

# Dermatological Manifestations in COVID-19 Disease

## Covid-19 Hastalığında Dermatolojik Lezyonlar

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### Dear Editor

Although the etio-pathogenesis of skin lesions in COVID-19 is yet not clear, several theories have been proposed. One of them is cytokine storm causing thrombophilic arteritis in COVID-19 patients due to activation of endothelial cells and macrophages. Furthermore, involvement of activated keratinocytes and/or Langerhans cells of the skin may cause various clinical spectrum. According to another theory, livedo reticularis-like lesions may be result of decreased blood flow to cutaneous micro-vascular system by accumulation of micro-thromboses derived from other organs.

From SARS-CoV-2 infected 148 patients, hospital records of 18 patients clinically showed skin involvement. 8 out of 18 patients showed the symptoms at the onset of COVID-19 and remained after hospitalization. Erythematous rash was observed in 14 patients, widespread urticaria in 3 patients, and chickenpox-like vesicles in 1 patient. Generally, affected area was trunk with low itching, but skin lesions healed in a few days. The authors emphasized skin manifestations are similar to cutaneous involvement occurring during common viral infections.<sup>1</sup>

Castelnuovo et al reported skin involvement of two young COVID-19 patients. First patient presented widespread urticaria in the thigh and peri-malleolar area spontaneously improving in a few days.<sup>2</sup> Second patient had vasculitic purpura, then evolving to erythematous rash. The patient was recovered after a short time with corticosteroid. In another study, a woman with COVID-19 was admitted withodynophagia. She later developed arthralgia and pruritic disseminated erythematous plaques involving face and acral areas. The authors suggested skin symptoms as an indicator for SARS-CoV-2 infection.<sup>2-3</sup>

The skin manifestations in 130 COVID-19 patients of two hospitals from Rome and Barcelona were examined. Vesicles surrounded by erythematous halos with mild pruritus were observed in only 2 patients of Rome. In Barcelona,

only 1 patient had numerous isolated vesicular lesions in the back. The authors stated that skin lesions seen in COVID-19 are similar to dermatological manifestations seen in typical viral infection of Herpesviridae family.<sup>4</sup>

Fernandez-Nieto et al conducted a retrospective analysis of 132 patients with SARS-CoV-2 infection. The mean duration of skin lesions was 8.7 days.<sup>5</sup> In 95 patients, there were acute acro-ischemic (chilblain-like pattern) lesions in the form of red to violet macules, plaques, and nodules, usually at the distal aspects of toes and fingers. Rounded erythematous macules and vesicles in erythema multiforme-like pattern tending to coalesce were observed in 37 patients.

In conclusion; as of today, there are limited studies and reports available on dermatological manifestations in COVID-19 patients. Dermatological symptoms can start before or after SARS-CoV-2 infection. The region of involvement and healing time of symptoms varies. Some symptoms are the same as occurring during classical viral infections.

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