



CASE REPORT

A Case of Concurrent Psoriasis and Hidradenitis Suppurativa Successfully Treated with Tildrakizumab

Thomas Damsin

Received: April 11, 2023 / Accepted: May 11, 2023 / Published online: June 2, 2023
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ABSTRACT

Introduction: Plaque psoriasis and hidradenitis suppurativa are chronic inflammatory skin conditions with common pathogenetic pathways.

Methods: We report the case of a 38-year-old man with 15-year history of psoriasis and hidradenitis suppurativa successfully treated with tildrakizumab for both conditions. After treatment failure to adalimumab, secukinumab, and guselkumab, tildrakizumab therapy was initiated and resulted in complete remission of psoriasis and the achievement of hidradenitis suppurativa clinical response after 40 weeks, without reporting adverse events. These responses were maintained at week 52.

Conclusion: Tildrakizumab may be an effective and safe therapeutic option for concomitant psoriasis and hidradenitis suppurativa.

Keywords: Case report; Hidradenitis suppurativa; Psoriasis; Tildrakizumab

Key Summary Points

A case of concomitant psoriasis and hidradenitis suppurativa previously unresponsive to the standard treatment is described.

Tildrakizumab therapy was initiated after treatment failure to adalimumab, the only biologic approved for the treatment of moderate-to-severe hidradenitis suppurativa, secukinumab, and guselkumab.

To the best of our knowledge, this is the first reported case on successful treatment of concomitant psoriasis and hidradenitis suppurativa with tildrakizumab.

Further studies in larger cohorts are required to establish conclusions that can be applied to patients with concurrent psoriasis and hidradenitis suppurativa in clinical practice.

INTRODUCTION

Both plaque psoriasis and hidradenitis suppurativa are chronic inflammatory skin diseases

T. Damsin (✉)
Department of Dermatology, CHU du Sart Tilman,
Avenue de L'Hôpital 1, 4000 Liège, Belgium
e-mail: th.damsin@chuliege.be

sharing risk factors, such as obesity or cigarette smoking, and inflammatory mediators, including tumor necrosis factor- α (TNF- α) or the interleukin (IL)-12/IL-23, and IL-17 pathways, which has been the rationale for selective targeting of these inflammatory pathways using biologics [1]. Furthermore, a positive association has been observed between psoriasis and hidradenitis suppurativa [2], and the co-occurrence of both diseases significantly impacts on patient quality of life [3, 4].

Tildrakizumab is an IL-23p19 inhibitor approved for the treatment of moderate-to-severe plaque psoriasis with demonstrated long-term effectiveness and a favorable safety profile [5, 6]. We present a case of treatment response to tildrakizumab in a patient with psoriasis and hidradenitis suppurativa previously unresponsive to standard therapies.

As this is a single case report, ethics committee approval was not required. All procedures followed were in accordance with the Helsinki Declaration of 1964 and its later amendments. The patient in this manuscript has given written informed consent to publication of his case details and images.

CASE REPORT

A 38-year-old man was referred to our dermatology department for the first time in August 2018 (at the age of 33 years) with two inflammatory dermatoses evolving concomitantly since 2008 (when he was 23 years old): severe plaque psoriasis and severe hidradenitis suppurativa. His medical history included schizophrenia (since age 16 years) and surgery for lumbar disk herniation. The patient was receiving daily treatment with olanzapine and zuclopenthixol for schizophrenia. The patient's weight was 117 kg, and his height was 183 cm. Thus, his body mass index was 34.9 kg/m², fulfilling the criteria for obesity. He had smoked 1–2 packs of cigarettes per day since he was 14 years and had excessive alcohol consumption (50 g/day).

Previous treatments for psoriasis, including topical corticosteroids and psoralen plus ultraviolet A irradiation, and previous treatments for

hidradenitis suppurativa, including oral lymecycline and combined antibiotic therapy with clindamycin and rifampicin, were not effective. The patient had also been treated with the TNF- α inhibitor adalimumab (40 mg per week given by subcutaneous injection) for 6 months without clinical improvement in hidradenitis suppurativa, although good control of psoriasis was achieved ($\geq 90\%$ improvement in Psoriasis Area and Severity Index [PASI]).

