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CASE SERIES

Rapid response on facial psoriasis to bimekizumab: case series

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Abstract

Psoriasis is a chronic inflammatory disease that can affect any part of the body but, when it appears in certain areas, like the face, it can have a very significant psychological impact. Biologics, in particular IL-17 and IL-23 drug inhibitors, have shown relevant clinical efficacy in the management of psoriatic lesions in difficult-to-treat areas. In post hoc analysis of phase III trials in plaque psoriasis, bimekizumab has shown safety and complete clearance of high-impact areas. However, these studies did not focus on the effect of bimekizumab on facial lesions. Therefore, this case series represents the first clinical real-life experience of rapid and successful management of facial psoriasis with bimekizumab in six patients.

Keywords: anti-IL-17, bimekizumab, difficult-to-treat area, psoriasis.

Citation

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Introduction

Psoriasis is a chronic inflammatory disease that can affect any part of the body but, when it appears in certain areas, such as the face, it can have a very significant psychological impact.[1,2] Psoriasis of the face is an infrequent clinical form of plaque psoriasis and its therapeutic management is often a challenge. Although the face represents a small body area, it can still cause considerable relational and emotional distress, and currently available disease severity indices do not fully describe the impact of the condition.[3]

It has been proposed that the clinical evaluation of severity of facial psoriasis should involve the division of clinical presentation into three types: peripherofacial, centrofacial and mixed localization.[4] Of note, the diagnosis of facial psoriasis may be complicated by the differential diagnosis with, for example, seborrheic dermatitis.[5] Canpolat et al. showed that facial psoriasis is under-represented in clinical trials, and often requires more intensive treatment.[6] Furthermore, few clinical trials have evaluated the effectiveness of psoriasis therapies on specific areas such as the face. In this regard, a multicentre study evaluated the rapidity and clinical efficacy bimekizumab in the management of facial psoriasis.[3] In post hoc analysis of phase III trials in plaque psoriasis, bimekizumab showed safety and complete clearance of high-impact areas.[7]

Bimekizumab is a monoclonal IgG1 antibody that selectively inhibits IL-17F in addition to IL-17A. IL-17F is less potent, but more abundant, than IL-17A in psoriasis.[8] In fact, bimekizumab acts by double-neutralizing both IL-17A and IL-17F, thus blocking the chemotaxis of multiple types of immune cells, either adaptive (T lymphocytes) or innate (monocytes and neutrophils), more effectively than action directed against IL-17A alone.

In clinical practice, there is need for a drug that can facilitate a fast and effective clinical response in the management of facial psoriasis given that, although representing a very limited body area, the presence of visible skin lesions can cause significant psycho-social impairment.[9] This case series represents the first clinical real-life experience of rapid and successful management of facial psoriasis with bimekizumab in six patients.

Methods

The primary conditions for patient selection were age over 18 years and the presence of facial psoriasis. Accordingly, patients with such localization who were eligible for therapy with the anti-IL-17 bimekizumab, were enrolled in the study. All selected patients had a significant impairment of quality of life according to the Dermatology Life Quality Index (DLQI) due to the facial involvement of psoriasis.

Clinical severity was calculated using the Psoriasis Area Severity Index (PASI) score and an additional PASI assessment was performed only for the facial area (Facial PASI), which included the main four PASI parameters (extent, erythema, infiltration and desquamation), with an associated score ranging from 0 to 4. Both scores were calculated at baseline (T0) and after 1 week of therapy (T1) (Table 1).

All patients included in the article have signed informed consent for the processing of personal data and use of photographic material according to CARE guidelines.

Case reports

Case 1

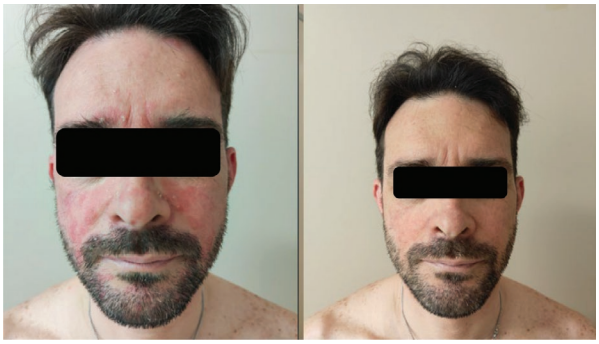
A 42-year-old man, smoker and naive to treatment with biologic drugs, with a negative family history of psoriasis and no comorbidities, presented with psoriasis with involvement particularly in the face.

