Received: 30 October 2018 | Revised: 20 November 2018 | Accepted: 5 January 2019

DOI: 10.1111/dth.12825

WILEY DERMATOLOGIC THERAPY

THERAPEUTIC HOTLINE: SHORT PAPER

A case of erythrodermic psoriasis successfully treated with ixekizumab

Matteo Megna[1] | Lucia Gallo[1] | Nicola Balato[1] | Anna Balato[2]

[1]Department of Dermatology, University of Naples Federico II, Naples, Italy

[2]Department of Advanced Biomedical Sciences, University of Naples Federico II, Naples, Italy

Correspondence
Matteo Megna, MD, Department of Dermatology, University of Naples Federico II, Via Pansini, Napoli 580131, Italy.
Email: mat24@libero.it

Abstract

Erythrodermic psoriasis (EP) is the most severe form of psoriasis, resulting in significant morbidity and mortality. International guidelines on EP treatment are lacking, with most of the biologic drugs being used basing on case reports or small case series. Ixekizumab, a fully human anti-interleukin (IL)-17A monoclonal antibody, is approved for moderate to severe plaque psoriasis while its use in EP is off label. However, two studies conducted on eight Japanese EP patients have showed ixekizumab as an efficacious and well tolerated therapy up to 24 and 52 weeks, respectively. To date, no case reports on Caucasian patients have been described. We report the case of a 66-year-old Caucasian female with EP successfully treated with ixekizumab, reaching PASI 100 after only 6 weeks of therapy and still maintaining this response at week 24. Our case report suggests ixekizumab as a highly efficacious treatment in EP, presenting also a very rapid action which leads to complete resolution of the disease after 6 weeks. Further studies are warrant to confirm our data, with controlled trials specifically dedicated to EP being strictly needed in order to verify the role and efficacy of the new biologics in EP.

KEYWORDS

erythrodermic psoriasis, ixekizumab, treatment

1 | INTRODUCTION

Erythrodermic psoriasis (EP) is the most severe form of psoriasis, resulting in significant morbidity and even mortality (Rosenbach et al., 2010). Nevertheless EP treatment options have greatly expanded in the last years, shared international guidelines are lacking, with most of the biologic drugs being used basing on clinical practice, case reports, or small case series (Singh et al., 2016). Ixekizumab, a fully human anti-interleukin (IL)-17A monoclonal antibody, demonstrated strong efficacy in treating moderate to severe plaque type psoriasis (Gordon et al., 2016). Ixekizumab use in EP is off label. However, two studies conducted on eight Japanese EP patients have showed ixekizumab as an efficacious and well tolerated therapy up to 24 and 52 weeks, respectively (Saeki et al., 2015, 2017), with six subjects still experiencing a Global Improvement Score of resolved or improved up to 220 weeks (Okubo et al., 2018). Conversely, a case of EP developed after 6 weeks of ixekizumab discontinuation in a 59-year-old woman with a long history of severe plaque psoriasis and psoriatic arthritis has been recently described (Potter et al., 2017). To date, no other cases of EP treated with ixekizumab has been published.

2 | CASE REPORT

A 66-year-old Caucasian female with EP was admitted at our outpatient Clinic on December 2017. The patient was suffering from plaque-type psoriasis for 42 years. Her disease showed a chronic remitting course requiring several cycles of conventional systemic drugs such as methotrexate, cyclosporine, acitretin, and narrow band ultraviolet (UV)-B phototherapy, with only partial and transitory disease improvement. However, she continued to experience recurrent flares, therefore an anti-tumor necrosis factor (TNF)-α therapy (adalimumab) was started in September 2016 and discontinued after 10 months due to secondary inefficacy. When referring to our clinic in December 2017, she was affected by an erythrodermic form of psoriasis (Psoriasis area and severity index [PASI]: 58−−body surface area [BSA]: 95%; Figure 1a, 2a), associated with fever and malaise. The patient was also suffering from heart disease, hypertension, diabetes, and depression. Treatment with standard dose ixekizumab (160 mg sc at week 0 and then 80 mg sc every 2 weeks for 12 weeks) led to achieve PASI75 at week 2 (PASI decreased to 11.3 and BSA to 25%) and complete remission (PASI100) after only 6 weeks (Figure 1b, 2b). A huge improvement was also

