

CASE AND RESEARCH LETTER

Anti-Interleukin 23 Biologic Are Mostly Effective and Safe in Psoriatic Patients Who Failed Anti-Interleukin 17. A Real-Life, Retrospective 52-Week Experience



Los inhibidores selectivos de la IL23 son en su mayoría efectivos y seguros en pacientes con psoriasis y fallo previo a tratamientos biológicos anti IL-17. Una experiencia de práctica clínica real a 52 semanas

Dear Editor,

Psoriasis is a chronic and recurrent skin disease, affecting up to 2% of the population. Biological therapy has revolutionized the management of this disease. Guselkumab and risankizumab are monoclonal antibodies anti-interleukin (IL)-23 approved for treatment of severe moderate plaque psoriasis.

Multiples studies that support the effectiveness of these treatments in real-life settings have been published. However, real-life data concerning the outcomes of psoriatic patients treated with anti-IL-23 drugs, after failing anti-IL-17 regimens are limited.

We present a retrospective study with 20 patients who had previously failed anti IL17 therapy treated with guselkumab or risankizumab during one year in clinical practice.

We analyze the demographic characteristics of patients, previous systemic treatments, and psoriasis severity using Psoriasis Area and Severity Index (PASI). PASI during the follow-up at weeks 4, 16, 28, and 52 were used to evaluate the response to the treatment. In addition, adverse events (AEs) were evaluated.

A descriptive analysis was carried out and the qualitative and quantitative variables were analyzed with chi-squared and T tests respectively considering p value $< .05$ statistically significant.

Overall, 20 patients were included. Demographic characteristics are shown in [Table 1](#).

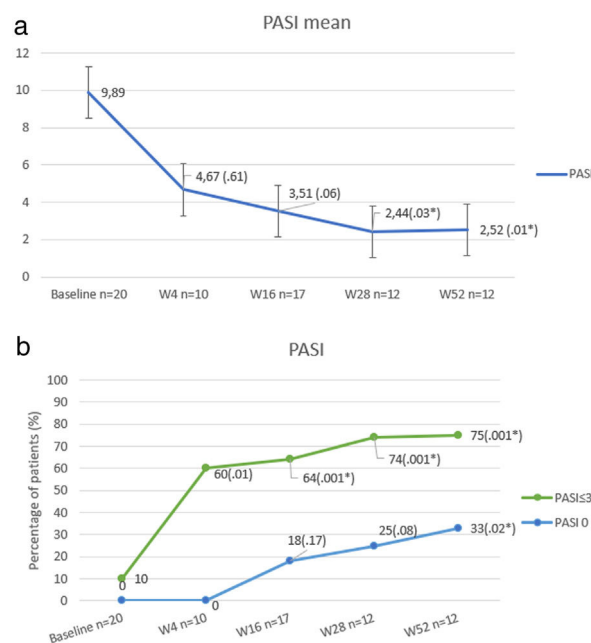


Figure 1 Mean PASI score from basal to week 52. (* p value $< .05$ statistically significant).

At baseline, mean PASI score was 9.89 (± 6.79), which was reduced up to 2.52 (± 2.99) at week 52 ($P < .01$). The percentage of patients who achieved PASI 0 and PASI ≤ 3 is shown in [Fig. 1](#).

No significant differences were found between the improvements in patients with risankizumab and guselkumab ($p = 0.8$).

In 3 patients, adverse effects were reported, all of them mild. One patient showed arthralgias at week 28, which caused the discontinuation of the treatment with risankizumab.

Treatment with antiIL23 was stopped in 3 patients (15%), in 2 cases (one patient with risankizumab and one with guselkumab) (10%) due to a primary inefficacy (week 28), and the remainder due to the reported adverse effect (arthralgias).

Our results show that the change of therapeutic target in patients who have failed anti IL17 regimens for an anti IL23 biologic may be an effective therapeutic alternative in a high percentage of cases. In other real-life series,²

Table 1 Demographic characteristics of patients.

Study population	
Patients, <i>n</i>	20
Age, years	48.90 (11.17)
Sex	
Female	7 (35%)
Male	13 (65%)
Psoriasis duration, years	23.95 (9.44)
BMI, mean	30.85 (11.52)
Obesity (BMI > 30)	13 (64%)
Special locations	
Scalp	5/20 (25%)
Nails	2/20 (10%)
Palmo-plantar	2 (10%)
Comorbidities	17/20 (85%)
Diabetes	3/20 (15%)
Hypertension	10/20 (50%)
Dyslipidaemia	10/20 (50%)
Psoriatic arthritis	1/20 (5%)
Fatty liver	7/20 (35%)
Latent tuberculosis infection	7/20 (35%)
Previous conventional systemic treatments, <i>n</i> (%)	
Phototherapy	11/20 (55%)
Methotrexate	17/20 (85%)
Ciclosporin	17/20 (85%)
Acitretin	13/20 (65%)
Apremilast	6/20 (30%)
Previous biologics therapy mean	4 (1.75)
Number of previous biological treatments	
1	2/20 (10%)
2	3/20 (15%)
3	2/20 (10%)
≥4	13/20 (65%)
Anti-IL17 therapy	
Ixekizumab	15/20 (75%)
Secukinumab	4/20 (20%)
Brodalumab	1/20 (5%)
Study therapies <i>n</i> (%)	
Guselkumab	11/20 (55%)
Risankizumab	9/20 (45%)
Score baseline	
PASI	9.89 (6.79)
BSA	20.31 (23.43)
DLQI	9.33 (5.93)
Adverse events <i>n</i> (%)	
Pain at the injection site	1 (5%)
Mild low back pain	1 (5%)
Arthralgias	1 (5%)

PASI ≤ 3 has been considered as the primary outcome, as it is related to significant improvement in patients' quality of life. PASI ≤ 3 at week 52 was reached in the majority (75%), although most of the patients had failure to respond to multiple previous biological therapies (average of 4).

