LETTER

DOI: 10.1111/dth.15952



Sub-erythrodermic psoriasis successfully treated with bimekizumab: A case report

Dear Editor,

Erythrodermic psoriasis (EP) is a rare variant of psoriasis, accounting for 1%–2% of all cases of plaque psoriasis.¹ EP is characterized by generalized erythema and scaling affecting more than 75% of body surface area, with or without systemic symptoms.¹ Due to both the rarity and the severity of this condition, which make it difficult to carry out randomized controlled clinical trials, the treatment of EP is challenging.^{1,2} The latest National Psoriasis Foundation Consensus Guidelines recommend cyclosporine or infliximab as first-line therapy due to their rapid onset of action.² However, these guidelines do not take into account the most recent biologic drugs, as only limited experience was available on anti-IL-17 and anti-IL-23 at that time. Here we report a case of sub-erythrodermic psoriasis successfully treated with bimekizumab, a humanized anti-IL-17A/F monoclonal antibody.³

A 44-year-old patient, with a 20-year history of plaque psoriasis, came to our emergency department referring to a worsening of his



FIGURE 1 Erythematous and scaly patches involving the trunk and the four limbs of a 44-year-old patient at the baseline visit (A–C). Almost complete resolution of skin lesions after 12 weeks of treatment with bimekizumab (D–F)

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited and is not used for commercial purposes. © 2022 The Authors. *Dermatologic Therapy* published by Wiley Periodicals LLC. cutaneous disease. He was previously treated with acitretin 20 mg/ day, with only partial improvement. On physical examination, we observed widespread erythema and desquamation to almost the entire skin area including hands, feet, scalp, and auricles (Figure 1A-C). Psoriasis Area and Severity Index (PASI) score was 39, body surface area (BSA) was 55, while the Dermatology Life Quality Index (DLQI) of the patient was 30. As the patient had already undergone screening tests in anticipation of biologic therapy, we decided to prescribe bimekizumab 160 mg, 2 subcutaneous injections every 4 weeks up to week 16. At week 4, after only one administration of bimekizumab, the patient came back to our Dermatology Unit for the first follow-up visit, showing already a consistent improvement of the cutaneous lesions with PASI = 2.6 and DLOI = 5. At week 12, after the third administration of bimekizumab, we observed almost complete skin clearance, as PASI was 1, BSA was 1, and DLQI was 2 (Figure 1D-F). The patient is still under treatment with bimekizumab and he has reported no adverse events, to date.

Bimekizumab is a humanized antibody that selectively binds and neutralizes the biologic functions of interleukin (IL)-17A and IL-17F.³ It has been approved for the treatment of moderate-to-severe plaque psoriasis after four Phase-3 studies (BE VIVID, BE READY, BE RADI-ANT, BE SURE) demonstrated the high levels of efficacy of bimekizumab.⁴⁻⁷ At week 4, a reduction of at least 75% in the PASI (PASI75) was observed in a percentage of patients between 71% and 76% among the four clinical trials, showing superiority compared with adalimumab,⁵ ustekinumab⁶ and secukinumab.⁴ This rapid onset of action could be due to the double neutralization of both IL-17A and IL-17F compared with targeting IL-17A alone.³ At week 16, PASI 100 was observed in at least 59% of the patients among the four Phase-3 studies.⁴⁻⁷ However, no data are available regarding the efficacy of bimekizumab in EP, because of the very recent approval of this drug. We decided to start bimekizumab because of encouraging data from clinical trials regarding efficacy, rapidity and safety, given the severity of the cutaneous symptoms of our patient. Notably, bimekizumab is administered with two subcutaneous injections at weeks 0, 4, 8, 12, and 16, and then every 8 weeks.³ Our patient experienced almost complete skin clearance at week 12, even before completing the induction phase.

In conclusion, we reported a case of sub-erythrodermic psoriasis which was successfully treated with bimekizumab, highlighting the rapid onset of action of this drug. Other experiences are needed to further establish the role of bimekizumab on the treatment of severe cases, including erythrodermic psoriasis.

