



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.



## Correspondence

Edited by Stephen P. Stone, MD

### Reply: Introducing special cutaneous “sign” tribute to health care workers managing new coronavirus disease 2019 (COVID-19)



To the Editor,

Subsequent to our initial publication on coronavirus disease 2019 (COVID-19) infection and the skin, the pandemic has evolved with nearly 1,600,000 new cases and over 93,000 deaths since the beginning of April 2020,<sup>1</sup> with these numbers increasing daily. In China, 3,300 health care workers have been infected with the virus, whereas the number in Italy has escalated to 2,600 so far.

### Medical personnel at risk

Medical personnel are at high risk for acquiring the infection due to intense exposure, lack of protective equipment, and ineffective prophylaxis. In the memory of those medics who have committed their lives to fight the pandemic, we have proposed a new skin sign, “COVID-19 MS sign,” with MS standing for medical staff, to reflect those facial cutaneous manifestations due to protective medical device and personal equipment.<sup>2</sup> We support this proposal with the clarification that it is similar to the facial skin changes in health care workers that have been observed elsewhere, also created by the extensive use of protective equipment.

Subsequent to our initial publication, specific skin manifestations of the COVID-19 infection have been reported, including maculopapular eruptions, urticaria, and vesicular lesions, along with livedo-like and petechial lesions.<sup>3,4</sup> We would like to remind the readership that COVID-19 is not detected in skin specimens taken from infected patients.<sup>5</sup> The structure of the skin and accessories is basically normal, with a sparse lymphocytic infiltrate surrounding the superficial small blood vessels of the dermis. Multifocal thromboses in individuals infected with COVID-19 have been described and are associated with positive anticardiolipin and anti- $\beta$ 2 glycoprotein I antibodies.<sup>6</sup>

In concordance, acroischemic skin lesions have been described in younger patients who have tested positive for COVID-19.<sup>7</sup> Despite the children’s general good health, the lesions typically have affected not all fingers or toes but an average of 3 fingers or toes. The lesions have been multiple, several millimeters in size, initially starting as a patch, then transforming into bullae that may become covered with black crusts in their subsequent evolution. Complete resolution occurs in about 14 days.

The direct effect of the virus on the skin is not evident. We attribute our cutaneous observations to hyperergic and hypersensitivity reactions to the infection or to a microcoagulopathy of the cutaneous vessels.<sup>8</sup>

### Conclusions

We underline the role of skin preventive measures to include the use of emollients, barrier creams, and moisturizers to assist in preventing skin complications precipitated by preventive measures used during the pandemic.

Razvigor Darlenski MD, PhD

*Department of Dermatology and Venereology  
Acibadem City Clinic, Tokuda Hospital, Sofia, Bulgaria*

*Department of Dermatology and Venereology  
Medical Faculty, Trakia University, Stara Zagora, Bulgaria  
E-mail address: darlenski@bv.bg*

Nikolai Tsankov MD, PhD, DSc

*Department of Dermatology and Venereology  
Acibadem City Clinic, Tokuda Hospital, Sofia, Bulgaria*

<https://doi.org/10.1016/j.clindermatol.2020.04.012>

### References

1. World Health Organization. Coronavirus disease (COVID-19). Available at: <https://who.sprinklr.com/>. Accessed Month Day, Year.
2. Kannangara K. Introducing special cutaneous “sign” tribute to health care workers managing new coronavirus disease (COVID-19). *Clin Dermatol* 2020;38:783.

3. Recalcati S. Cutaneous manifestations in COVID-19: a first perspective [e-pub ahead of print]. *J Eur Acad Dermatol Venereol*. <https://doi.org/10.1111/jdv.16387>, accessed Month Day, Year.
4. Joob B, Wiwanitkit V. COVID-19 can present with a rash and be mistaken for Dengue. *J Am Acad Dermatol* 2020;82, e177.
5. Yao XH, Li TY, He ZC, et al. A pathological report of three COVID-19 cases by minimally invasive autopsies. *Zhonghua Bing Li Xue Za Zhi* 2020;49, E009.
6. Zhang Y, Xiao M, Zhang S, et al. Coagulopathy and antiphospholipid antibodies in patients with COVID-19. *N Engl J Med* 2020;382, e38.
7. Mazzotta F, Troccoli T: Acute acro-ischemia in the child at the time of COVID-19 [e-pub ahead of print]. *Eur J Pediatr Dermatol*. <https://www.ejpd.com/images/nuova-vasculite-covid-ENG.pdf>, accessed Month Day, Year.
8. Knopfel N, Noguera-Morel L, Latour I, et al. Viral exanthems in children: a great imitator. *Clin Dermatol* 2019;37:213-226.