Dermatology Reports
https://www.pagepress.org/journals/index.php/dr/index

eISSN 2036-7406

Please cite this article as:

Minghini M, Schettini N, Pacetti L, et al. Psoriasiform eruption induced by dupilumab successfully treated with upadacitinib. *Dermatol Rep 2025 [Epub Ahead of Print] doi: 10.4081/dr.2025.10588*

Submitted 27/08/25 - Accepted 12/10/25

Psoriasiform eruption induced by dupilumab successfully treated with upadacitinib

Mattia Minghini, Natale Schettini, Lucrezia Pacetti, Chiara Bocchi, Alessandro Borghi

Section of Dermatology and Infectious Diseases, Department of Medical Sciences, University of Ferrara, Italy

Correspondence: Mattia Minghini, Section of Dermatology and Infectious Diseases, Department of Medical Sciences, University of Ferrara, via Ludovico Ariosto 35, 44121 Ferrara, Italy.
E-mail: mattia.minghini@edu.unife.it

Key words: atopic dermatitis; psoriasis; Janus kinase inhibitors; humanized monoclonal antibodies; drug-related side effects; adverse reactions.

Conflict of interest: the authors have no conflict of interest to declare.

Ethics approval and consent to participate: no ethical committee approval was required for this case report by the Department, because this article does not contain any studies with human participants or animals. Informed consent was obtained from the patient included in this study.

Consent for publication: the patient gave his written consent to use his personal data for the publication of this case report and any accompanying images.

Availability of data and materials: not applicable.

Abstract

Psoriasiform eruptions are increasingly reported as adverse events during treatment of atopic dermatitis (AD) with interleukin (IL)-4/IL-13 inhibitors, including dupilumab. These reactions may represent a possible overlap manifestation between AD and psoriasis (PSO), which are two conditions that, according to recent literature, could lie along a clinical spectrum and share certain clinical, pathogenetic, and histological features.

We describe the case of a 30-year-old male with lifelong AD who developed psoriasiform plaques on his elbows and knees during dupilumab therapy. After discontinuation of dupilumab and initiation of upadacitinib 15 mg/day, the patient achieved substantial improvement of both AD and psoriasiform eruptions at 6 months.

This case highlights dupilumab-induced psoriasiform eruptions and underscores the therapeutic challenges associated with these clinical pictures. Upadacitinib appears to be a possible and effective treatment option for these presentations.

Introduction

Dupilumab, a fully human monoclonal antibody targeting the interleukin (IL)-4 receptor α subunit, inhibits IL-4 and IL-13 signaling and has become a cornerstone therapy for patients with moderate-to-severe atopic dermatitis (AD).[1] Its use has been associated with huge improvements in disease severity, pruritus, sleep quality, and overall quality of life. Despite its favorable efficacy and safety profile, dupilumab treatment can be accompanied by a spectrum of adverse events, including conjunctivitis, blepharitis, injection-site reactions, eosinophilia, and cutaneous reactions.[1]

Among the reported skin reactions, psoriasiform eruptions have been documented. They represent a therapeutic challenge, given the need to address both AD and psoriasis (PSO).

In this report, we present the case of an AD patient who developed psoriasiform eruptions during treatment with dupilumab, which were successfully managed with upadacitinib.

Case Report

The patient, a 30-year-old male with a lifelong history of AD, was initially managed with cyclosporine until secondary ineffectiveness, which led to its discontinuation. About two years prior to presentation, he was switched to dupilumab, which led to acceptable disease control, despite occasional flare-ups.

In March 2024, the patient presented with a severe disease flare, showing eczema on his flexural surfaces, trunk, and face (Eczema Area and Severity Index [EASI] score 18, pruritus Numerical Rating Scale [NRS] 6, sleep NRS 8, Dermatology Life Quality Index [DLQI] 9). Unlike previous

flares, this episode included psoriasiform, erythematous, scaly plaques on the patient's extensor surfaces, such as the elbows and knees (Figure 1).

A skin biopsy revealed mild acanthosis, compact hyperkeratosis, and mild spongiosis, with lymphocytic infiltration and occasional eosinophils.

After six months, a follow-up assessment revealed worsening of the eczematous lesions (EASI 27). Blood tests, including a complete blood count, liver profile, lipid profile, hepatitis serology, HIV serology, and Quantiferon test, were performed in preparation for treatment with a Janus kinase (JAK) inhibitor, and all results were within normal limits. Without any contraindications and after dupilumab discontinuation, upadacitinib at a daily dosage of 15 mg was initiated.

