Dermatology Practical & Conceptual

Tildrakizumab: Successful Response in Two Patients With Psoriatic Arthritis

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Introduction

Psoriatic arthritis (PsA) is a chronic, immune-mediated, inflammatory arthropathy that develops in up to 30% of patients with psoriasis. Different phenotypes are recognized according to the joints involved: distal interphalangeal predominant, asymmetric oligoarticular, symmetric polyarthritis, spondylitis and arthritis mutilans. The treatment of PsA includes different therapeutic strategies: conventional disease modifying antirheumatic drugs (DMARDs) and biologic therapies such as tumor necrosis factor (TNF) inhibitors, interleukins-17 (IL-17) inhibitors, IL-12/23 inhibitor. However not all agents used for psoriasis are yet approved for PsA including IL-23 inhibitors: there are several cases of PsA successfully treated with IL-23 inhibitors.

Case Presentation

We report 2cases of patients with PsA and psoriasis (Table 1) who successfully responded to tildrakizumab, an anti-IL-23 antibody approved only for psoriasis.

In the first case a 45-year-old man came to our unit with a 10 years history of PsA and psoriasis. The patient presented several episodes of dactylitis with radiologically documented damage to the distal interphalangeal joints. He had been treated with methotrexate (20 mg/week) for 9 months, suspended for a significant increase in transaminases (ALT 110 U/L, AST 121 U/L). We started treatment with secukinumab (300 mg sc monthly) from October 2018 to November 2019 with a partial improvement of PsA and skin disease, but the patient developed upper respiratory tract infection and the drug was stopped. Thus, the patient received tildrakizumab at the same dosage regimen as in psoriasis (100 mg sc every 12 weeks) with improvement in both diseases.

In the second case a 56-year-old woman came to our unit with a 15 years history of PsA and psoriasis. The patient suffered from peripheral asymmetric oligoarticular arthritis associated with bilateral uveitis, treated periodically with methotrexate (15 mg/week) interrupted because of several relapses. From October 2019 to September 2020, she began therapy with adalimumab (40 mg sc every 2 weeks), then stopped for the appearance of itching and skin rash. Given

Table 1. Patients clinical details with tildrakizumab treatment for psoriatic arthritis

	Patient 1	Patient 2
Gender	Male	Female
Age, years	45	56
Psoriatic arthritis phenotype	Distal interphalangeal joints	Asymmetric oligoarticular joints
Systemic involvement	Psoriasis	Psoriasis Uveitis
Treatment before tildrakizumab	Methotrexate Secukinumab	Methotrexate Adalimumab

the impossibility of carrying out therapy with IL-17 inhibitors due to a suspected concomitant ulcerative colitis, we started therapy with tildrakizumab from December 2020, getting a control of PsA.

Conclusions

IL-23/IL-17 cytokines are important players in the pathogenesis of PsA. In particular, IL-23 stabilizes the Th17 phenotype, supporting secretion of IL-17 which mediate the epidermal hyperplasia and keratinocyte differentiation. Moreover IL-23 activates the production of LTB4, exacerbating the synovial inflammation, and induces osteoclast differentiation with bone resorption result [1].

We have demonstrated that tildrakizumab is a valid therapeutic option in patients suffering from PsA, as it acts inhibiting the IL-23/IL-17 axis, the signaling pathway primarily dysregulated in this condition. It has never been described cases of patients with PsA and concomitant psoriasis with favorable response to tildrakizumab. Recent studies have been published on the approval of guselkumab in PsA [2]: considering that IL-23 is the same target, also tildrakizumab could be a useful therapeutic option for this affection.

Further studies are required to evaluate the efficacy and safety of tildrakizumab in larger cohorts of patients to consider this IL-23 inhibitor as a new promising treatment option for PsA.

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