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LETTER

New-onset psoriasis after Comirnaty (BNT162b2, BioNTech/Pfizer) vaccine successfully treated with ixekizumab

Dear Editor,

The management of chronic inflammatory conditions, including psoriasis, changed drastically during Coronavirus disease 2019 (COVID-19) pandemic.[1] Problems with drugs availability and irregular consultations with dermatologist induced exacerbations of new or pre-existing dermatoses in many patients. Moreover, the global health emergency triggered insecurity about the use of novel treatment modalities. COVID-19 vaccines have been rapidly widespread worldwide. New-onset or exacerbations of psoriasis following vaccination are uncommon but have been described for some vaccines (influenza and tetanus-diphtheria).[2] The reported cases of post-vaccinal psoriasis occur closely after vaccination and are generally limited or mild forms.[2] Usually, if developed after Covid-19 vaccine, psoriasis may appear secondary to the transitory activation of inflammatory pathways by mRNA COVID-19 and is well-responsive to topical steroids or phototherapy UVB narrow-band.[3] There are few reports about patients treated with biologics, for example, patients with new onset or flares of psoriasis after messenger RNA (mRNA)-1273 vaccine or patients with post-vaccine generalized pustular psoriasis (GPP) after m-RNA BNT162b2 vaccine treated with anti-InterLeukin (IL)-23.[4–6] Here, we present a case of a new-onset psoriasis developed after BNT162b2 vaccine successfully treated with ixekizumab. An 82-year-old woman came to our Emergency Department in May 2021 for erythematous-desquamative plaques on upper and lower limbs developed 7 days after first dose of vaccine. She started therapy with bethemetason/calcipotriol foam with complete recover. After the second dose, in June 2021, psoriasis flared all over skin surface, reaching PASI 17 (Figure 1A,B). Past medical history revealed high blood pressure and anemia. Patient denied any other drug assumption in the 30 days before vaccination. To exclude a drug reaction after vaccination, we performed a punch biopsy for histopathological examination so confirming our hypothesis of psoriasis. In relation to the patients' features and to the extension of disease, we excluded therapy with conventional Disease Modifying AntiRheumatic Drugs (cDMARDs) and started therapy with adalimumab biosimilar at loading dose. After 3 months of therapy, PASI was only minimally reduced, so we decided to stop adalimumab and to start ixekizumab at loading dose. After 8 weeks from the first dose, patient was infected by Sars-Cov-2 virus, but she developed only low fever and mild respiratory symptoms with complete recover in 7 days. No interruption of ixekizumab was performed. After 3 months of therapy, patient reached PASI 0, with no relapse of psoriasis (Figure 1C,D). Psoriasis is a T-helper (Th)-1 and 17 immune disease where the dysregulation of Th-1 and Th-17 responses play a key role in the pathogenesis. Ixekizumab (IL-17A inhibitor) is a monoclonal antibody (mAb) licensed for use in moderate to severe plaque psoriasis and psoriatic arthritis. Therapy with mAbs does not increase risk of COVID-19 infection or its complications in patients with psoriasis. It is known that many drugs or vaccines can be associated with the psoriasis flare-up.[5,7,8] The most common cutaneous adverse effects reported after COVID-19 vaccination include local injection-site reactions, delayed large local reactions, urticarial eruptions, morbilliform reactions, herpes zoster, herpes simplex flares, and pityriasis rosea-like reactions.[7] Currently, there is no well-understood pathologic mechanism for new-onset or flares of psoriasis following vaccination. It can be supposed that, as already reported for tetanus-diphtheria vaccine, mRNA COVID vaccines induce elevation of interleukin 6 and Th17 cells, which can contribute to the onset or flare of psoriasis.[9] In our case report, ixekizumab proved to be effective and well-tolerated for the treatment of psoriasis after mRNA COVID-19 vaccine with rapid action and no adverse effects in short-term follow-up. In our patient, no problems were described even during Sars-Cov-2 infection. Further studies are needed to identify new recommended strategies to better manage these patients.