At a six-month control visit, the patient exhibited substantial clinical improvement, with only residual lichenification in his popliteal fossae and complete resolution of psoriasiform plaques (EASI 3, pruritus NRS 2, sleep NRS 5, DLQI 5) (Figure 1). The patient maintained clinical remission of both eczematous and psoriasiform manifestations at subsequent follow-up visits.

Discussion

The psoriasiform eruption observed in this case appeared to be due to dupilumab-induced reactions. Such reactions are increasingly recognized as part of an overlap between PSO and AD phenotypes.[2] Although PSO and AD have traditionally been considered distinct, recent literature suggests that these conditions lie on a spectrum, with overlapping features in the middle. Tsai and colleagues[2] have proposed a classification system for these overlap conditions, which included: i) AD with psoriasiform features, which is common in the so called "Asian AD", where AD clinical and histologic features overlap with those of PSO, and where an increased Th17/Th22-mediated response is observed; ii) PSO with eczematous features, which include forms of PSO that present a differential diagnosis challenge with AD, for example, nummular PSO and erythrodermic PSO; iii) coexistence of AD and PSO; iv) development of AD-like dermatitis during PSO treatment, which can occur in psoriatic patients treated with tumor necrosis factor (TNF)α inhibitors, IL-12/23 inhibitors, IL-17 inhibitors, and IL-23 inhibitors; v) development of PSO during PSO or AD treatment, in cases in which PSO emerges or worsens during treatment with TNFα inhibitors, IL-12/23 inhibitors, IL-17 inhibitors or IL-23 inhibitors administered for PSO as well as with IL-4/IL-13 inhibitors and IL-13 inhibitors used for AD. In the literature, reports of psoriasiform reactions to dupilumab[3] have been published, and recently, similar cases have been observed with tralokinumab.[4] Interestingly, a 2019 case series reported that dupilumab may induce various psoriasis phenotypes (plaque, guttate, pustular, erythrodermic, and sebopsoriasis), with predominant involvement of the extremities, trunk, and scalp.[3]

The therapeutic challenge in these overlapping conditions lies in the need to comprehensively target both AD and PSO.

A first approach is represented by conventional immunosuppressants like methotrexate or cyclosporine. Another option may be dual biologic therapy, which has shown effectiveness in some case reports[5] but comes with significant cost implications and a potential risk of increased adverse events.

JAK inhibitors, including upadacitinib, represent a promising therapeutic option for overlapping AD and PSO conditions. Upadacitinib has been shown to effectively improve both AD and psoriasiform manifestations,[6] as in our experience.

Conclusions

This case report confirms that upadacitinib may be an effective therapeutic choice for patients with psoriasiform eruptions secondary to dupilumab administered for treating AD. By addressing both AD and psoriasiform features, upadacitinib provides a more streamlined and cost-effective approach compared to dual biologic regimens.

References

1. Kamata M, Tada Y. A Literature Review of Real-World Effectiveness and Safety of Dupilumab for Atopic Dermatitis. JID Innov 2021;1:100042.
2. Tsai YC, Tsai TF. Overlapping Features of Psoriasis and Atopic Dermatitis: From Genetics to Immunopathogenesis to Phenotypes. Int J Mol Sci 2022;23:5518.
3. Napolitano M, Scalvenzi M, Fabbrocini G, et al. Occurrence of psoriasiform eruption during dupilumab therapy for adult atopic dermatitis: A case series. Dermatol Ther 2019;32:e13142.
4. Balakirski G, Burmann SN, Hofmann SC, Kreuter A. Paradoxical tralokinumab-induced psoriasis in a patient with atopic dermatitis. J Dermatolog Treat 2023;34:2258240.
5. Kaszycki MA, Pixley JN, Feldman SR. Concurrent Atopic Dermatitis and Psoriasis Successfully Treated With Dual Biologic Therapy. Cutis 2023;112:E13-6.
6. Gargiulo L, Ibba L, Pavia G, et al. Upadacitinib for the treatment of concomitant psoriasis and atopic dermatitis: a case series. J Dermatolog Treat 2023;34:2183729.

Figure 1. a) Psoriasiform erythematous-scaling plaques on the patient's knees; **b**) complete resolution of plaques on the patient's knees after a 24-week treatment with upadacitinib.