

LETTER

Lichen Ruber Planus occurring after SARS-CoV-2 vaccination

Dear Editor,

An otherwise healthy 49-year-old Italian man presented to our clinic for a cutaneous, pruriginous eruption on his trunk and limbs. The signs appeared 11 days after receiving the second dose of SARS-CoV-2 Adenoviral vector Vaxevria (Astrazeneca) vaccine.

He did not report any additional symptoms. The past medical history is silent, and he has not taken drugs in chronic nor in a discontinuous manner in the last year.

When examined, the patient presented erythematous papules on the upper and lower limbs, while on the feet formed small plaques with a keratotic centre. No other lesions were found on oral and genital mucosa (Figure 1A and B). The rash started with an intense itch, reported on a numeric scale of 7/10.¹ A thorough examination with Dermoscopy showed the presence of thin keratotic stripes, also called *Whickam striae* (Figure 1C).

Clinical and dermoscopic signs, together with the histological examination of a 5-mm punch biopsy taken from the right arm, led to the eruptive Lichen Planus (LP) diagnosis. Subsequential blood tests were unremarkable, showing no signs of viral hepatitis or possible autoimmune-related disease as thyroiditis, autoimmune gastritis or antinuclear antibodies positivity (ANA).

We started therapy with topical steroids and systemic antihistamines. After 1 month, the lesions had virtually disappeared, showing only mild erythema and complete remission of the itch.

The clinical signs and the intense itching related to other cases reported in literature²⁻⁴ and the temporal association with the vaccine

administration led us to diagnose “Eruptive Lichen Ruber Planus”, according to Naranjo Scale.⁵

Numerous skin reactions have been described as elicited by SARS-COV-2 and its vaccines, and most of these are considered self-limiting. Still, others are caused by an autoimmune substrate, leading to chronic skin diseases. Among the possible conditions are described psoriasis,⁶ cutaneous lupus erythematosus and LP. LP is a T cell-mediated chronic inflammatory tissue reaction that results in a cytotoxic response against basal epithelial cells of the skin.⁷

The onset of LP after vaccination in our patient may have multiple pathogenetic mechanisms. Among these, we believe that T-cells play an essential role in the immune response against the cells of the basal layer of the skin in predisposed patients due to the increase in circulating pro-inflammatory cytokines induced by the vaccine response.⁸ Another mechanism may be reconducted to ACE-2 receptors in the skin.⁹ Spike proteins generated by the vaccine may link to the cutaneous cells presenting this receptor and start an immune response by recruiting CD4+ lymphocytes, eventually causing LP in predisposed subjects.

While considering that any inflammatory stimulus, such as vaccinations, can act as a potential trigger of autoimmune disease, such LP in predisposed subjects, data currently do not contraindicate future Anti-Sars-Cov2 vaccinations of any type in this kind of patients.

We conclude with a reminder for dermatologists and practitioners to continue investigating any onset of clinical signs

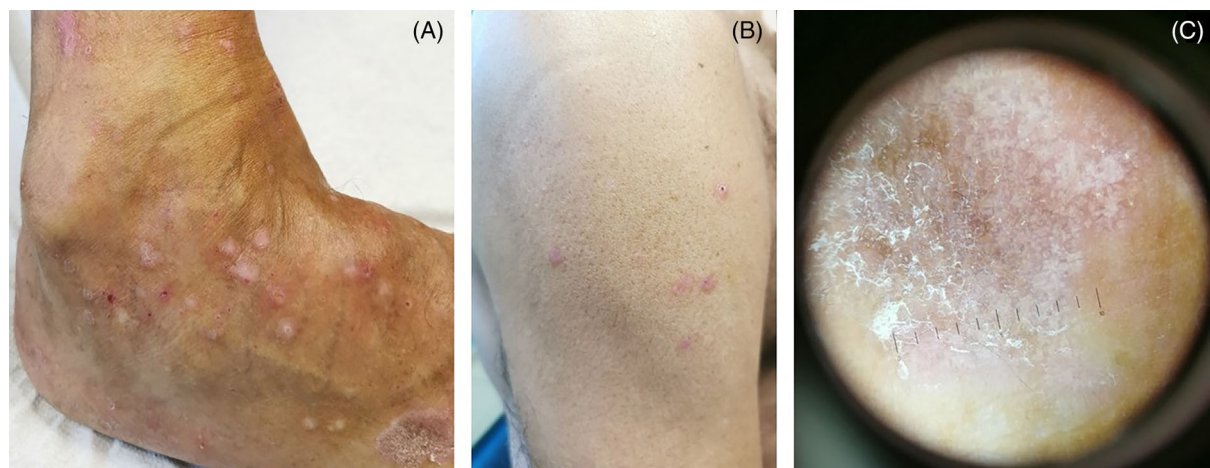


FIGURE 1 (A) detail of the Lichen of the right foot; (B) Papules of the right arm; (C) *Whickam striae*, characteristics of lichen planus, observed at Dermoscopy

concerning the administration of vaccines during vaccination campaigns.

CONFLICT OF INTEREST

The authors have no conflict of interest to declare.

INFORMED CONSENT

The patients in this manuscript have given written informed consent to the publication of their case details.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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