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Cutaneous manifestations in COVID-19: familial cluster of urticarial rash

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Coronavirus disease (COVID-19) is a new infectious disease that is rapidly spreading across the world. Many clinical manifestations of the virus have been described. and new symptoms are emerging, but only a few cases of skin manifestation have been described since the pandemic was announced by the World Health Organization in March.^{1,2}

Common clinical features of COVID-19 reported include fever, cough, myalgia, fatigue, headache, shortness of breath and diarrhoea.¹

Some reports have suggested that skin manifestations are present in up to 20.4% of patients with COVID-19. and reports suggest a wide range of skin conditions being related to the virus, including widespread urticaria, morbilliform rash, erythematous rash, chickenpox-like vesicles, purpuric rash, dusky acrocyanosis, dry gangrene, petechiae rash coexisting with thrombocytopenia, transient livedo reticularis and red papules on fingers resembling chilblains.^{2–5} Unfortunately, some of these reports do not have clinical pictures to show the relation between COVID-19 and the skin manifestations.

We report a family of five members living in the city of Monterrey, Mexico who tested positive for COVID-19, as a result of one of the members becoming infected during a trip to New York in February 2020. All five patients had anosmia, ageusia, chills and dizziness, and two of them had skin manifestations associated with COVID-19.

Patient 1 was a 50-year-old woman, and Patient 2 was a 20-year-old woman, who was the daughter of Patient 1. Both patients had a bilateral disseminated rash on the shoulders, elbows, knees and buttocks, characterized by erythematous annular and irregular weals on the skin that appeared suddenly and disappeared within < 24 h (Fig. 1). The rash appeared after the cough and fever appeared. Neither patient had any history of similar lesions, and no trigger factors other than the viral context were identified. No other clinical or laboratory examinations were positive.

A diagnosis of urticaria associated with COVID-19 was made. Both patients were treated with antihistamines and moisturizers, and 48 h after treatment was started the urticaria resolved.

Although urticarial rash is the most common skin manifestation described in COVID-19 infection, cases can be classified into two groups: those related to the virus and those associated with complications and management.5



Figure 1 Erythematous annular and irregular weals in two patients with COVID-19 infection: (a,b) Patient 1, a 50-year-old woman; (c,d) Patient 2, a 20-year-old woman, who was the daughter of Patient 1.

Further studies are required to elucidate the skin involvement in COVID-19. Histopathology of active exanthemas may be helpful in understanding the skin manifestations of COVID-19 infection.

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Comment on 'Clinical and histological characterization of vesicular COVID-19 rashes: a prospective study in a tertiary care hospital'. Pseudoherpetic Grover disease seems to occur in patients with COVID-19 infection

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We read with great interest the article by Fernandez-Nieto et al. showing histopathological pictures of one of the two biopsied cases from their series of 24 patients diagnosed of vesicular lesions related to COVID-19.1 They additionally performed a real-time PCR assay for SARS-CoV-2 that was negative in four tested cases.¹ Regarding their case using histopathological pictures, we agree with their description as we can observe acantholytic cells, some of them with dyskeratotic features or grouped without a clear moulding of nucleus, but reminiscent of the multinucleated giant cells typically observed in herpetic lesions, a picture that looks to our eyes, most likely to be a rare entity named pseudoherpetic Grover disease (GD),² first described as vesicular GD by Fernandez-Figueras et al.³

Pseudoherpetic GD is characterized clinically by asymptomatic or itchy papules, intermingled with crusts and isolated vesicles or pustules that mostly involve the trunk (Fig. 1), a picture that overlaps with the diffuse pattern of vesicular lesions related to COVID-19, described by Fernandez-Nieto et al.¹ Histopathologically, the main clues for the diagnosis of pseudoherpetic GD are the presence of intraepidermal vesicles, frequently filled with plasma, along with scarce groups of acantholytic cells, mostly located in the lateral parts of the vesicle. A dermal inflammatory infiltrate, which may contain neutrophils, can also be present (Fig. 2). In our series of pseudoherpetic GD, we did not find any viral inclusions, and immunostaining for herpesvirus and varicella were negative in all the cases.²

COVID-19 infection characteristically produces lymphopenia, and immunosuppression is a predisposing factor for both herpesvirus recurrence⁴ and development of pseudoherpetic GD.²