Received: 15 May 2022 | Revised: 29 July 2022 | Accepted: 9 August 2022

DOI: 10.1111/dth.15766

DERMATOLOGIC THERAPY WILEY

LETTER

A case of severe psoriatic arthritis with hands flexion contracture and palmar psoriasis successfully treated with guselkumab

Dear Editor,

Psoriasis is a multisystemic, inflammatory skin disease manifesting with scaly erythematous plaques that can affect any areas of the body, but mainly the extensor surfaces of the elbows and knees, sacrum (especially the intergluteal fold), and the umbilical area. Psoriasis has a prevalence of 2%–4% in western adults, and 20%–30% of psoriasis patients may develop psoriatic arthritis (PsA).[1] PsA is an inflammatory musculoskeletal disease, affecting both men and women and usually following psoriasis development; hence PsA screening questionnaires are frequently used for a prompt diagnosis.[2] It is a complex disease that affects multiple organ systems including peripheral and axial joints, entheses, skin, and nails. Common symptoms include swollen fingers and toes (dactylitis), lower back pain due to spondylitis and sacroiliitis, nail pitting, and uveitis. From a therapeutical standpoint, conventional synthetic disease-modifying anti-rheumatic drugs can be used such as sulfasalazine, methotrexate, leflunomide, and ciclosporin. However, the best option to treat PsA are biologics, the only agents which have showed the ability to stop disease progression and radiographically documented bone damage.[3] These are agents with different mechanisms of action, including tumor necrosis factor (TNF)-alpha inhibitors (adalimumab, certolizumab, infliximab, golimumab, and etanercept), interleukin (IL)-12/23 inhibitor (ustekinumab), IL-17 inhibitors (ixekizumab and secukinumab) and IL-23 inhibitors (guselkumab). Among these, there is no general consensus on which is the first line in PsA patients. Indeed, no head-to-head trials have shown superiority for each class, so the choice should be tailored according to the patient's comorbidities, disease severity, and associated systemic signs and symptoms.[3,4]

Herein we report the case of a man affected with severe PsA and palmar psoriasis, who was successfully treated with guselkumab. A 45-year-old man affected by palmoplantar psoriasis and PsA from almost 10 years came to our dermatological department for psoriasis worsening and intense joint pain, affecting all the fingers of both hands (Figure 1A,C). Joint inflammatory involvement, as confirmed by ultrasonography, was compatible with PsA and led to contracture of the hands with the fingers in full flexion with severe functional impairment and huge limit in everyday life (Figure 1A,C), with a dermatology life quality index (DLQI) of 28 at baseline. The patient had already been treated with methotrexate with poor results, and his medical history included hypertension. In 2019, he started ixekizumab with complete resolution of skin lesions and joint symptoms control; however, at weeks 72 both psoriasis and PsA worsened; particularly, intense joint pain, and dactylitis affecting all the fingers of both hands strongly limited fingers movement possibility. Hence, he was switched to guselkumab. After 16 weeks of treatment hands skin lesions disappeared (Figure 1D), and the patient experienced a huge benefit in joint symptoms as confirmed both by clinical examination, with reacquired articular mobility (Figure 1B,D), and ultrasonography, which showed absence of signs of inflammation such as edema, tenosynovitis and synovitis, with a reduction in DLQI from 28 to 2.

Guselkumab is a fully human monoclonal antibody who selectively blocks the p19 subunit of IL-23, being approved in Europe in late 2020 for the treatment of PsA, being the first of its class achieving such indication.[5]

Contrary to psoriasis, in which clinical trials have shown that anti-IL17 and anti-IL-23 are superior to anti-TNF, in PsA there are no studies showing superiority of one class of biologics to the other. Indeed, in literature there are studies that have not shown superiority of secukinumab and ixekizumab compared with adalimumab on PsA according to ACR20.[6] Hence, treating algorithm selection in PsA patients maybe not always easy. Herein we reported the efficacy of guselkumab in a severe PsA patients who failed ixekizumab. This effect could be related to the pivotal role that IL-23 has in synovial inflammation, orchestrating immune cell activation in arthritis by regulation of Th17 differentiation and IL-17 secretion as well as playing a key role in PsA related pain.[7]

In this context, it would be interesting to have real-life data of anti-IL-23 efficacy in subjects who failed antiIL-17 and/or anti-TNF, also to understand the degree of efficacy if equivalent to bionaive.

