



**Figure 1** (a) Blisters and erosions on the lower lip. (b) The buccal mucosa revealed acantholysis of suprabasal layer cells (haematoxylin and eosin; original magnification  $\times 100$ ). (c) Slit-lamp examination revealed impairment of the right sclera.

that his scleritis was attributable to a noninfectious pathogenesis.

Unlike the conjunctiva, which consists of nonkeratinizing stratified columnar epithelium and expresses Dsg3, sclera is not an epithelium. Because the sclera is essentially acellular, containing only a few fibroblasts and non-branching traversing vessels, it is not affected by anti-Dsg antibody. Scleritis is a type of refractory autoimmune or infectious inflammation, which is accompanied by conjunctival and surface or deeper scleral vascular

congestion.<sup>3</sup> Scleritis is often accompanied by systemic inflammatory diseases, such as rheumatoid arthritis, connective tissue disease and vasculitis. Although pathogenic mechanisms of scleritis associated with systemic diseases have been poorly understood, autoimmunity and scleral destruction by resident cells and infiltrating leucocytes or matrix metalloproteinases have been proposed.<sup>4,5</sup>

Fortunately, our patient's scleritis improved promptly without any sequelae, but, unlike conjunctivitis, exacerbation of scleritis can lead to visual disturbance. Consequently, dermatologists should be alert to scleritis in patients with PV with severe eye complications.

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## COVID-19 vaccination and patients with psoriasis under biologics: real-life evidence on safety and effectiveness from Italian vaccinated healthcare workers

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Dear Editor,

The COVID-19 outbreak has drastically modified the treatment of chronic inflammatory diseases such as

psoriasis, in terms of drug delivery, patient adherence and booking of consultations.<sup>1,2</sup> Furthermore, during lockdown, patients may have modified or even discontinued their antipsoriatic treatments due to misinformation, COVID phobia or even cabin fever syndrome, resulting in them experiencing a psoriatic flare and decreasing their overall daily functionality and quality of life.<sup>2</sup>

Owing to the differing methods across different studies, it is unknown whether patients with psoriasis have a higher risk of SARS-CoV-2 infection, or what might be the potential protective action of targeted therapy against the most severe COVID-19 clinical manifestations in such patients.<sup>3,4</sup> In Italy, three anti-COVID-19 vaccines are currently approved: two RNA-based vaccines and one viral vector-based vaccine (Table S1). During the initial vaccination campaign targeted at healthcare workers, some concerns were raised regarding patients with possible immunosuppression, because no data are currently available and all vaccine instructions delegate to clinicians the final decision to vaccinate such patients. Patients with psoriasis have a higher risk of respiratory comorbidities due to systemic inflammation,<sup>5</sup> high rates of smoking and use of antipsoriatic (both conventional and targeted) therapies.<sup>6</sup> However, the Italian National Psoriasis Foundation suggests that vaccines may play a pivotal role in protecting patients with psoriatic against SARS-CoV-2 infection and that these patients do not have to discontinue their prescribed antipsoriatic therapies.<sup>7</sup> Similarly, educational campaigns targeting the general population are essential to counteract vaccine-related misconceptions and to improve knowledge on COVID-19 vaccines.<sup>8</sup>

We present four cases of healthcare workers under treatment with biologics who received the Pfizer mRNA BNT162b2 (COMIRNATY) vaccine (owing to privacy/ethical restrictions, data are available on request only).

Patient 1 was a 58-year-old man with a 16-year history of psoriasis, a body mass index (BMI) of 28.4 kg/m<sup>2</sup> and concurrent hypertension. He had been undergoing treatment with the anti-interleukin-17 drug secukinumab since 2017, and had achieved a Psoriasis Area Severity Index (PASI) 100 and Dermatology Life Quality Index (DLQI) of 6, starting from a baseline of PASI 18 and DLQI 22. The patient received both doses of vaccine without experiencing any psoriatic flare or even a fluctuation in PASI. Notably, he did not modify his secukinumab maintenance scheme and received the drug 4 days before the first vaccine dose and 3 days after the second one.

