



Case report

[Translated article] Complete resolution of rupiaceous psoriasis associated with arthropathy with guselkumab: A case report



Resolución completa de psoriasis rupiácea asociada a artropatía con guselkumab: a propósito de un caso

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Introduction

Rupoid psoriasis is a rare hyperkeratotic variant of severe psoriasis that primarily affects men and is characterised by extensive body surface involvement and a marked association with psoriatic arthritis. In this context, the term *rupioid* or *rupiaceous* refers to the thickness of the psoriasis plaques. Reported cases of rupioid psoriasis successfully resolved are very rare and describe treatments with cyclosporine, methotrexate, infliximab, adalimumab, and ustekinumab.^{1–3} We describe and evaluate the effectiveness of guselkumab in a patient diagnosed with rupiaceous psoriasis and psoriatic arthritis refractory to multiple systemic treatments.

Case description

A 40-year-old man with no known allergies, under follow-up by the dermatology and rheumatology departments for extensive plaque psoriasis with arthropathy, which had been evolving for 20 years. Following his diagnosis in 2003, he began treatment with deflazacort and methotrexate 20 mg weekly. Over the following years, the patient was monitored inconsistently, resulting in therapeutic failure regarding his skin and joint symptoms. However, in 2014, with the advent of biological treatments, he was switched to adalimumab 80 mg every 2 weeks and leflunomide 20 mg every 24 h. In 2018, he was switched to etanercept 50 mg weekly alongside leflunomide 20 mg daily, owing to the persistence and recurrence of skin lesions, as well as functional limitation from joint involvement.

Despite the initially inconsistent follow-up, the patient attended all appointments regularly after commencing treatment with biologics. Adherence to adalimumab and etanercept was high (90–95%), according to the dispensing records from the hospital pharmacy outpatient service.

The July 2020 review showed that there had been a slight improvement in the lesions since the patient started taking etanercept. However, he had intense pruritus and persistent erythematous, scaly plaques on his trunk and limbs. The Psoriasis Area Severity Index (PASI) was estimated at 46.7, with a Body Surface Area (BSA) involvement of 71% (Fig. 1). Consequently, he was switched to secukinumab, 300 mg every 4 weeks following a loading dose combined with leflunomide, 20 mg daily. Clear initial improvements were observed at the first and fourth monthly visits (PASI 15, BSA 49%; and PASI 3.20 and BSA 4%, respectively), with resolution of most lesions, re-epithelialisation of the soles of the feet (one of the most affected areas), and a marked reduction in pruritus. However, the patient continued to experience pain in the wrists and knees, with infiltrated, scaly plaques that persisted on the upper surfaces of the feet. In October 2021, an attempt was made to improve joint involvement by replacing leflunomide with methotrexate 20 mg weekly together with folic acid.

According to the dispensing records from the hospital pharmacy outpatient service, adherence to secukinumab treatment remained consistently high with values ranging from 98% to 100%.

By the end of November 2021, 16 months after starting secukinumab, there was a marked worsening of joint disease and psoriatic plaques, with infiltrated rupiaceous plaques appearing on the body and face (PASI 16.80 and BSA 35%). In addition, the patient reported feeling generally unwell on the day methotrexate was administered. This was considered a secondary failure, and it was decided to discontinue methotrexate and switch the patient from secukinumab to guselkumab 100 mg, administered at week 0, week 4, and then every 4 weeks, owing to the risk of progressive joint involvement and disability caused by arthropathy. This regimen was used off-label as, at that time, guselkumab had not yet been authorised for treating psoriatic arthritis with this monthly schedule.

Two months after starting treatment (January 2022), following the first 2 doses of guselkumab (at weeks 0 and 4) and prior to the third dose (week 8), the patient was able to walk around and move his hands freely without pain. In addition, dactylitis had resolved and there was significant improvement in his lesions (PASI 3.20 and BSA 3.90%), with only a few plaques remaining on the lower limbs and in the intergluteal region. After 16 weeks of treatment with guselkumab

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Figure 1. Erythematous, scaly plaques on the trunk and limbs (July 2020).

(March 2022), there was near-complete resolution (PASI 2.8 and BSA 2%), except for a plaque on the front of the left leg, with the patient walking normally. The rheumatology service recommended combining guselkumab with oral methotrexate 2.5 mg weekly for grade III-IV bilateral sacroiliitis. By October 2022, 44 weeks after starting guselkumab treatment, the patient's severe psoriasis with arthropathy was under full control, with no lesions or rupioid plaques (PASI 0 and BSA 0) and psoriatic nail disease showing clear signs of resolution (Fig. 2). These

results are currently being maintained, with psoriasis completely cleared and psoriatic arthropathy well controlled.

Discussion

Very little literature is available on the treatment of rupioid psoriasis, and what exists is based on clinical cases of patients treated with various therapies, including biological ones.¹⁻³



Figure 2. Complete clearing of psoriasis and control of associated arthropathy after 44 weeks of guselkumab treatment.

The patient had undergone all treatment steps for psoriasis, including biological therapies such as adalimumab, etanercept, and secukinumab. The lesions initially improved, but then relapsed and became persistent. Owing to the incomplete skin clearance and significant joint involvement, treatment was switched to guselkumab, administered at weeks 0, 4, and then every 4 weeks, following the dosing regimen used in the available clinical trials for psoriatic arthritis. This decision was made despite guselkumab not yet being authorised for this indication in the Summary of Product Characteristics, although its approval was imminent, as the therapeutic positioning report issued by the Spanish Agency of Medicines was released in June 2022.⁴

A retrospective, multicentre study including 168 patients evaluated the persistence and efficacy of guselkumab in patients with moderate-to-severe plaque psoriasis in routine clinical practice. In total, 24% of patients had received more than 3 biological therapies prior to receiving guselkumab, while 67% had received 1 or 2. After 156 weeks of treatment, persistence was 83%. In patients with special or difficult-to-control locations, persistence ranged from 92% to 97%, demonstrating the high effectiveness of guselkumab in clinical practice.⁵

Despite our patient's poor response to previous biological therapy, guselkumab treatment achieved almost complete clearance at 16 weeks, with complete clearance achieved at 44 weeks. This response has been maintained up to week 132 since treatment initiation, demonstrating high therapeutic persistence and good control of both psoriasis and associated arthropathy.

Patient data confidentiality

The authors confirm that they have followed their workplace's protocols regarding the publication of patient data.

Declaration of authorship

All authors made intellectual contributions to the study, fulfilled the authorship criteria, and approved the final version.

The contributions of each author are as follows: case reporting, manuscript writing: Andrea Pinilla Rello and Eva Queipo García. Case review and provision of case images: Adrián Diago Irache. Approval for publication: M. Victoria Corriol Pallas, Adrián Diago Irache, Eva Queipo García, and Andrea Pinilla Rello.

CRediT authorship contribution statement

Andrea Pinilla Rello: Writing – original draft, Validation, Conceptualization. **Eva Queipo García:** Writing – original draft, Validation, Conceptualization. **M^a Victoria Corriol Pallas:** Visualisation, Validation. **Adrián Diago Irache:** Writing – review & editing, Visualisation, Validation, Conceptualization.

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Conflicts of interest

None declared.

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