AUTHOR CONTRIBUTIONS

Giulio Cortonesi and Emanuele Trovato have given substantial contributions to the conception or the design of the manuscript. All authors have participated to drafting the manuscript. Pietro Rubegni revised it critically.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

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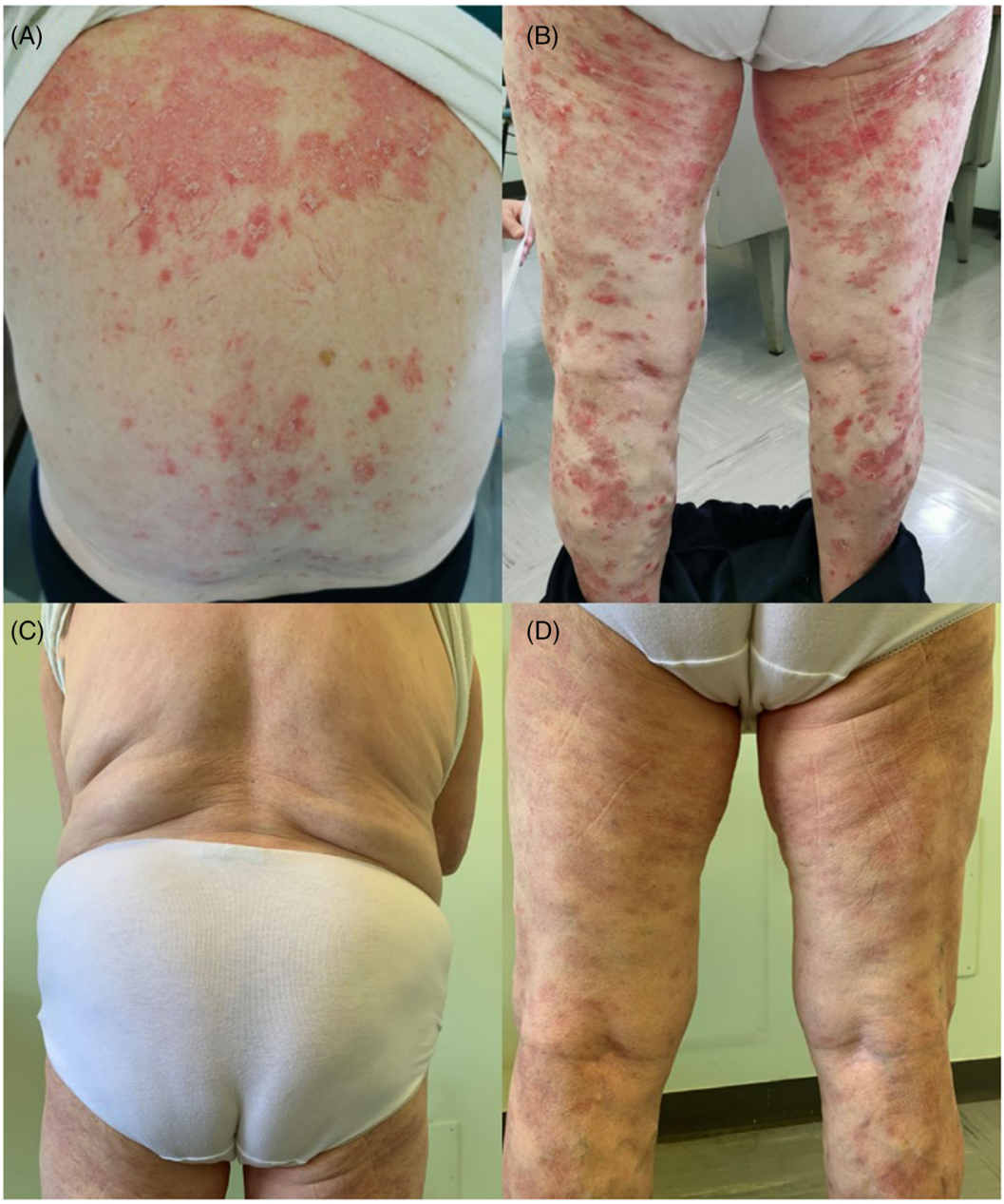

FIGURE 1 Patient after second dose of Comirnaty (BNT162b2, BioNTech/Pfizer) vaccine (A and B) and after 3 months of therapy with ixekizumab (C and D)

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