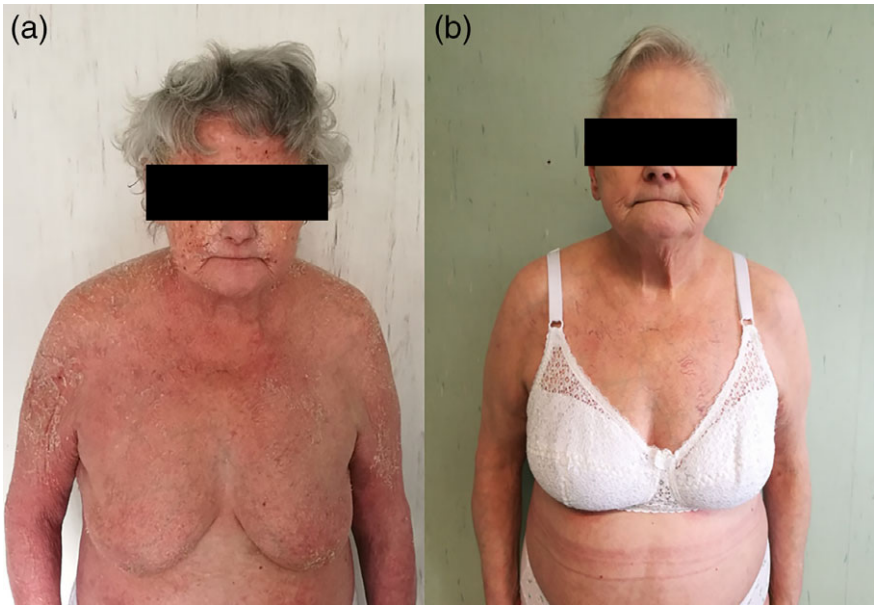

FIGURE 1 (a) Patient at baseline (Week 0) and (b) after 6 weeks of ixekizumab therapy (Week 6): head, neck, and trunk

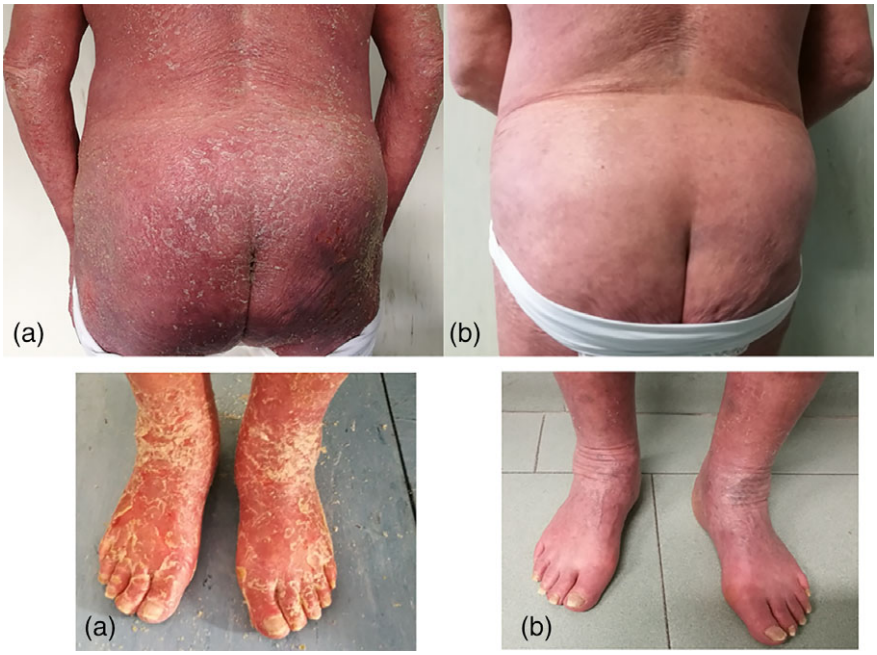

FIGURE 2 (a) Patient at baseline (Week 0) and (b) after 6 weeks of ixekizumab therapy (Week 6): back and feet

observed for Dermatology Quality Life Index which decreased from 30 (at week 0) to 12 (at week 2) and 0 at week 6. The patient continued ixekizumab treatment (80 mg sc every 4 weeks), still presenting PASI100 response at the last follow-up (week 24).

3 | DISCUSSION

Ixekizumab was approved by the Food and Drug Administration (FDA) in 2016 for the treatment of moderate to severe plaque psoriasis (Saeki et al., 2017). It is a humanized monoclonal IgG antibody which neutralizes interleukin-17A (Sekhon et al., 2017; Thomas et al., 2018). Treatment with ixekizumab results in decreased expression of interferon-γ, IL-17, IL-22, IL-23, and other cytokines involved in the pathogenesis of psoriasis. As a result, keratinocyte proliferation and neutrophil migration to the epidermis is slowed. Data from the pooled analysis of three phase III trials suggested a rapid onset of clinical effect with noticeable improvements after 1 week in some plaque psoriasis patients with also a favorable safety profile (Fleming, 2018). However, data on EP are very limited to date. Our case report suggests ixekizumab as a highly efficacious treatment in EP, presenting also a very rapid action. Indeed, ixekizumab was able to lead to a complete resolution of the disease after 6 weeks. Our case is in line with Saeki et al. (2015, 2017) articles which already showed ixekizumab as extremely efficacious and well tolerated therapy in eight Japanese EP patients up to 52 weeks of treatment. Moreover,

very recently Okubo et al. showed that six out these eight subjects still experienced a Global Improvement Score of resolved or improved up to 220 weeks of ixekizumab treatment, showing that it can be an effective long-term treatment option for EP (Okubo et al., 2018).

