



# COVID-19 Pandemic: The Associated Skin Conditions

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## Dear Editor,

In late December 2019, in Wuhan, Hubei Province, China, many people were taken to the hospital due to an initial diagnosis of pneumonia of an unknown etiology, which was later discovered as a novel coronavirus, a great public health threat (1, 2). On June 08, 2020, more than 7 million confirmed cases of coronavirus disease 2019 (COVID-19) were reported across the globe. According to healthcare providers around the world, some COVID-19 patients develop skin rashes. The most common skin problem found was named “COVID-toes”. Recent studies have shown that COVID-19 can cause an injury to body tissues such as patches on the hands, toes, and rashes on the body (among both children and adults), although the skin conditions are not so serious, and the lesions usually disappear on their own. Most of these skin conditions are observationally reported, and there is no clear evidence showing that those rashes are the sign of COVID-19. No health agencies (e.g., CDC or WHO) has no listed skin rash as a sign of COVID-19 (3). A Chinese study on more than 1000 COVID-19 patients reported only 0.2% of skin rashes among these patients; however, another study conducted on 88 patients showed that 20.4% of these patients developed cutaneous manifestations (4, 5). Rash is not new symptom as it can be found in some viral infections, including measles, chickenpox, and herpes. Some COVID-19 patients could generate some skin reactions the same as in various viral infections. A group of Spanish researcher classified rashes into five different types among COVID-19 patients (3):

A COVID toes (a rash on the hands or feet that resembles chilblains);

A blistering rash (a rash on the abdomen, back, arms, or legs);

A hives-like rash (a slightly elevated reddish or white patches on the skin);

A maculopapular rash (a small reddish bumps on a flat,

reddish patch of skin);

Livedo or necrosis (a rash characterized by purplish skin with a lace-like pattern).

Another study reported two additional skin conditions that may be associated with COVID-19 (3):

A petechiae (tiny purple, red or brown spots);

A digitate papulosquamous (scaly rash).

Many researchers around the world held that the rashes might be caused by an immune response to the virus. In some patients, rashes were reported to normally disappear after some days as stated (6). American Academy of Dermatology (AAD) recorded more than 100 cases of the conditions in COVID-19 patients. The dermatologists around the globe have started gathering information on what may be the largely overlooked sign of COVID-19 (7).

It was reported that some skin problems were associated with the use of personal protective equipment (PPE) and some personal hygiene measures. The epidermal barrier breakdown, contact reactions, hyper-hydration effect of PPE, and friction, all of which may aggravate an existing skin disease (8). The most commonly affected skin sites were the nasal bridge (due to the use of protective goggles), hands, cheeks, and forehead. The use of protective hats, long-term use of protective gloves, exaggerated hand-washing with detergents or disinfectants, and prolonged contact with masks and goggles may cause a variety of cutaneous diseases (8). Wearing the mask for prolonged periods may result in ear pain or ear fatigue because the elastic loops attached to the masks can rub the ears and the skin. Nevertheless the dermatologists suggest using emollients, barrier creams, and moisturizers to avert skin complications caused by preventive measures during the COVID-19 crisis (8). The presence of rash on the skin may be a sign of COVID-19, but the clinicians should be aware until more is known regarding the presence of rash on the skin of COVID-19 patients.

## Footnotes

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