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Editorial

Dermatology and COVID-19: Much knowledge to date but still a lot to discover



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Since March 2020, more than 1500 articles relating to dermatology and COVID-19 have been published [1]. Our main goal was to determine whether COVID-19 was responsible for skin manifestations and to characterize them. Skin manifestations appear rare. Indeed, according prospective studies in which patients with proved COVID-19 were systematically examined, the mean rate of patients with skin involvement was 2% [2]. The different clinical presentations were described notably in two large retrospective series from Spain and North America, in respectively 375 and 682 patients with suspected or confirmed SARS-CoV-2 infection [3,4]. The most frequent cutaneous manifestations in Spanish patients were maculopapular eruptions (47%) followed by chilblains and urticaria (each 19%), vesicular eruption (9%), and livedo/necrosis (6%), whereas it was chilblains (62%) in the North American cohort, which is closer to the findings of Jacquin–Porretaz et al. reported in this issue [5]. The latter noted the cutaneous manifestations observed in 39 patients with suspected or confirmed COVID-19 prospectively included between April and July 2020 in a region in Eastern France. Chilblains were the most frequent finding seen in 49% of patients, followed by maculopapular rash (23%), and vesicular eruptions (16%).

Acral manifestations, mainly chilblains, are the topics that gave rise to the greatest number of publications. More than 2000 cases have been reported, taking into account only series including more than 10 patients [6].

Patients with manifestations other than chilblains had a mean age of between 40 and 50 years and overall, hospitalization for COVID-19 was required in one third of them. Patients presenting with chilblains were distinguished by their age (most often children or young adults), and absence of infectious signs or presence of only slight infectious signs.

Questions remain regarding the link between skin manifestations and SARS-CoV-2. Considering the different types of exanthema reported, no specific type as for measles or chickenpox for example seems to emerge for COVID-19. A link between different types of non-specific exanthema and the virus is thus more

difficult to establish. In addition, the retrospective designs of the largest studies often preclude the possibility of excluding differential diagnosis for the cutaneous manifestations observed such as adverse drug reactions regarding maculopapular exanthema. For a large proportion of reported patients with cutaneous manifestations possibly related to COVID-19, the diagnosis of COVID-19 remains unsure due to the lack of available laboratory tests to confirm diagnosis [3,4].

Chilblains in particular have led to much debate about association with COVID-19 because of the absence or mildness of infectious signs, as well as negative PCR and/or serological results in 90% of cases. One hypothesis put forward is a marked type I interferon response that could account for the occurrence of chilblains by analogy with those observed in type I interferonopathies as well as SARS-CoV-2 clearance before the occurrence of humoral immunity development [7]. Other authors have favoured the hypothesis of the role of inactivity during lockdown and a snowball effect following media announcements of a link between chilblains and COVID-19 [8].

In this issue, Hubiche et al. report an original approach to finding arguments in favour of the role of COVID-19 in chilblains. They reported the proportion of people with suspected COVID in the households of 103 children with chilblains occurring during the pandemic [9].

Another important question in daily practice was to determine whether patients treated for chronic inflammatory dermatoses using immunomodulating treatments are at higher risk of severe form of the disease. Data collected to date via international registries concerning systemic treatments for psoriasis are reassuring [10]. These data have led the European Dermatology Forum and the American Academy of Dermatology to advise against interrupting treatments except as a precautionary measure in the event of COVID infection. However, data for other immunosuppressants including rituximab in a registry of rheumatological diseases seems less reassuring [11]. Data collected so far concerns systemic treatments. In this issue, Souaid et al. raise the question of the risk associated with application of topical immunosuppressive treatments [12]. The team reported that neither the frequency of contamination nor the severity of the infection appeared to increase in patients treated for at least 4 weeks with topical corticosteroids and/or topical tacrolimus, either alone or in combination with systemic treatments.

Although the data concerning the specific risk of chronic inflammatory skin diseases or treatments are reassuring, the pandemic

has nevertheless had an impact on patients presenting chronic illnesses due to interruption of follow-up or cessation of treatment. In this issue, Beytout et al. report the results of an online survey of children with psoriasis showing self-declared worsening of dermatosis in half of the 91 children included, most often for reasons related to the pandemic [13]. Treatment discontinuation was reported in 18% of them.

Physicians, including dermatologists, are also impacted by the pandemic as highlighted by the survey conducted by Misery et al. reported in this issue [14]. The authors noted considerable impact on the professional practice and financial situation of physicians, as well on their psychological and personal life.

Never has such an amount of data has been accumulated in so short a period of time thanks to enormous international mobilization of the dermatological community. The 5 studies presented in this issue contribute to the effort. Unanswered questions and uncertainties remain; however, the pandemic is unfortunately not over. Since science is a dynamic process, more studies will be performed, and hopefully the knowledge already collected will enable better answers to be found to the remaining questions and allow uncertainties to be resolved.

Disclosure of interest

The author declares that he has no competing interest.

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