Late onset of acral necrosis after SARS-CoV-2 infection resolution

Editor

The presence of a worldwide outbreak of chilblain-like lesions (CLL) contemporarily to COVID-19 pandemic has been largely reported, not only on social media, but also in the literature.[1-4]

SARS-CoV-2 has been hypothesized as the aetiologic agent of CLL, on the basis of the temporal correlation between the 'burst' of skin manifestations and the viral pandemic, even though we have scarce evidence of swab-confirmed infections. Authors have therefore suggested some pathogenetic mechanisms such as a delayed immune-mediated reaction to the virus in genetically predisposed patients[1] or an early IFN-I response in young patients, muting early viral replication but also inducing microangiopathic changes.[2]

The dermatologic community is currently focusing on the paediatric population,[1] having observed acute acral areas of erythema-oedema in asymptomatic or mildly symptomatic young patients[4] and is speculating on clinical implications. On the contrary acral, true ischaemic lesions have been described in COVID-19 as a consequence of clotting disorders, but only in severely affected patients, hospitalized in intensive care units.[4-6]

We would like to report a case of SARS-CoV-2-related acro-ischaemia, peculiar for several reasons: i) the patient presented real acral ischaemia that progressed towards necrosis; ii) she was otherwise completely asymptomatic; iii) she was on regular medication with warfarin for atrial fibrillation.

A 74-year-old female was referred to our emergency service because of the presence of livedoid macules that had initially appeared on her hands 6 days before. She reported only pain, whilst she had no complaint referable to currently known COVID-19 symptomatology.

Her medical history included chronic venous leg ulcers, atrial fibrillation on regular medication with warfarin and a recent hospitalization due to congestive heart failure one month before. During this hospitalization, in accordance with the directives of the Regional Health Service, she was tested for SARS-CoV-2 even though she was completely asymptomatic, and resulted positive. She was later discharged and was tested twice at home, resulting negative both times; the last test was 20 days before our evaluation.

On examination, we observed blanching of fingers, dusky red macules, digital infarcts and an ischaemic necrosis of the left third fingertip (Fig. 1).

We requested power Doppler ultrasound examination and vascular surgery assessment, but the patient opted for discharge against medical advice. We contacted her by phone 6 days later, but she refused any further visits, claiming improvement.

The present case, to the best of our knowledge, is the first case of true acral necrosis in an asymptomatic SARS-CoV-2

Figure 1 SARS-CoV-2-related acro-ischaemia. (a, b, c, d, e) Blanching of fingers, dusky red macules, digital infarcts and an ischaemic necrosis of the left third fingertip.

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infected. This observation raises several questions and considerations.

Firstly, it would be important to determine the pathogenesis of vascular damage to understand why the patient developed acral necrosis 20 days after her second test had resulted negative (i.e. the patient could be considered healed). Our case seems to support the theory of a delayed immune-mediated reaction to the virus.[1]

Moreover, until now we have been used to observing benign acral lesions that progress towards complete recovery; therefore, it is important to determine whether the necrotic outcome is related to any risk factor such as the advanced age of the patient, a genetic predisposition or whether it could be related to her well-established venous impairment, the latter being less likely as we did not observe a worsening of the leg ulcers.

We would like to draw clinicians' attention to the possibility that acral lesions may also be observed in the elderly and that these could have a necrotic outcome.

Finally, we underline that, whilst necrosis is considered a primary lesion of COVID-19,[4,5] it can also present with a late onset, suggesting that a longer period of follow-up is needed also in the healed population to detect late complications.

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Conflicts of interest

The authors have no conflict of interest to disclose.

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Diversity of clinical appearance of cutaneous manifestations in the course of COVID-19

Dear Editor

The outbreak of COVID-19 has stricken more than 203 000 people in Italy up to 30th of April 2020, with over 27 000 died according to official estimates.[1] While Italy was one of the most affected countries in Europe, the impact of the disease in the southern part of the state was less dramatic than in the north, due to some still not understood reasons. Particularly in Sicily, 'only' 3140 cases have been recorded, of whom 533 encountered in the province of Messina.

Apart from the well-established signs and symptoms of the disease, the spectrum of possible cutaneous manifestations before, in the course of, or after SARS-CoV-2 infection is discussing.

We read with great interest the paper by Recalcati *et al.*[2] together with further clinical contributions on the JEADV.[3–5]

One hundred and twenty-five COVID-19 confirmed cases (by nasopharyngeal swab) have been referred to our COVID Hospital between 10 March 2020 and 26 April 2020. Taking advantage of the front-line involvement of a dermatologist in the medical team, we checked them for cutaneous manifestations and related anamnestic data, when available.

Among these patients, 109 were admitted in conventional hospitalization and 16 to the intensive care unit (ICU). There were 61 females (54.5%) and 51 males (45.5%), with a mean age of 71.9 years (range: 19–100 years). Twenty-three died during their stay, of whom five receiving continuous intensive medical support.

We collected a total of 13 associated cutaneous diseases (10.4%), represented by widespread urticarial eruption (two cases), panniculitis (three cases), erythematous rash (two cases), chilblains-like lesions (one case), two cases of acrocyanosis arisen in patients with leg thrombosis (one of them finally leads to amputation) and two cases of reactivation of oral herpes simplex.

Although three out of 13 cases (23%) were observed in ICU, skin involvement seems not to be related to the severity of the disease; in fact, two of them were HSV-1 reactivation that could be considered as relatively common in course of prolonged intubation during the first days of hospitalization. Besides, their general condition improved in the further weeks.

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