At T0 (Figure 1A), he had a PASI score of 12 and DLQI score of 30. The Facial PASI scores at T0 were 3 for extent, 4 for erythema, 3 for infiltration and 3 for desquamation.

At T1 (Figure 1B), he had a PASI score of 1 and DLQI score of 3. The Facial PASI scores at T1 were 0 for extent, 1 for erythema, 0 for infiltration and 0 for desquamation.

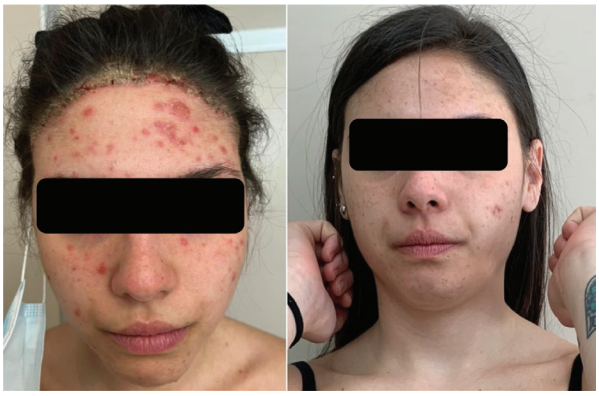
Thus, only 7 days after the start of bimekizumab therapy, a marked improvement in the clinical skin picture was observed with almost complete resolution of the facial lesions.

Figure 1. Facial psoriasis at T0 (A) and at T1 (B) in patients described in Case 1.



A B

Figure 2. Facial psoriasis at T0 (A) and at T1 (B) in patients described in Case 2.



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Case 2

A 30-year-old woman, smoker and naive to treatment with biologic drugs, with a family history of psoriasis (mother) and presence of comorbidity (thyroiditis), presented with psoriasis with involvement particularly in the face and scalp.

At T0 (Figure 2A), she had a PASI score of 18 and DLQI score of 30. The Facial PASI scores at T0 were 2 for extent, 4 for erythema, 3 for infiltration and 3 for desquamation.

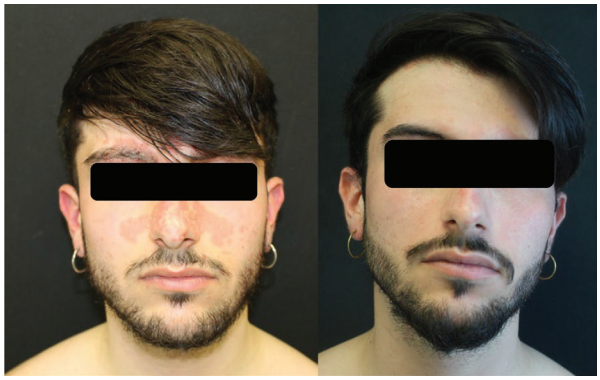
At T1 (Figure 2B), she had a PASI score of 2 and DLQI score of 3. The Facial PASI scores at T1 were all 0.

Thus, after 1 week of bimekizumab therapy, considerable reduction of lesions was observed on both the face and scalp.

Case 3

A 31-year-old man, smoker (10 cigarettes/day) and naive to treatment with biologic drugs, with a family history

Figure 3. Facial psoriasis at T0 (A) and at T1 (B) in patients described in Case 3.



A B

of psoriasis (father) and no presence of comorbidities, presented with psoriasis with involvement especially in the face, scalp and genitalia.

At T0 (Figure 3A), he had a PASI score of 6 and DLQI score of 18. The Facial PASI scores at T0 were all 3.

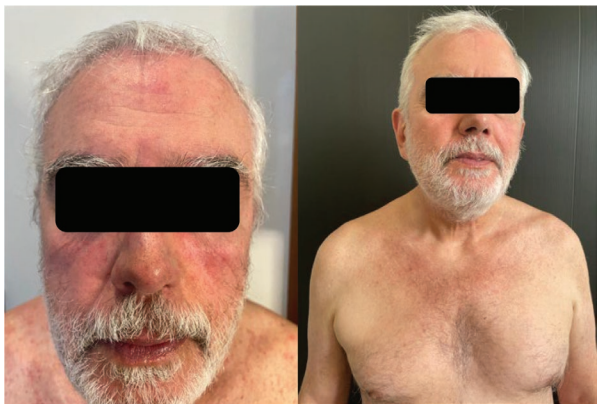
At T1 (Figure 3B), he had a PASI score of 0 and DLQI score of 0. The Facial PASI scores at T1 were 0 for extent, 1 for erythema, 0 for infiltration and 0 for desquamation.