Patient 2, a 67-year-old man with a BMI of 32.9 kg/m<sup>2</sup>, had concurrent diabetes and hypercholesterolaemia, treated with metformin and statins. The patient was started on ixekizumab in 2016, achieving PASI 100 after 4 months. He received the vaccine without experiencing any flare of

psoriasis. Interestingly, he experienced pain at the injection site for 3 days after the first vaccine dose, along with asthenia and headache; none of which appeared after the second dose administration. The patient did not discontinue his drug schedule and received ixekizumab 2 days before the first dose of vaccine and 5 days after the second one.

Patient 3 was a 28-year-old man with a BMI of 23.1 kg/m<sup>2</sup>, who had recently been started on risankizumab, achieving PASI 100 from a baseline of PASI 18. He reported pain at the injection site lasting for 2 days after both vaccination doses, without any psoriasis flare or even cutaneous manifestations. The patient did not discontinue or modify risankizumab maintenance phase and received doses of the biologic drug 15 days before the first vaccine dose and 20 days after the second one.

Patient 4 was a 34-year-old woman with a BMI of 22.5 kg/m<sup>2</sup> and a 6-year history of psoriasis, who had been started on secukinumab after ciclosporin failed. From a baseline of PASI 11 and DLQI 23, she achieved PASI 2 and DLQI 6 in 16 weeks, and these results did not change with the COVID-19 vaccination. She reported pain at the vaccine injection sites, lasting for 3 days with both doses, without any vaccine-related cutaneous manifestation or any psoriasis flare. Secukinumab was not discontinued and she received the drug 12 days before the first vaccine dose and 4 days before the second one.

All patients developed anti-S1-receptor binding domain IgG against SARS-CoV-2 and consequently the vaccination was effective.

The four cases described seem to suggest that the COVID-19 RNA-based vaccine is safe and effective for patients with psoriasis undergoing target therapies (immunosuppressants) and it does not trigger psoriasis flares. Although these preliminary results are encouraging, they need to be validated in a larger patient cohort and also in patients undergoing treatment with small molecules (apremilast and fumaric acid) and conventional therapies (acitretin, methotrexate and ciclosporin). Obtaining real-life data about vaccine effectiveness in patients undergoing combination therapies is essential, and may assist in identifying the need for any possible dose modifications to the vaccine based on the minimal erythematous dose.

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## Supporting Information

Additional Supporting Information may be found in the online version of this article:

**Table S1.** Position statements on use in immunosuppressed patients of vaccines approved in Italy.v

## Characterization of nail changes in alopecia areata using 33-MHz ultrasonography

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Linked article: Yesudian PD, de Berker DAR. *Clin Exp Dermatol* 2021; **46**: 16–20.

Dear Editor,

We read with great interest the recent article in *Clinical and Experimental Dermatology* by Yesudian and de Berker,<sup>1</sup> describing the differences between nail changes in lichen planus and alopecia areata (AA). We would like to share our experience using high-frequency ultrasonography (HFUS) with a 33-MHz transducer for the examination of the nail plates and bed, as a complementary method to physical examination and dermatoscopy.

A 12-year-old boy presented at our dermatology service with a 4-year history of trachyonychia and pitting (Fig. 1) in the nails. HFUS was performed with a 33-MHz transducer. Using the B-mode image, we found loss of differentiation of the dorsal and ventral plates, koilonychia, onychorrhexis, and focal thickening of the nail plate layers (Fig. 2b).

A diagnosis of AA was made based on clinical characteristics and confirmed by histopathological analysis.

AA is an inflammatory disease mediated by T lymphocytes<sup>2</sup> and characterized by nonscarring hair loss.<sup>3</sup> Approximately 30% of patients have nail changes, and the most severe forms of the disease are related to nail



**Figure 1** Hand of the 12-year-old patient with alopecia areata.