

## LETTER

# Successful treatment with secukinumab in an HIV-positive psoriatic patient after failure of apremilast

Dear editor,

Psoriasis is a chronic skin disease characterized by an IL23/IL17-oriented immune activation and keratinocyte hyperproliferation and can be observed in human immunodeficiency virus (HIV) infected persons. There is not full agreement on the prevalence of HIV-associated psoriasis that may result similar to the general population.<sup>1</sup> Psoriasis might worsen or be firstly detected when HIV infection is diagnosed, further affecting the quality of life of HIV patients. Furthermore, the progression of HIV seems to correlate with worsening of psoriasis.<sup>2</sup> The management of these patients is a challenge as any therapy must be carefully considered. Immunosuppressive drugs as methotrexate and cyclosporine should be avoided due to the risk of opportunistic infections, while TNF-alpha blockers and ustekinumab should not be started during an active infection because they may potentially give rise to a multitude of infections, so should be contraindicated for HIV patients even if some authors suggested safety modalities for their use.<sup>3,4</sup> Nevertheless, single case reports have shown that treatment with other biologics (such as anti-IL17) or oral small molecules (i.e., apremilast) may be successful and safe in HIV-patients affected by moderate-severe psoriasis.<sup>5-9</sup> Here we describe our clinical experience with an anti-IL17A monoclonal antibody, secukinumab, in an HIV positive psoriatic man who failed an initial treatment with apremilast.

A 31-year-old man with history of HIV undergoing treatment with emtricitabine, rilpivirine, and tenofovir alafenamide, for the last 7 years, was observed due to worsening of his plaque psoriasis during the last 12 months. He had a 10-year history of plaque psoriasis successfully treated in the past with a topical association of betamethasone and calcipotriol. Clinical examination showed a 15% body surface area (BSA) involvement with Psoriasis Area and Severity Index (PASI) score of 18.7; lesions mainly affected trunk and legs. He did not have associated psoriatic arthritis or nail involvement. Baseline investigations included complete blood count, renal function, liver function, urine routine and microbiology, autoimmunity, lipid profile, chest X-ray, ECG, 2D echocardiogram, ultrasound of abdomen and pelvis, quantiferon, and serology for hepatitis B and C, which all resulted normal. At baseline, CD4+ lymphocytes were 1487/ $\mu$ l. Apremilast was started with initial titration and

maintained on 30 mg twice a day. The patient was followed up every 4 weeks for clinical assessment and every 3 months for evaluation of all the above-mentioned laboratory parameters including the CD4 count, but with the exception of hepatitis B and C, Quantiferon.<sup>10</sup> After 12 months of treatment, the patient still had PASI score of 13 (Figure 1A) and complained severe itching, so we decided to interrupt apremilast and he was started on secukinumab after consultation with an infectious disease specialist and evaluation of all the laboratory parameters, including hepatitis B and C, and Quantiferon. The follow up was the same performed during the treatment with apremilast. After the 5-week induction period, the patient achieved complete clearance of skin lesions (PASI 0). During the treatment, the patient did not develop alterations in any laboratory parameter and complained only of one episode (during the fourth month of treatment) of genital candidiasis successfully treated with oral fluconazole (200 mg daily for 7 days) without the interruption of secukinumab. At his most recent follow-up visit, 18 months after the initiation of secukinumab therapy, the patient was still free of psoriasis (Figure 1B).

The treatment of HIV associated psoriasis depends on the severity disease and requires careful consideration. Usually, antiretroviral therapy combined with antipsoriatic topical therapies might be a successful approach, though the management of moderate and severe psoriasis in HIV positive populations might result challenging because of the poor response that could occur and the risk-to-benefit ratio specific to biologics' treatment in these patients needs to be taken into consideration when selecting therapy.<sup>9</sup> To date, there are very few reported cases of HIV-associated psoriasis treated with secukinumab.<sup>7,8</sup> Our case proves the efficacy of secukinumab for the treatment of HIV associated psoriasis and highlights the need for ongoing safety assessment. Nevertheless, additional experience is required with secukinumab before it can be established as a standard therapy in HIV-associated psoriasis.

## AUTHOR CONTRIBUTION

Paolo Romita developed the conceptualization, supervision, writing-original draft, writing-review and editing. Caterina Foti developed the conceptualization, supervision, writing-original draft, writing-review and editing. Gianluca Caliano developed the critical manuscript revision and editing. Andrea Chiricozzi developed the critical manuscript revision and editing.

Informed consent for the figures has been obtained.

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**FIGURE 1** (A) Psoriatic lesions of the patient after 12 months of therapy with apremilast; (B) complete clearance of the skin lesions maintained after 18 months of therapy with secukinumab

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#### CONFLICT OF INTEREST

The authors have no conflict of interest to disclose with the exception of AC who served as advisory board member and consultant and has received fees and speaker's honoraria or has participated in clinical

trials for AbbVie, Ammirall, Leo Pharma, Lilly, Janssen, Novartis, Sanofi Genzyme, Pfizer, and Incyte.

#### DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

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