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COVID-19 vaccines and skin manifestations

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It has been a busy time for dermatologists, as SARS-CoV-2 has caused common and diversified skin reactions that may be the only sign of infection. Furthermore, skin changes and symptoms are also being seen after COVID-19 vaccinations. In this issue of the *BJD*, the multicentre study by Català *et al.*, which examines cutaneous side-effects of COVID-19 vaccines, demonstrates several novel features.[1] Firstly, this study shows that multicentre studies can be set up rapidly via the use of electronic case report forms (eCRFs) rather than old-fashioned paper entries. It is impressive that so many dermatologists from all over Spain participated in this study and broad questionnaires covered many potential associations. SARS-CoV-2 infections have already been associated with several distinct skin manifestations in reports published in large studies in Europe (https://covidskinsigns.com/).[2,3] Types of postvaccination skin reactions reported in the study by Català *et al.* are quite similar to those seen in patients who had COVID-19, apart from 'COVID arm', which is obviously a local reaction. The striking similarities are perhaps surprising, given that vaccines elicit an immune response to only a small part of the virus, which may have led to different skin reactions.

This study did not report 'COVID digits', which were not uncommon after SARS-CoV-2 infections. COVID digits are more likely to occur later, so they may not have been identified during a short follow-up. COVID digits may be discreet, unnoticed or may not necessitate a dermatology referral. Rashes reported by Català *et al.* are likely to be the most symptomatic of COVID-19.[1] The prevalence of skin reactions after vaccination in terms of frequency and severity was similar in patients who had previous skin reactions after SARS-CoV-2 infection compared with those who did not have previous skin reactions. Another important observation of this study was that vaccination could reactivate or worsen pre-existing skin diseases. The reactivation of varicella zoster virus was observed after both vaccination and SARS-CoV-2 infection, and the age of onset was noted to be younger, even involving paediatric cases.

The predominance of cases occurring in female patients is puzzling as, although the prevalence of skin reactions was slightly more common in women than men after SARS-CoV-2 infections, data in this study were mostly derived from women. This is likely to be caused by selection bias, as women are more likely to consult a dermatologist. Another new finding reported in this study, is that skin reactions either to the virus or the vaccine can occur a long time (sometimes months) after the infection or vaccine. At the beginning of the pandemic, there was some uncertainty about whether skin reactions were caused by the SARS-CoV-2 virus. However, with hindsight, it is now clear that COVID-19 is associated with frequent skin manifestations. What also remains a long-term issue for our specialty is long COVID involving the skin with urticaria, recurrent erythematopapular eruptions or COVID digits. These often debilitating skin reactions require dermatological input as they are not always recognized by the medical community and treatments used are often suboptimal. Dermatology-led studies during the COVID-19 pandemic have shown that successful collaborations can be established quickly, either nationwide or worldwide, using eCRFs and harnessing the fact that dermatologists are always eager to report and document skin manifestations. We are hopeful that this trend will continue.

V. Bataille [1] and S. Puig [2]

[1]*Twin Research and Genetic Epidemiology Unit, King's College London, London, UK and* [2]*Department of Dermatology, IDIBAPS, University of Barcelona, Barcelona, Spain*
Email: *bataille@doctors.org.uk*

Conflicts of interest: the authors declare they have no conflicts of interest.

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Mogamulizumab-associated rash (MAR) mars its efficacy in the treatment of cutaneous lymphoma

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Clinical research to establish highly evidence-based treatment practice for cutaneous T-cell lymphoma (CTCL), especially