Psoriasis Induced by Anti-Tumor Necrosis Factor Therapy: A Class Effect?

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Selective inhibition of tumor necrosis factor-α (TNF-α) leads to a dramatic reduction of signs and symptoms in patients with rheumatoid arthritis (RA). Several investigators have recently reported psoriasis induced by TNF-α blockade[1-5] but the mechanism involved is still elusive. We describe a patient with RA who experienced development of diffuse psoriatic lesions following therapy with both infliximab and etanercept. Negative patch tests argued in

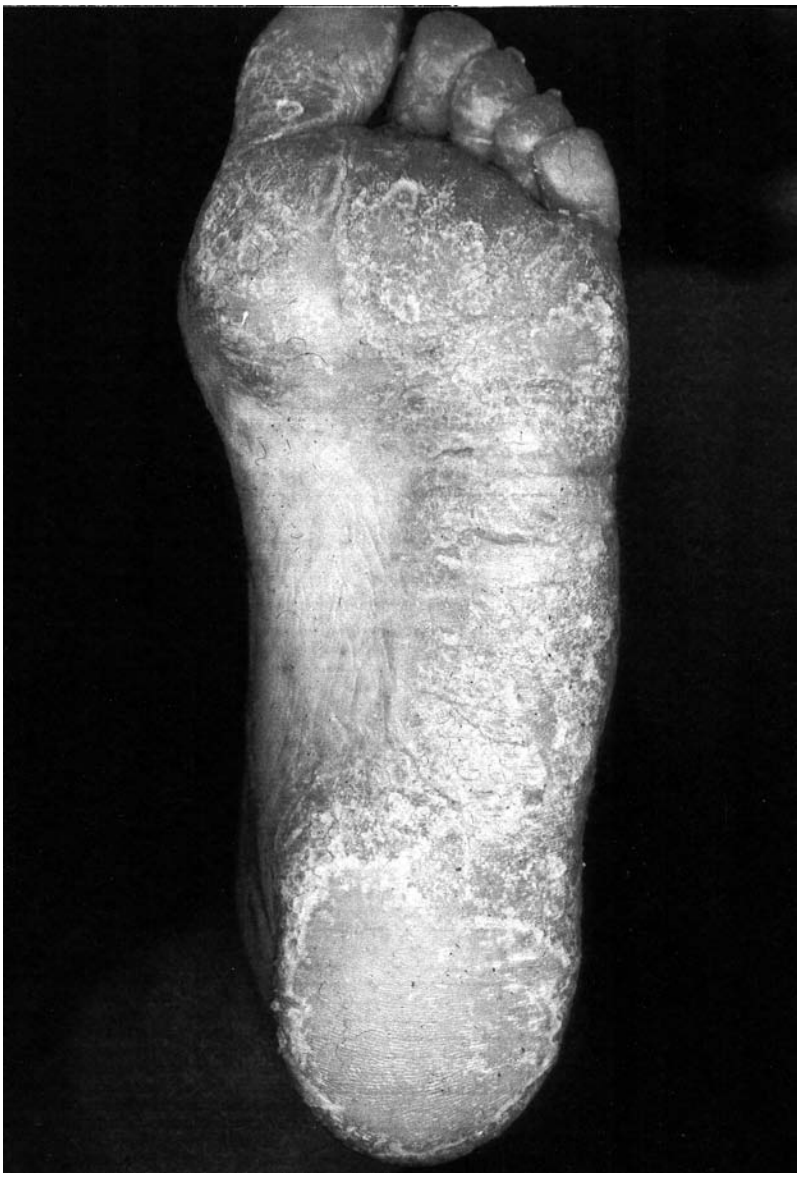

Figure 1. Erythematous papulopustular lesions of the patient's soles.

favor of an anti-TNF-α class effect. Our patient, a 37-year-old woman, had a 14-year history of severe erosive seropositive RA refractory to numerous disease modifying antirheumatic drugs. She had no personal or family history of psoriasis and was negative for HLA-B27 testing. Treatment with infliximab (3 mg/kg) and methotrexate (12.5 mg weekly) produced a dramatic improvement of joint pain and synovitis within 1 month. Four weeks after the onset of infliximab therapy, she gradually developed erythematous papulopustular lesions of the soles (Figure 1) associated with pruriginous guttate skin lesions on the trunk and limbs. A skin biopsy of a lesion revealed histological findings consistent with psoriasis, showing epidermal acanthosis and parakeratosis without keratinocytic alterations, and a moderate lymphocytic infiltrate of the dermis. There was no evidence of eosinophils or any feature of vasculitis. Immunofluorescence analysis of a lesional skin biopsy showed a nonspecific C3 subepidermis continuous linear deposit.

Discontinuation of infliximab was rapidly followed by the remission of skin lesions. Etanercept was introduced 5 months later as the patient experienced severe relapse of her RA. Psoriatic skin lesions recurred 6 weeks after the onset of etanercept therapy, resulting in a widespread eruption involving trunk, limbs, palms, and soles. Etanercept withdrawal and topical corticosteroids led to rapid improvement of her skin condition. Skin patch tests were performed 3 months later with infliximab and etanercept, and yielded negative results.

New-onset psoriatic skin lesions and exacerbation of psoriatic skin lesions have recently been reported with each of the 3 TNF-α blockers[1-5]. One of the features of TNF-α-induced psoriasis is the high frequency of a palmoplantar distribution and a pustular pattern[1-5], as in our patient.

In this case, psoriasis induction by 2 different TNF-α-inhibiting agents and negativity of allergic tests argue against an immunoallergic reaction toward these latter compounds, and instead support a class-dependent effect. This observation emphasizes that, besides their beneficial effects in inflammatory rheumatological and skin diseases, use of TNF-α-blocking agents may sometimes be associated with side effects of dysimmune origin[6,7]. Even though induction of psoriasis may appear to be an acceptable side effect in view of the benefits provided by anti-TNF-α treatments in patients with psoriasis, it is worth remembering that besides its proinflammatory effects, TNF-α also plays an immunoregulatory role[8]. Further investigations are necessary to determine whether anti-TNF-α treatment could favor the recruitment of activated autoreactive T lymphocytes in skin in genetically predisposed patients.

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