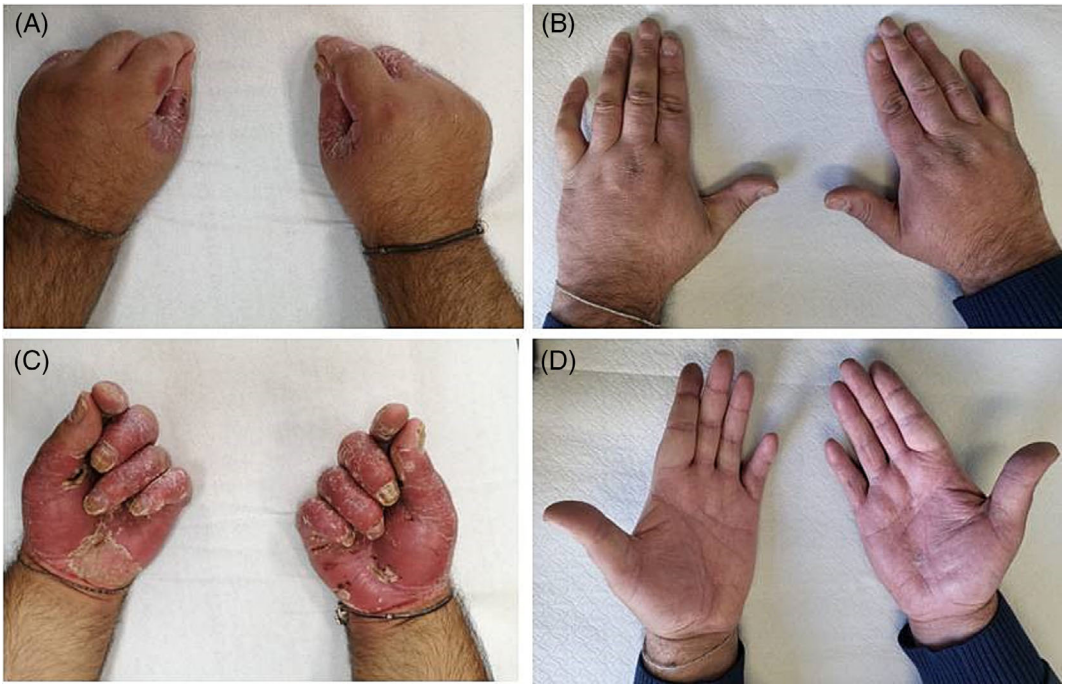

FIGURE 1 Patient's clinical condition at baseline showing dactylitis of the fingers of both hands with fingers in full flexion (A, C) and the presence of palmar psoriasis (C), and after 16 weeks of guselkumab with complete resolution of both psoriasis (D) and PsA signs (B, D)

In our case, Guselkumab was effective in a patient with severe PsA who had already failed with anti-IL-17 and demonstrated a favorable benefit–risk profile, so it might be an effective treatment option for patients with active PsA and severe articular deformities.[8]

AUTHOR CONTRIBUTIONS

Matteo Megna: conceptualization, validation, visualization, writing-original draft preparation, writing - review & editing. **Laura Marano**: data curation, investigation, methodology, visualization, writing-original draft preparation. **Elisa Camela**: data curation, investigation, methodology, visualization, writing-original draft preparation. **Massimiliano Scalvenzi**: conceptualization, validation, visualization, writing-review & editing, supervision. **Luca Potestio**: data curation, investigation, methodology, visualization, writing-original draft preparation. **Gabriella Fabbrocini**: conceptualization, validation, visualization, writing-review & editing, supervision. **Gianluca Guerrasio**: data curation, investigation, methodology, visualization, writing-original draft preparation. All authors read and approved the final version of the manuscript.

ACKNOWLEDGMENT

Open Access Funding provided by Universita degli Studi di Napoli Federico II within the CRUI-CARE Agreement.

CONFLICT OF INTEREST

Matteo Megna acted as a speaker or consultant for Abbvie, Eli Lilly, Janssen, Leo-Pharma, and Novartis. G. Fabbrocini acted as a speaker or consultant for Abbvie, Amgen, Eli Lilly, Janssen, Leo-Pharma, Almyrall, Novartis, and UCB. The remaining authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no data sets were generated or analyzed during the current study.

PATIENT CONSENT

The patient in this manuscript has given written informed consent to publication of his case details.

Matteo Megna
Laura Marano
Elisa Camela
Luca Potestio
Gabriella Fabbrocini
Massimiliano Scalvenzi
Gianluca Guerrasio

Section of Dermatology, Department of Clinical Medicine and Surgery, University of Naples Federico II, Napoli, Italy

Correspondence
Matteo Megna, Section of Dermatology, Department of Clinical Medicine and Surgery, University of Naples Federico II, Via Pansini 5, 80131 Napoli, Italy.
Email: mat24@libero.it

ORCID

Matteo Megna https://orcid.org/0000-0003-1803-2046
Elisa Camela https://orcid.org/0000-0001-7201-9163
Luca Potestio https://orcid.org/0000-0001-5940-0592
Gabriella Fabbrocini https://orcid.org/0000-0002-0064-1874

REFERENCES

1. Ocampo DV, Gladman D. Psoriatic arthritis. *F1000Res*. 2019;8:19144 F1000 Faculty Rev-1665.
2. Salaffi F, Di Carlo M, Luchetti MM, et al. A validation study of the simple psoriatic arthritis screening (SiPAS) questionnaire to screen psoriasis patients for psoriatic arthritis. *Clin Exp Rheumatol*. 2018; 36(1):1074-1081.
3. Messina F, Valenti M, Malagoli P, et al. Early predictors of psoriatic arthritis: a delphi based consensus from Italian dermatology centers. *Ital J Dermatol Venerol*. 2022;157:231-234.
4. Ogdie A, Coates LC, Gladman DD. Treatment guidelines in psoriatic arthritis. *Rheumatology (Oxford)*. 2020;59(Suppl 1):i37-i46.
5. Megna M, Balato A, Raimondo A, Balato N. Guselkumab for the treatment of psoriasis. *Expert Opin Biol Ther*. 2018;18(4):459-468.
6. Mourad A, Gniadecki R. Treatment of dactylitis and enthesitis in psoriatic arthritis with biologic agents: a systematic review and Metaanalysis. *J Rheumatol*. 2020;47(1):59-65.
7. Vecellio M, Hake VX, Davidson C, et al. The IL-17/IL-23 Axis and its genetic contribution to psoriatic arthritis. *Front Immunol*. 2021;7(11): 596086.
8. Deodhar A, Helliwell PS, Boehncke WH, et al. Guselkumab in patients with active psoriatic arthritis who were biologic-naive or had previously received TNFα inhibitor treatment (DISCOVER-1): a double-blind, randomised, placebo-controlled phase 3 trial. *Lancet*. 2020; 395(10230):1115-1125.