

Figure 2 Histologic findings of patient of Fig. 1. (a) Diffuse perivascular and periadnexal involvement of the dermis and hypodermis by a dense lymphoid infiltrate (H&E, 2,5×). (b) Thickening of the vessel wall and activation of the endothelium with nuclear enlargement (H&E, 20×).

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Chilblain-like lesions and COVID-19: second wave, second outbreak

Dear Editor,

During the first phase of European epidemic of COVID-19, a contemporary outbreak of chilblain-like lesions (CLL) has been reported.¹ After that, hundreds of similar cases have been described in the world. CLL typically appeared in young otherwise healthy patients with no proven SARS-CoV-2 infection, and most studies did not show positivity of PCR of serology. In



Figure 1 A 14-year-old with chilblain-like lesions of toes. Lesions presented 1 month prior. The patient was asymptomatic and otherwise healthy. Both serology and PCR were negative.

Italy, during the trimester March–April–May we experienced the majority of cases of COVID-19 and contemporarily of CLL.^{2–4} During summertime, a dramatic decrease of infected patients was observed, and in that context, CLL were not reported anymore. Unfortunately, a second wave of infections flooded Italy in September and Europe as well. With the fast increase of number of contagions, after a couple of months, novel cases of CLL have reappeared in Italy.

We have collected further 15 cases (Fig. 1) in different Italian regions. Patient's profile was the same as the first wave:

asymptomatic adolescent (mean age: 14 years) with history of contact with positive patients, but negative swab or serology. Also, morphology of the lesions appeared identical with CLL mostly occurring on the feet (rarely hands) with erythematous–oedematous or blistering lesions. Among these patients, one had a recurrence of CLL after lesions appeared in the first wave.

It seems obvious to think that if the second wave is accompanied by a second outbreak of CLL, the relationship is certain. Actually, in most patients a direct or indirect presence of the



Figure 2 Blistering detachment on the plantar surface of first toe in the same patient.

infection has not been found.⁵ This is the first description of the second wave, and cases of CLL are probably expected to increase again.

The reason of this phenomenon is still unknown, but two different hypotheses could be advanced.

The first and most accepted one supports a relationship with SARS-CoV-2 infection, whose contact would induce in young patients a higher innate more than cell-mediated immune response with consequent fast clearance of antibodies and appearance of CLL.^{6–10} The second less likely hypothesis is due to immobility; indeed, in Italy the first outbreak was observed during the lockdown and the second outbreak is now occurring during the soft lockdown as well. Young guys are the most affected by these measures because they are not attending schools and spending most of their time sat down watching monitors or TV. The lack of mobility could create a decreased blood flow with consequent appearance of CLL. Although interesting, against this second hypothesis is that frostbite is not among the cutaneous signs observed in paraplegic or wheelchair-immobilized patients.

We would like to share these new data about the second outbreak and need to wait what is going to happen in the next future in order to understand whether the Italian CLL will be followed by the rest of Europe.

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Absence of SARS-CoV-2 RNA detection in tissue samples of COVID-19-related cutaneous lesions analyzed by real-time RT-PCR

Editor

Despite the increasing knowledge of COVID-19-related skin lesions, few studies have attempted to demonstrate the presence of the virus in skin lesions by real-time reverse transcriptase polymerase chain reaction (RT-PCR).^{1,2}

The objective of this research was to determine through RT-PCR whether SARS-CoV-2 was present in skin biopsies of patients with cutaneous manifestations related to COVID-19.

A single-centre case series study was performed. We included samples from skin biopsies of 14 patients with cutaneous manifestations related to COVID-19 between April and May 2020. The biopsies were processed embedded in paraffin in five patients, immersed in physiological saline (fresh) in three patients and both samples (paraffinated and fresh) in six patients. This implies that 20 biopsies (11 paraffinated and 9 fresh) were analysed. (Table 1).

Each specimen was sent for virological investigation to the Respiratory Virus and Influenza Unit of the National Microbiology Center (ISCIII, Madrid, Spain). The biopsies were processed within 24 h. RNA from the homogenized skin tissue of the