Thus, after 7 days of bimekizumab therapy, complete remission was observed.

Case 4

A 68-year-old man, former smoker and naive to treatment with biologic drugs, with a positive family history of psoriasis (sister) and presence of comorbidities (hypertension, major depression under treatment), presented with psoriasis with involvement particularly in the face, hands and feet.

Figure 4. Facial psoriasis at T0 (A) and at T1 (B) in patients described in Case 4.



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At T0 (Figure 4A), he had a PASI score of 25 and DLQI score of 28. The Facial PASI scores at T0 were 3 for extent, 3 for erythema, 2 for infiltration and 2 for desquamation.

At T1 (Figure 4B), he had a PASI score of 4 and DLQI score of 6. The Facial PASI scores at T1 were all 0.

Thus, after 1 week of treatment with bimekizumab, total remission of facial lesions was observed.

Case 5

A 54-year-old woman, smoker and naive to treatment with biologic drugs, with no family history for psoriasis and no comorbidities reported at baseline, presented with psoriasis with involvement of particularly the face, scalp and genitalia.

At T0 (Figure 5A), she had a PASI score of 18 and DLQI score of 25. The Facial PASI scores at T0 were 1 for extent, 3 for erythema, 3 for infiltration and 3 for desquamation.

At T1 (Figure 5B), she had a PASI score of 0 and DLQI score of 2. The Facial PASI scores at T1 were all 0.

Thus, at 1 week after the start of bimekizumab therapy, complete remission was observed.

Case 6

A 42-year-old man, non-smoker and naive to treatment with biologic drugs, with no family history of psoriasis but with the presence of comorbidities at baseline (hypertension, hypercholesterolaemia, obesity II (BMI: 39.7) and hepatic steatosis), presented with psoriasis with involvement of various areas, including the face, scalp and genitalia.

At T0 (Figure 6A), he had a PASI score of 15.8 and DLQI score of 18. The Facial PASI scores at T0 were 3 for extent, 4 for erythema, 2 for infiltration and 2 for desquamation.

Figure 5. Facial psoriasis at T0 (A) and at T1 (B) in patients described in Case 5.

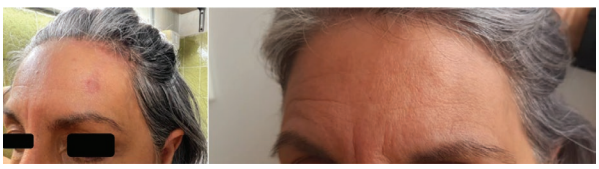

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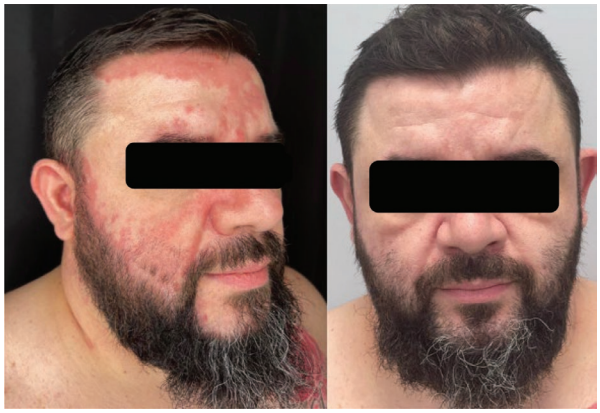
Figure 6. Facial psoriasis at T0 (A) and at T1 (B) in patients described in Case 6.



A B

At T1 (Figure 6B), he had a PASI score of 0 and DLQI score of 4. The Facial PASI scores at T1 were all 0.

Thus, 7 days after the first administration of bimekizumab, a marked improvement of facial lesions was observed.

