Received: 25 October 2020 | Revised: 17 January 2021 | Accepted: 5 February 2021

DOI: 10.1111/dth.14865

DERMATOLOGIC THERAPY WILEY

LETTER

A case of erythrodermic psoriasis in which adalimumab injection sites are preserved

Dear Editor,

Erythrodermic psoriasis is characterized by generalized erythema and scaling, and it usually develops from preceding plaque psoriasis after infections or discontinue of steroids but may arise de novo. Lately, biologic agents are increasingly used in severe psoriasis cases, in addition to conventional therapies. Currently, three types of biologics are approved for treatment of psoriasis: (a) monoclonal antibodies, (b) recombinant human cytokines, and (c) fusion proteins, this agents have FDA approval in psoriasis vulgaris and psoriatic arthritis. Data for their usage in erythrodermic psoriasis and rare subtypes of psoriasis are limited, yet their success had been proved in a limited number of case reports. Although, it is also shown that biologics can cause paradoxical psoriasis and exacerbation of psoriasis in recent years. Lately, there are few reports about the treatment of erythrodermic psoriasis with biological agents.[1-4] Herein, we present the case of erythrodermic psoriasis sparing adalimumab injection sites.

Thirty-one year old Caucasian male patient with 16 years of psoriasis history was admitted to our clinic with severe erythroderma and desquamation. His past treatments included cylosporin (between 2011 and 2012 for 3 or 4 months and in 2014 irregularly as whenever he needs), methotrexate (irregular), and phototherapy (about 20 sessions). He had started adalimumab therapy with 80 mg initial dose and 1 week after initial dose 40 mg for fortnightly, in another clinic while his PASI score were 17.6, and dose were upgraded to 40 mg weekly following eight injection. He presented to our clinic after in October 2019, six injections of adalimumab 40 mg/week, with erythema and desquamation involving 80% of body surface area (BSA; Figure 1 A,B), his PASI score were 38. In examination there were two well demarcated circular areas of sparing over the abdomen and thighs, which corresponded to the subcutaneous injection sites. The patient did not have any prior injection site reactions or difference in the topical treatment between affected and unaffected sites. His adalimumab treatment ceased and methotrexate 20 mg/week subcutaneous injection treatment had started. But due to his liver dysfunction, (ALT:126 IU/L,AST:49 IU/L,GGT:180 IU/L), methotrexate discontinued after 12 weeks. Treatment with secukinumab 300 mg by subcutaneous injection at Weeks 0, 1, 2, 3, and 4, followed by 300 mg every 4 weeks led to achieve almost complete remission (PASI75) after 12 weeks(Figure 2A,B). After 1 year follow-up, our patient is in complete remission with secukinumab treatment.

Intralesional therapy may be used to treat several localized neoplastic, infectious, fibrosing, or inflammatory cutaneous diseases. For this aim, corticosteroids, methotrexate, cyclosporine, biologics, botulinum toxin type-A,15-hydroxyeicoatetraenoicacid, and several chemotherapy agents such as 5-fluorouracil may be used intralesionally to localized resistant plaques of psoriasis.[5] Therefore, we have been able to find two studies on this clinical sign.[6,7] Despite the lack of direct evidence, the preservation of injection sites may result from higher drug concentrations at the injection sites and longer local effects than expected.[6] The combination of prolonged retention of drugs, low redisturbions, and insufficient systemic drug concentration can cause an intralesional injection-like