No statistically significant difference or predicting factor of response was found between patients who achieved

PASI ≤ 3 compared to non-responder patients at week 28. However, it was observed that patients who did not reach PASI ≤ 3 at week 52, had a higher BMI (39.52 vs 29.86; $p=0.041$) and presented more frequently Diabetes (67% vs 0%; $p=0.007$).

Mean PASI of patients who had not received previous treatment with ustekinumab (33%) was slightly lower at week 52 compared with those who were treated in the past with anti-IL12-23 therapy, (1.35 vs 3.05) without significant differences ($p=0.38$). Neither the number of previous therapies nor the previous administration of any specific biological treatment implied any statistically significant change in the response to treatment with anti-IL23.

In the literature there are multiple studies that have shown in real life^{3,4} that anti-IL23 drugs were very effective treatments, with results comparable to pivotal clinical trials of these drugs.^{5,6}

Nevertheless, real-life data of patients treated with new anti-interleukin (IL)-23 drugs, after failing anti-IL-17 regimens are scarce.

Bonifati et al.¹ reported a series with 12 patients prospectively studied for 6 months. The demographic characteristics were similar to our own, excepting baseline average PASI, which was lower (6.25 (±7.80)), and they showed statistically significant improvements in PASI at both 3 and 6 months.

Megna et al.⁷ studied 8 patients retrospectively with previous failure to anti-IL17 and/or ustekinumab achieving a reduction in absolute PASI from 11.9 to 5.5 at week 4 and 3.3 at week 16, data similar to our series.

Megna et al.⁸ have just reported a study with 44 patients to evaluate the long-term efficacy of guselkumab in patients who previously failed anti-IL17. They have described a significant improvement, achieving a reduction in absolute PASI from 13.9 to 0.9 at week 52.

Our study displays several limitations. The number of patients is limited and due to its retrospective design, the patients are not homogeneous in terms of several baseline characteristics, which renders the extrapolation of results difficult.

We present a series of psoriatic patients treated with anti-IL23 in real-life after failure to treatment with anti-IL17. The change of therapeutic target proved an effective and safe alternative in a high number of patients in clinical practice, despite them being of high complexity.

Conflict of interests

The authors declare they have no conflict of interest.

References

1. Bonifati C, Morrone A, Cristaudo A, Graceffa D. Effectiveness of anti-interleukin 23 biologic drugs in psoriasis patients who failed anti-interleukin 17 regimens. A real-life experience. *Dermatol Ther.* 2021;34:e14584.
2. Carrascosa JM, Puig L, Belinchón Romero I, Salgado-Boquete L, Del Alcázar E, Andrés Lencina JJ, et al. Practical update of the Recommendations Published by the Psoriasis Group of the Spanish Academy of Dermatology and Venereology (GPS) on the Treatment of Psoriasis with Biologic Therapy. Part 1. Concepts and

- General Management of Psoriasis with Biologic Therapy. *Actas Dermosifiliogr.* 2021. Published online.
- Gkalpakiotis S, Cetkovska P, Arenberger P, Dolezal T, Arenbergerova M, Velackova B, et al. Risankizumab for the treatment of moderate-to-severe psoriasis: Real-life multicenter experience from the Czech Republic. *Dermatol Ther (Heidelb)*. 2021;11:1345–55.
 - Galluzzo M, Tofani L, Lombardo P, Petruzzellis A, Silvaggio D, Egan CG, et al. Use of guselkumab for the treatment of moderate-to-severe plaque psoriasis: a 1 year real-life study. *J Clin Med*. 2020;9:2170.
 - Langley RG, Tsai TF, Flavin S, Song M, Randazzo B, Wasfi Y, et al. Efficacy and safety of guselkumab in patients with psoriasis who have an inadequate response to ustekinumab: results of the randomized, double-blind, phase III NAVIGATE trial. *Br J Dermatol*. 2018;178:114–23.
 - Strober B, Menter A, Leonardi C, Gordon K, Lambert J, Puig L, et al. Efficacy of risankizumab in patients with moderate-to-severe plaque psoriasis by baseline demographics, disease characteristics and prior biologic therapy: an integrated analysis of the phase III UltIMMa-1 and UltIMMa-2 studies. *J Eur Acad Dermatol Venereol*. 2020;34:2830–8.
 - Megna M, Fabbrocini G, Ruggiero A, Cinelli E. Efficacy and safety of risankizumab in psoriasis patients who failed anti-IL-17, anti-IL-23 and/or anti IL-23: preliminary data of a real-life 16-week retrospective study. *Dermatol Ther*. 2020;33:e14144.
 - Megna M, Potestio L, Ruggiero A, Camela E, Fabbrocini G. Guselkumab is efficacious and safe in psoriasis patients who failed anti-IL17: a 52-week real-life study. *J Dermatol Treat*. 2022:1–5. Published online.
- J. Arroyo-Andrés*, D. Falkenhain-López,
M. Agud-Dios, R. Rivera-Díaz
- Department of Dermatology, Hospital Universitario 12 de Octubre, Madrid, Spain*
- *Corresponding author.
E-mail address: a_a.jorge@hotmail.com (J. Arroyo-Andrés).