Discussion

Psoriasis is an inflammatory immune-mediated chronic disease that can affect any region of the body. In daily clinical practice, certain anatomical areas have a greater impact on the quality of life of patients with psoriasis than other anatomical areas typical for psoriasis presentation. Areas such as the genitals, nails, folds, scalp, palm-plantar region, legs and face are known as difficult-to-treat areas because they are usually resistant to common treatment. Other areas, however, are defined as 'sensitive', such as the face, scalp and genitals, because they interfere on patients' social relations besides responding slowly to therapy. Additionally, as stated by the National Psoriasis Foundation survey, psoriatic lesions localized in highly visible areas may have

Table 1. Patient clinical data.

	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6
Sex	Male	Female	Male	Male	Female	Male
Age	42	30	31	68	54	42
Smoke	Yes	Yes	Yes	No	Yes	No
Familiarity	No	Yes (mother)	Yes (father)	Yes (sister)	No	No
Comorbidities	No	Thyroiditis	No	Hypertension, depression	No	Hypertension, hypercholesterolaemia, obesity II, hepatic steatosis
PASI T0	12	18	6	25	18	15,8
DLQI T0	30	30	18	28	25	18
PASI T1	1	2	0	4	0	0
DLQI T1	3	3	0	6	2	4
Facial PASI T0: extension	3	2	3	3	1	3
Facial PASI T0: erythema	4	4	3	3	3	4
Facial PASI T0: infiltration	3	3	3	2	3	2
Facial PASI T0: desquamation	3	3	3	2	3	2
Facial PASI T1: extension	0	0	0	0	0	0
Facial PASI T1: erythema	1	0	1	0	0	0
Facial PASI T1: infiltration	0	0	0	0	0	0
Facial PASI T1: desquamation	0	0	0	0	0	0
Difficult areas	Face	Face, scalp	Face, scalp, genitalia	Face, hands, feet	Face, scalp, genitalia	Face, scalp, genitalia
Bio-naive	Yes	Yes	Yes	Yes	Yes	Yes

DLQI, Dermatology Life Quality Index; PASI, Psoriasis Area Severity Index.

a negative impact on patient quality of life assessed through the DLQI.[2] Thus, these difficult areas, due to their high clinical impact, require treatment with the fastest possible resolution.

This real-life Italian clinical experience focuses on the treatment of facial psoriasis with bimekizumab and, to our knowledge, represents the first evidence of a rapid therapeutic response of this biologic treatment in this sensitive area. In available randomized clinical trials of bimekizumab, the facial psoriasis data are not highlighted separately, highlighting the need for the present study.

All six patients (two women and four men, median age 44.5 (SD 13.2)) showed a significant therapeutic response within 7 days after the first administration of bimekizumab. All of the clinical parameters investigated (PASI and Facial PASI) improved with treatment, with a reduction of more than 90% from baseline within 7 days. Improvement was observed in all cases regardless of distribution (peripherofacial or centrofacial[4,10]). The six patients treated had the following distribution: four had overlap between centrofacial and mixed type, and two had peripherofacial (hairline psoriasis).

Limitations

Despite the obvious resolution of psoriasis observed, the score we used could be a limitation of this study, as it is not a validated instrument. The facial Psoriasis Log-based Area and Severity Index score, which considers not only the face but also a more extensive anatomical area (scalp and neck), was not used in our research as we focused only on facial psoriasis.[11]

Conclusion

The choice of bimekizumab for the management of facial psoriasis could be important to enable physicians to optimally treat patients with moderate-to-severe plaque psoriasis aggravated by facial involvement. With this in mind, the reporting of these cases, all characterized by a fast and effective response, can be a starting point for more extensive data collection.

Contributions: NB wrote the paper, conceived the research idea and collected data. DO conceived the research idea and collected data AD, GC, CA, AD'A, GM and ET collected data. AGR supervised the research. NS wrote the paper and supervised the research. CP coordinated and was responsible for the research activity. All named authors meet the International Committee of Medical Journal Editors (ICMJE) criteria for authorship for this article, take responsibility for the integrity of the work as a whole, and have given their approval for this version to be published.

Data availability statement: All data reported in the present manuscript will be available on request from the authors.

Disclosure and potential conflicts of interest: The authors declare that they have no conflicts of interest relevant to this manuscript. The International Committee of Medical Journal Editors (ICMJE) Potential Conflicts of Interests form for the authors is available for download at: https://www.drugsincontext.com/wp-content/uploads/2024/04/dic.2024-1-4-COI.pdf

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