

Histological pattern in COVID-19-induced viral rash

Dear editor,

As stated by Estébanez *et al.*,¹ incidence of dermatological affection in COVID-19 patients may be different than reported until now.

Data and evidences are building up every day, and we wanted to add a contribution describing the case of a 67-year-old patient, Caucasian, with moderate obesity, a history of alcoholism and various chronic morbidities. No drug allergy was referred. She was sent to ER due to progressive dyspnoea and fever: after RT-PCR resulted positive to SARS-CoV-2, she was admitted to hospital and then intubated a week later due to worsening of the respiratory condition.

Therapy included hydroxychloroquine, omeprazole, piperacillin/tazobactam and remdesivir, all interrupted after two weeks. She continued assuming potassium canrenoate and enoxaparine 4000 I.U. twice a day.

A month later, while respiratory function improved but pharyngeal swab was still positive to the virus, an erythema associated with fever's recurrence (38.0°C) appeared.

At physical examination, we observed a moderately itching erythematous confluent rash, with undefined margins, bleaching, mostly located at the neck, trunk, back and proximal portions of upper and lower limbs (Fig. 1). The palmoplantar skin, face and mucous membranes were spared.

Due to its resembling a classical viral exanthema, a punch biopsy for histological examination was obtained from the patient's abdomen. Haematoxylin–eosin-stained tissue specimens showed slight superficial perivascular lymphocytic infiltrate, extremely dilated vessel in the papillary and mid dermis (Fig. 2). A week after the rash onset, our patient was newly tested through SARS-CoV-2 pharyngeal swab, resulted negative. Fever and rash were disappeared.

Many non-respiratory signs and symptoms related to COVID-19 have been reported recently. In the work by Guan *et al.*,² a large number of clinical manifestations and their incidence associated with RT-PCR-positive patients were described, but out of 1099 subjects, only two showed some kind of unspecified cutaneous reaction. Specifically referring to skin reactions related to COVID-19, one of the most recent papers published by Recalcati *et al.* describes the presence of various cutaneous affections in 18 out of 88 patients. Of these, 14 (15.9% of the total) reported having an erythematous type affection, three urticarial (3.4%) and one (1.13%) chickenpox-like.³ To date, indexed on MEDLINE, another two authors have reported an erythematous rash,^{4,5} one a skin reaction with petechiae⁶ and one with urticarial lesions⁷ in COVID-19 affected patients, all of them presented as onset symptoms, even though clinical images were supplied only in one case.

In our case, the clinical skin manifestation appeared after hospitalization, as described in some cases by Recalcati *et al.*³ First cases of COVID-19 arrived in our hospital at the beginning of March and from then more than 360 bed sites have been reserved for this specific patient, but until now this is the only



Figure 1 Detail of confluent exanthema on right thigh.

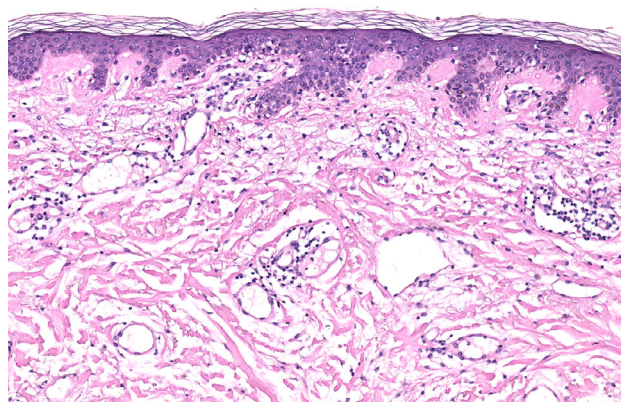






Figure 2 Superficial perivascular lymphocytic infiltrate, dilated vessel in the papillary and mid-dermis. Focal spongiosis, lymphocytes along the dermoepidermal junction and vacuolar alteration were present. Cornified layer was spared. H&E 10×.

one case associated with a cutaneous exanthema that we could observe. Our report focuses on a COVID-19-related rash description and is supported by clinical images and histopathological examinations. Histological examination did not show any particular signs that can make this affection different from other rashes of viral aetiology except for extremely dilated vessels in the dermis which could represent a histological diagnostic finding⁸. It should be kept in mind that skin manifestations associated with this virus could present in any form and at any time during the natural history of the disease and we have no data demonstrating a direct correlation with the prognosis of this illness. More studies of the physiopathology of the SARS-CoV-2 action are needed, above all regarding its interaction with endothelial cells in small vessels sites and its possible prognostic role.

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Hand disinfection in the combat against COVID-19

Dear Editor,

The World Health Organization (WHO) has declared a global health emergency over a new coronavirus. The new coronavirus (SARS-CoV-2) has raised global attention with raising concerns of rapid spread from human-to-human. Like severe acute respiratory syndrome (SARS)-nCoV, 2019-nCoV can be passed directly from person to person by respiratory droplets and may also be transmitted through contact and fomites.¹

Currently, there is no vaccine or specific therapeutic option against the new virus. Hygienic hand antisepsis is one of the most important measures in preventing healthcare- and outbreak-associated viral infections. Hence, there is an emergency in identifying efficacious antiviral agents to combat the disease.²

Appropriate measures to decrease the risk of transmission from infected person to the patients, visitors and healthcare workers include hand hygiene. Appropriate care is to be considered for higher risk patients with chronic lung disease, diabetes and renal failure, as well as immunocompromised patients. WHO formulations I and II (two alcohol-based hand rubs) or povidone-iodine (PVP-I) are highly effective against the enveloped coronaviruses (Table 1), as well as other antiseptic agents.³ If alcohol-based hand rubs (gel or foam) or povidone-iodine are not available, ethanol 70% solution may be used. These are all available as commercial solutions – however, the correct use is crucial and has received insufficient investigation.

The accessibility of the WHO/PVP-I formulations as well as their correct use is therefore likely to be of significant benefit for human health on a global scale, particularly in the developing countries.³ Repeated hand disinfection must be paired with simple handwashing. This has been shown to be of even increased

Table 1 Hand disinfectants

Type of antiseptic	Inactivates
Iodine	<ul style="list-style-type: none"> Bacteria Bacterial spores Enveloped viruses Non-enveloped viruses
Ethanol	<ul style="list-style-type: none"> Bacteria Enveloped viruses Non-enveloped viruses ‘variable’
Phenolic	<ul style="list-style-type: none"> Bacteria Enveloped viruses Non-enveloped viruses ‘variable’
Chlorine	<ul style="list-style-type: none"> Bacteria Bacterial spores ‘variable’ Enveloped viruses Non-enveloped viruses
Quaternary ammonium	<ul style="list-style-type: none"> Bacteria Bacterial spores