AUTHOR CONTRIBUTIONS

Mario Valenti collected the clinical data, wrote the draft of the manuscript, adapted the clinical image, and reviewed the manuscript. Luigi Gargiulo, Luciano Ibba, and Giulia Pavia collected the clinical data and wrote a draft of the manuscript. Alessandra Narcisi collected the clinical data and critically reviewed the manuscript. Antonio Costanzo collected the clinical data, obtained the figures, and critically reviewed the manuscript.

ACKNOWLEDGMENTS

Open access funding provided by BIBLIOSAN.

CONFLICT OF INTEREST

Mario Valenti has been a consultant and/or speaker for Sanofi, Leo Pharma, Eli Lilly, Boehringer. Alessandra Narcisi has been a consultant and/or speaker for Abb-Vie, Almirall, Amgen, Janssen, Leo Pharma, Eli Lilly, Boehringer, Novartis, Pfizer and UCB Antonio Costanzo has been a consultant and/or speaker for Abb-Vie, Almirall, Amgen, Janssen, Leo Pharma, Eli Lilly, Galderma, Boehringer, Novartis, Pfizer, Sandoz, and UCB. The other authors have nothing to disclose.

DATA AVAILABILITY STATEMENT

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

INFORMED CONSENT

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

Mario Valenti^{1,2} Luigi Gargiulo^{1,2} Luciano Ibba^{1,2} Giulia Pavia^{1,2} Alessandra Narcisi² Antonio Costanzo^{1,2}

¹Department of Biomedical Sciences, Humanitas University, Pieve Emanuele, Italy

²Dermatology Unit, IRCCS Humanitas Research Hospital, Rozzano, Italy

Correspondence

Luciano Ibba, Department of Biomedical Sciences, Humanitas University, Via Rita Levi Montalcini, 4 Pieve Emanuele, MI 20090, Italy.

Email: luciano.ibba@humanitas.it

ORCID

Mario Valenti D https://orcid.org/0000-0001-9140-9263 Luigi Gargiulo D https://orcid.org/0000-0002-6051-1676 Luciano Ibba D https://orcid.org/0000-0002-7876-4866 Giulia Pavia D https://orcid.org/0000-0001-5600-288X

REFERENCES

- Lo Y, Tsai TF. Updates on the treatment of erythrodermic psoriasis. Psoriasis (Auckl). 2021;11:59-73. doi:10.2147/PTT.S288345
- Carrasquillo OY, Pabón-Cartagena G, Falto-Aizpurua LA, et al. Treatment of erythrodermic psoriasis with biologics: a systematic review. *J Am Acad Dermatol.* 2020;83(1):151-158. doi:10.1016/j.jaad.2020. 03.073
- Freitas E, Blauvelt A, Torres T. Bimekizumab for the treatment of psoriasis. Drugs. 2021;81(15):1751-1762. doi:10.1007/s40265-021-01612-z

- Reich K, Warren RB, Lebwohl M, et al. Bimekizumab versus secukinumab in plaque psoriasis. N Engl J Med. 2021;385(2):142-152. doi:10. 1056/NEJMoa2102383
- Warren RB, Blauvelt A, Bagel J, et al. Bimekizumab versus adalimumab in plaque psoriasis. N Engl J Med. 2021;385(2):130-141. doi:10.1056/ NEJMoa2102388
- Reich K, Papp KA, Blauvelt A, et al. Bimekizumab versus ustekinumab for the treatment of moderate to severe plaque psoriasis (BE VIVID):

efficacy and safety from a 52-week, multicentre, double-blind, active comparator and placebo controlled phase 3 trial. *Lancet.* 2021; 397(10273):487-498. [published correction appears in Lancet. 2021 Feb 20;397(10275):670]. doi:10.1016/S0140-6736(21)00125-2

7. Gordon KB, Foley P, Krueger JG, et al. Bimekizumab efficacy and safety in moderate to severe plaque psoriasis (BE READY): a multicentre, double-blind, placebo-controlled, randomised withdrawal phase 3 trial. *Lancet*. 2021;397(10273):475-486.