4 | CONCLUSION

To our knowledge, our article shows the first Caucasian EP case successfully treated with ixekizumab, with PASI 100 reached at week 6 and maintained through week 24, showing also an excellent safety profile. However, further studies are warrant to confirm our data, with controlled trials specifically dedicated to EP being strictly needed in order to evaluate the exact role and the efficacy of the new biologics in EP. Indeed, these studies are fundamental to support the establishment of EP treatment guidelines.

ORCID

Matteo Megna https://orcid.org/0000-0003-1803-2046

REFERENCES

Fleming, P. (2018). Ixekizumab and psoriasis: An important entry into the therapeutic landscape. *The British Journal of Dermatology*, *178*, 585–586.

Gordon, K. B., Blauvelt, A., Papp, K. A., Langley, R. G., Luger, T., Ohtsuki, M., … UNCOVER-1 Study Group; UNCOVER-2 Study Group; UNCOVER-3 Study Group. (2016). Phase 3 trials of Ixekizumab in moderate-to-severe plaque psoriasis. *The New England Journal of Medicine*, *375*, 345–356.

Okubo, Y., Mabuchi, T., Iwatsuki, K., Elmaraghy, H., Torisu-Itakura, H., Morisaki, Y., & Nakajo, K. (2018). Long-term efficacy and safety of ixekizumab in Japanese patients with erythrodermic or generalized pustular psoriasis: Subgroup analyses of an open-label, phase 3 study (UNCOVER-J). *Journal of the European Academy of Dermatology and Venereology*. https://doi.org/10.1111/jdv.15287

Potter, K. A., Motaparthi, K., & Schoch, J. J. (2017). Erythrodermic psoriasis after discontinuation of ixekizumab. *JAAD Case Reports*, *4*, 22–23.

Rosenbach, M., Hsu, S., Korman, N. J., Lebwohl, M. G., Young, M., Bebo, B. F., Jr., … National Psoriasis Foundation Medical Board. (2010). Treatment of erythrodermic psoriasis: From the medical board of the National Psoriasis Foundation. *Journal of the American Academy of Dermatology*, *62*, 655–662.

Saeki, H., Nakagawa, H., Ishii, T., Morisaki, Y., Aoki, T., Berclaz, P. Y., & Heffernan, M. (2015). Efficacy and safety of open-label ixekizumab treatment in Japanese patients with moderate-to-severe plaque psoriasis, erythrodermic psoriasis and generalized pustular psoriasis. *Journal of the European Academy of Dermatology and Venereology*, *29*, 1148–1155.

Saeki, H., Nakagawa, H., Nakajo, K., Ishii, T., Morisaki, Y., Aoki, T., … Japanese Ixekizumab Study Group. (2017). Efficacy and safety of ixekizumab treatment for Japanese patients with moderate to severe plaque psoriasis, erythrodermic psoriasis and generalized pustular psoriasis: Results from a 52-week, open-label, phase 3 study (UNCOVER-J). *The Journal of Dermatology*, *44*, 355–362.

Sekhon, S., Jeon, C., Nakamura, M., Yan, D., Afifi, L., Bhutani, T., & Levin, E. (2017). Clinical utility of ixekizumab in the treatment of moderate-to-severe plaque psoriasis. *Psoriasis (Auckland, N.Z.)*, *7*, 65–72.

Singh, R. K., Lee, K. M., Ucmak, D., Brodsky, M., Atanelov, Z., Farahnik, B., … Liao, W. (2016). Erythrodermic psoriasis: Pathophysiology and current treatment perspectives. *Psoriasis (Auckland, N.Z.)*, *6*, 93–104.

Thomas, L. W., Lee, E. B., & Wu, J. J. (2018). Systematic review of anti-drug antibodies of IL-17 inhibitors for psoriasis. *The Journal of Dermatological Treatment*, *18*, 1–7.

How to cite this article: Megna M, Gallo L, Balato N, Balato A. A case of erythrodermic psoriasis successfully treated with ixekizumab. *Dermatologic Therapy*. 2019;32:e12825. https://doi.org/10.1111/dth.12825