

described as a possible initial presentation of COVID-19 disease,<sup>3</sup> as well as acute haemorrhagic oedema of infancy associated with coronavirus NL63.<sup>4</sup>

We want to report one case of COVID-19 infection that presented with skin manifestations.

A 28-year-old woman with no previous medical history, initially presented with dry cough, nasal congestion, fatigue, myalgias and arthralgias without fever. She tested positive for coronavirus. As she was feeling well, self-isolation at home was recommended. Four days later, she presented with diarrhoea, ageusia and anosmia. During the following days, she started feeling better but with persistent dry cough, ageusia and anosmia. She only took paracetamol for the first 4 days and did not take any other drugs. Thirteen days after being tested (10 days after last dose of paracetamol), the patient started noticing pruritic lesions on both heels and sent us some photographs. Confluent erythematous-yellowish papules were observed in both heels (Fig. 1a-b), without any lesions on the rest of the skin. She denied wearing tight socks, shoes or any local pressure that could explain the distribution of the lesions. A treatment with local corticosteroids was advised. Despite this treatment, three days later, the lesions persisted and became erythematous plaques that were both hardened and pruritic (Fig. 2a-b). At this point, urticaria, urticarial vasculitis, idiopathic plantar hidradenitis and neutrophilic dermatosis were considered within the differential diagnosis. However, a biopsy was not performed.

Differing from Dr Recalcati's report,<sup>1</sup> the lesions we describe do not look like morbilliform rash, urticaria or chickenpox-like vesicles; they respect the trunk and are intensely pruritic. The case we report is a mild COVID-19 disease case with no history of drug intake for the last 10 days. The observed skin manifestations could be related with the COVID-19 viral infection or with the immune response. We think it is important to report cutaneous manifestations of this new infection that may help us to pay attention, better diagnose and understand the disease.

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## Viral exanthem in COVID-19, a clinical enigma with biological significance

Editor

Since December 2019, the COVID-19<sup>1</sup> has spread throughout the world at a staggering speed. As of 30 March 2020, the confirmed case number has reached 693 224 globally and the COVID-19 has claimed 33 106 lives.<sup>2</sup> Current researches emphasize on understanding of transmission patterns, severity, clinical features and risk factors for infection, but the data remain limited.

Common clinical features of COVID-19 reported include fever, cough, myalgia, fatigue, headache and diarrhoea.<sup>3</sup> It is not uncommon for viral infections to cause skin rashes, for example, measles, rubella and dengue fever all cause viral exanthems. However, the prevalence and pattern of cutaneous involvement with COVID-19 are unknown. Guan *et al.*<sup>4</sup> described 2 (0.2%) patients developed skin rash in the 1099 patients enrolled. However, the study did not describe the detailed skin manifestation, cutaneous symptoms, timing of the symptom onset or their criteria to diagnose the skin lesions and enrolment into the dataset. Since viral exanthem is not uncommon in viral infections, we were curious about skin manifestations in COVID-19. Meanwhile, we are keen to explore if there is a distinctive cutaneous feature that can help us differentiate coronavirus disease (COVID-19) from other viral infections.<sup>5</sup>

In Italy, COVID-19 has claimed over ten thousand lives, including more than 60 doctors. We honour the efforts of the physicians, nurses and healthcare workers in fighting this pandemic in Italy. In their busy clinical schedules, Recalcati *et al.*<sup>6</sup> in Italy elegantly reported the first large analysis on the skin manifestations of 148 COVID-19 positive patients in Lecco Hospital. After excluding 60 patients who recently had new drug intake, the authors unveiled a range of cutaneous manifestations including erythematous rash, widespread urticaria and chickenpox-like vesicles in 20.4% of all the remaining patients. The report brought up a couple of questions that we would like to

investigate further. First, the analysis did not include patients with similar clinical symptoms, i.e. cough or fever, but were tested negative. Since COVID-19 negative patients, likely with other viral infections, may also have similar skin manifestation as COVID-19 positive patients do, the difference in the prevalence and morphology of skin rash between COVID-19 positive and negative patients warrants comparisons. This would address whether the skin rashes of the three patterns described in the study (erythematous, urticarial and varicelliform) are specific to the COVID-19. Second, it is crucial to measure the viral load in different time points before, during and after the skin rashes in future studies. Viraemia and the skin exanthem may have different time kinetics in different viral infections. For example, viraemia of the measles peaks at the onset of skin rash,<sup>7</sup> whereas viraemia of the parvovirus B19 ends before the onset of skin rash.<sup>8</sup> Hence, the dynamic viral load and its reference to skin rash can become a vital clinical clue for the clinicians to determine the optimal timing (before, during or after the skin rash) to collect the samples for molecular identification.

As we have observed the heavy burden of triage and shortage of essential medical goods posed by the outspread of COVID-19, the introduction of an easy clinical assessment tool like classic COVID-19 skin manifestation is a novel path to cope with the challenge that we are facing during the pandemic. However, this will take more studies to build up the validity and reliability. Dermatology's outlook in the COVID-19 is multidimensional, starting from the pathogenesis, public health issues to applying new technologies in clinical practice, the opportunities are infinite. Most importantly, we dermatologists as part of the medical community should contribute our unique perspective in the battle against this formidable pandemic.

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Commentary to S. Recalcati, Cutaneous manifestations in COVID-19: a first perspective. *J. Eur. Acad. Dermatol. Venereol.* 10.1111/jdv.16387 (2020).

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## Comment on: Cutaneous manifestations in COVID-19: a first perspective. Safety concerns of clinical images and skin biopsies

Dear Editor

We have read with great interest the article: Cutaneous manifestations in COVID-19: a first perspective by Recalcati S.<sup>1</sup> This article is the first report of the cutaneous manifestations in Coronavirus Disease 2019 (COVID-19) patients during the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) pandemic in Lombardy, Italy. From a total of 88 included patients that were evaluated by dermatologists, 18 developed skin involvement, namely erythematous rash ( $n = 14$ ), widespread urticaria ( $n = 3$ ) and chickenpox-like vesicles ( $n = 1$ ). However, no clinical images are available in the article because of the risk involved in infecting other people.

We would like to report our current experience in the Ramon y Cajal Hospital, Madrid, Spain. As it occurred in Italy, dermatologists are currently involved in the first line due to staff shortages.<sup>2</sup> Because of the elevated number of COVID-19 inpatients in our hospital, a 'MACRO-COVID' unit was created on March 18, three days after a state of emergency was declared. Every medical and surgical specialty was integrated in this unit to provide assistance in the medical wards, overcrowded with COVID-19 patients.

To evaluate skin alterations in COVID-19 inpatients, we are currently performing a simple and easily reproducible method. Dermatologists and non-dermatologists who are in charge of patients with COVID-19 and skin signs, are using zip lock transparent bags to transport their mobile phones or other photographic devices (Fig. 1). These disposable bags are made of low-density polyethylene, allowing high-quality pictures through their transparent material and permitting glove interaction with current smartphones. After the evaluation, these sealed bags are dipped in a container with a 70% ethanol solution,<sup>3</sup> thus being completely disinfected. This is a safe method to avoid unnecessary visits,<sup>4</sup> attempting to reduce person-to-person spread.

We are also performing biopsies in these patients when indicated. The same plastic bags are used to introduce disposable