In August 2018, the patient started treatment with methotrexate (15 mg/week), with poor results on either psoriasis or hidradenitis suppurativa. Hence, treatment with an IL-17 inhibitor (secukinumab) was initiated in October 2018, after monitoring of fecal calprotectin levels [7]. Subcutaneous secukinumab 300 mg was administered every week for 5 weeks (induction phase) followed by 300 mg every 4 weeks. In January 2019, although the psoriasis was controlled, secukinumab treatment was switched to the IL-23p19 inhibitor guselkumab owing to worsening of hidradenitis suppurativa symptoms. Guselkumab 100 mg was administered by subcutaneous injection at weeks 0 and



Fig. 1 Hidradenitis suppurativa lesions in the right axillary region of patient before treatment with tildrakizumab

4, followed by a maintenance dose every 6 weeks with a 50% improvement in the overall disease condition until January 2022, when the patient had a treatment failure of hidradenitis suppurativa, presenting skin lesions on both right and left axillary and inguinal regions, with a Hurley stage of 2 and a Hidradenitis Suppurativa-Physician Global Assessment (HS-PGA) score of 4 (i.e., severe) [8, 9]. His abscess and inflammatory nodule count was 13 (3 abscesses and 10 inflammatory nodules), and his draining fistula count was 2 (Fig. 1).

In February 2022, guselkumab treatment was switched to 200 mg of subcutaneous tildrakizumab every 12 weeks after the initial loading dose at weeks 0 and 4. At week 40, the Hidradenitis Suppurativa Clinical Response (HiSCR) [10, 11] was achieved, with an abscess and nodule count of 4 (4 inflammatory nodules) and without any draining fistula. The Hurley stage was 2, and the HS-PGA score was reduced to 2 (i.e., mild) (Fig. 2). A complete remission of psoriasis was also observed at week 40, with the patient achieving a PASI 100 response. These responses were maintained at



Fig. 2 Hidradenitis suppurativa lesions in the right axillary region of the patient after 40 weeks of treatment with tildrakizumab

week 52. No adverse events were reported during the 52-week treatment period.

DISCUSSION

We present herein the case of a patient with concomitant psoriasis and hidradenitis suppurativa. Hidradenitis suppurativa is a highly stigmatizing inflammatory disease whose pathogenesis is not fully understood, although IL-23 cytokine pathway may be involved [1]. The IL-23 axis is also implicated in the pathogenesis of psoriasis, which was reported to be associated with hidradenitis suppurativa [4]. In fact, it is estimated that 6% of patients with hidradenitis suppurativa also suffer from psoriasis [12].

The patient presented herein was initially treated with adalimumab, the only biologic approved for the treatment of moderate-to-severe hidradenitis suppurativa, and the IL-17 inhibitor secukinumab, which has recently been proved to be clinically effective in two phase III trials involving patients with moderate-to-severe hidradenitis suppurativa [13]. However, after 3 months, the treatment was switched to the IL-23p19 inhibitor guselkumab, owing to lack of efficacy, and both diseases improved drastically. Of note, clinical response to IL-23 antagonism in hidradenitis suppurativa has recently been found to be associated with male gender [14]. Despite the long-term control with guselkumab for 3 years, the treatment was switched to tildrakizumab 200 mg, owing to a relapse of hidradenitis suppurativa. To the best of our knowledge, this is the first reported case on successful use of tildrakizumab to treat concomitant psoriasis and hidradenitis suppurativa, with the patient achieving HiSCR [10, 11] and PASI 100 [15] responses after only four tildrakizumab doses. These results suggest that clinical effect of IL-23p19 inhibitors might be influenced by genetic background or gene interactions, showing a different effect depending on the anti-IL-23p19 agent [14, 16], although the use of a higher dose (200 mg) could also play a role. Nine cases of hidradenitis suppurativa successfully treated with off-label use of tildrakizumab have been described in

literature [17, 18], and there is also one mention of the use of tildrakizumab as an effective treatment option in patients with PASH syndrome, which is characterized by the presence of pyoderma gangrenosum, acne, and hidradenitis suppurativa [19].

CONCLUSIONS

Tildrakizumab 200 mg may be a safe and effective alternative for patients with concurrent hidradenitis suppurativa and psoriasis even when patients switched from another IL-23p19. More studies in a larger cohort of patients are needed to validate these results.

ACKNOWLEDGEMENTS

We thank the patient for agreeing to publication of his case.

Funding. Sponsorship for this publication and Rapid Service Fee were funded by Almirall R&D, Barcelona, Spain.

Medical Writing and Editorial Assistance. Editorial assistance in the preparation of this article was provided by Eva Mateu, PhD of TFS HealthScience. Support for this assistance was funded by Almirall R&D, Barcelona, Spain.

Author Contributions. Thomas Damsin confirms sole responsibility for the conception of the work and acquisition of data. He revised the work critically for important intellectual content and approved the version to be published.

Disclosures. Thomas Damsin has no conflicts of interest to disclose.

Compliance with Ethics Guidelines. As this is a single case report, ethics committee approval was not required. All procedures followed were in accordance with the Helsinki Declaration of 1964 and its later amendments. The patient in this manuscript has given written

informed consent to publication of his case details and images.

Data Availability. Data sharing not applicable to this article as no datasets were generated or analysed.

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