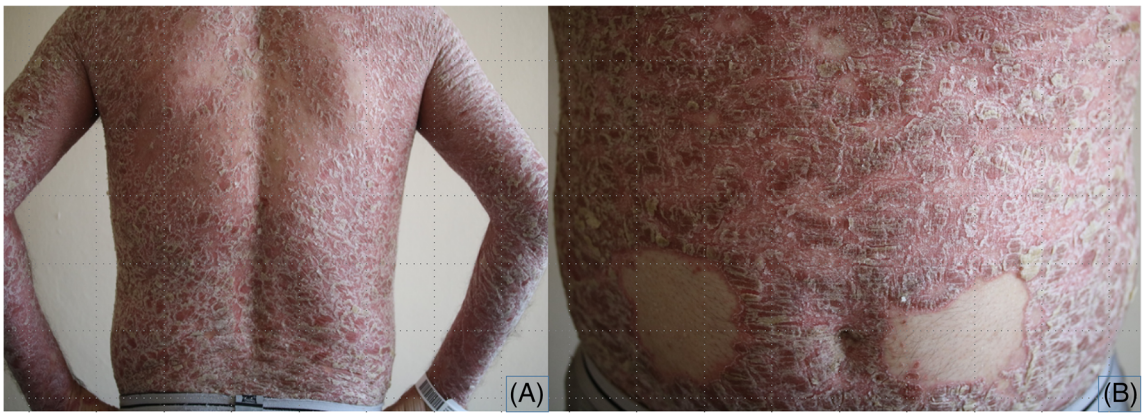

FIGURE 1 A,B, Erythrodermic psoriasis patient and sparing injection areas on the abdominal area

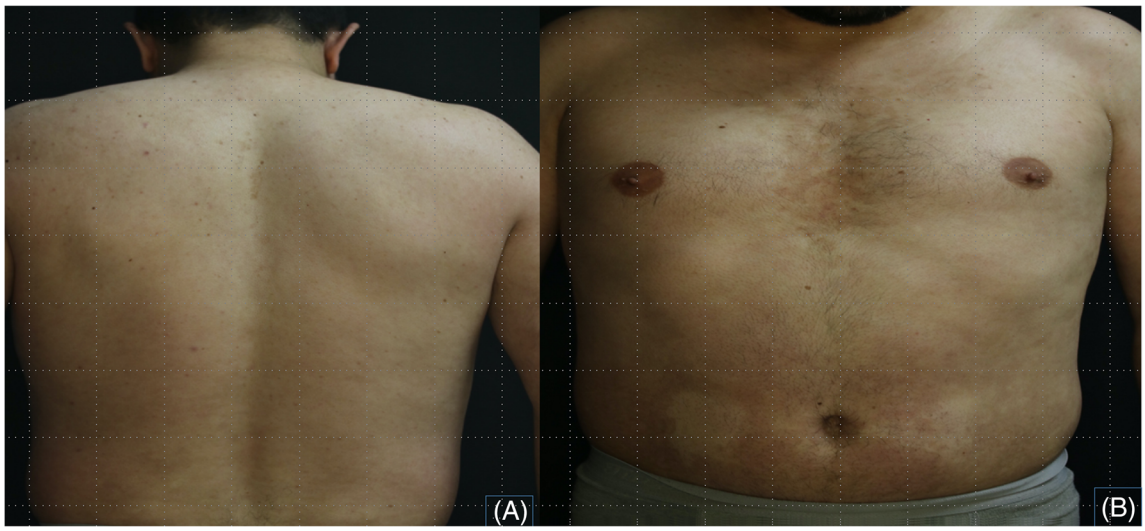

FIGURE 2 A,B, After secukinumab therapy, his lesions completely disappeared, and he reached PASI 100

effect.[6] The lipophilic nature of adalimumab may allow higher concentrations in the subcutaneous adipose tissue on the application sites. This may explain the preservation of injected areas despite the erythrodermic response in the remaining parts of the body and the different responses seen in the injection areas and the rest of the body.[7] We report this case to highlight this unusual observation in order to elucidate its exact mechanisms.

We certify that we have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understands that his name and initials will not be published and due efforts will be made to conceal his identity, but anonymity cannot be guaranteed.

CONFLICT OF INTEREST

The authors have no conflicts of interest.

AUTHOR CONTRIBUTIONS

Conception and design of study: İlknur Ozcan, Ayse Serap Karadag; acquisition of data: İlknur Ozcan, Ayse Serap Karadag, Eylem Ceren, Filiz Cebeci, Buşra Demirci; analysis and/or interpretation of data: İlknur Ozcan, Ayse Serap Karadag.

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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