. *N Engl J Med* 2020;383(4):347–58, doi: <http://dx.doi.org/10.1056/NEJMoa2021756> Epub 2020 Jun 29.

Feldstein LR, Rose EB, Horwitz SM, Collins JP, Newhams MM, Son MBF. Overcoming COVID-19 Investigators, CDC COVID-19 Response Team. Multisystem inflammatory syndrome in U.S. children and adolescents. *N Engl J Med* 2020;383(4):334–46, doi: <http://dx.doi.org/10.1056/NEJMoa2021680> Epub 2020 Jun 29.

Shaigany S, Gnirke M, Guttman A, Chong H, Meehan S, Raabe V, et al. An adult with Kawasaki-like multisystem inflammatory syndrome associated with COVID-19. *Lancet* 2020;396(July (10246)):e8–10, doi: [http://dx.doi.org/10.1016/S0140-6736\(20\)31526-9](http://dx.doi.org/10.1016/S0140-6736(20)31526-9) Epub 2020 Jul 10.

Takato Nakamoto^a
Masahiro Ishikane^{a,*}

Ryo Sasaki^b
Norio Ohmagari^a

^a*Disease Control and Prevention Center, National Center for Global Health and Medicine, Tokyo, Japan*

^b*Department of Emergency Medicine and Critical Care, National Center for Global Health and Medicine, Tokyo, Japan*

* Corresponding author at: 1-21-1 Toyama, Shinjuku-ku, Tokyo 162-8655, Japan.

E-mail address: mishikane@hosp.ncgm.go.jp (M. Ishikane).

Received 2 October 2020

Received in revised form 8 October 2020

Accepted 10 October 2020