Guselkumab induction therapy has long-lasting efficacy in mild psoriasis patients

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Introduction

- Guselkumab is an anti-interleukin (IL)-23 antagonist approved for the treatment of moderate-to-severe psoriasis and readily used in current clinical practice with high efficacy.
- However, mild patients do not qualify for guselkumab treatment or other biologics due to their high costs, even after exhausting topical options.
- However, the effect of guselkumab in mild patients has not yet been explored and could present a new therapeutic strategy which may even result in long-lasting disease modification.

Table 1. Demographics of the study population

		Guselkumab	Placebo	Total
Total number of patients		15	5	20
Age at first dose	≤ 18 years	0 (0%)	0 (0%)	0 (0%)
	18 - 65 years	14 (93%)	5 (100%)	19 (95%)
	≥ 65 years	1 (7%)	0 (0%)	1 (5%)
Sex	Female	3 (20%)	1 (20%)	4 (20%)
	Male	12 (80%)	4 (80%)	16 (80%)
Fitzpatrick	I	1 (7%)	0 (0%)	1 (5%)
	II	5 (33%)	2 (40%)	7 (35%)
	III	9 (60%)	2 (40%)	11 (55%)
	IV	0 (0%)	0 (0%)	0 (0%)
	V	0 (0%)	0 (0%)	0 (0%)
	VI	0 (0%)	1 (20%)	1 (5%)
Disease onset	≤ 4 years	0 (0%)	0 (0%)	0 (0%)
	4 - 10 years	4 (27%)	2 (40%)	6 (30%)
	10 - 20 years	6 (40%)	1 (20%)	7 (35%)
	≥ 20 years	5 (33%)	2 (40%)	7 (35%)

Aim

To establish the efficacy of anti-IL-23 induction therapy in mild patients and explore the potential for long-lasting disease modification

Efficacy

Guselkumab treatment significantly reduces PASI compared to placebo

- PASI was significantly reduced compared to placebo from week 4 in 15 patients receiving guselkumab.
- At week 24, an average PASI score of 0.52 (±0.51) corresponding to a 91±8.8% decrease was obtained in the guselkumab-treated group.
- PASI-100, -90, and -75 responses were achieved by 6 (40%), 8 (53%) and 15 (100%) guselkumab-treated patients, respectivelv

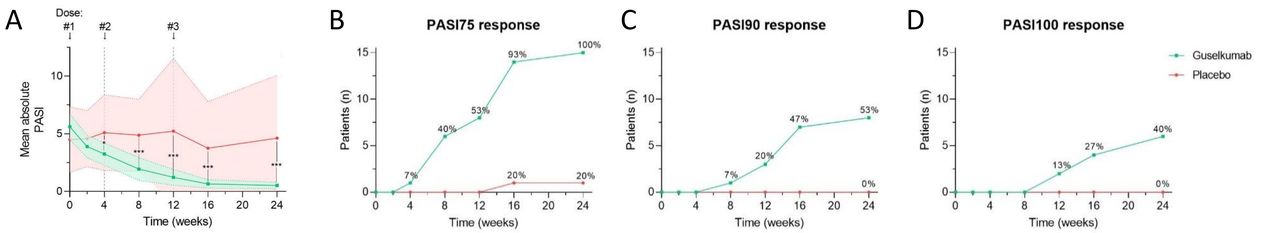

Figure 1. Efficacy expressed as mean absolute PASI and 95% confidence interval over time for patients randomized to guselkumab (n=15) or placebo (n=5) (A). Patients were administered guselkumab 100 mg or placebo at day 0 (dose #1), week 4 (dose #2) and week 12 (dose #3). The number of patients in the guselkumab (n=15) and placebo group (n=5) obtaining a Psoriasis Area and Severity Index (PASI)-75 (B), PASI90 (C) or PASI100 (D) response. Responses indicate a 75%, 90% or 100% reduction in PASI score compared to baseline, respectively. The percentages indicate the percentage of patients per treatment group achieving a response. P-values denote significant differences between the guselkumab and placebo group from the results of a mixed-effects model and are reported as *: P≤0.05, **: P≤0.01, ***: P≤0.001.

Relapse

All patients experienced relapse after cessation of treatment

- Patient-assessed relapse occurred on average 32±9.7 weeks after last dose
- Although sample size does not permit formal statistical testing, PASI responses at week 24 appear positively correlated with time to relapse in line with results from moderate-to-severe patients
- Disease duration and presence of joint complaints were neither correlated to response nor time to relapse

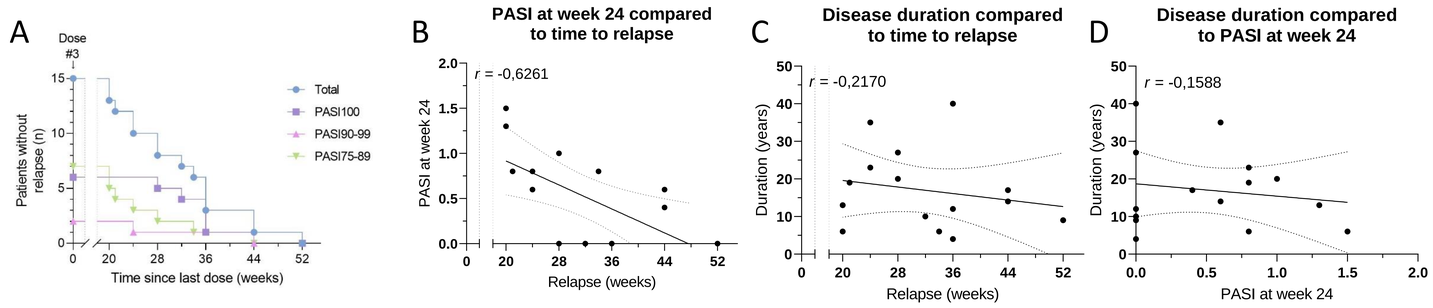

Figure 2. Time until patient-reported relapse in weeks after withdrawal from guselkumab therapy (A). Patients are stratified in their corresponding response group based on their PASI score at the end of the treatment period at week 24. Correlations between the final PASI obtained at the last study visit at week 24 and time to relapse (B), correlation between the disease onset and time to relapse (C), and correlation between the disease onset and final PASI obtained (D). A line representing the best fitting linear regression and 95% confidence intervals are presented along with the Pearson correlation coefficient (*r*).

Conclusions

Patients with mild psoriasis can benefit immensely from a short regimen of guselkumab for a prolonged period. Though disease modification is not achieved, effects in patients with shorter disease duration or after extended treatment remain to be explored.

Study design

Twenty mild psoriasis patients defined by a Psoriasis Area and Severity Index (PASI) score of ≤5 at screening were included in a randomized double-blind, placebo-controlled single centre study. Patients were naïve to systemic and biologic therapies. Disease duration ranged 4 to 39 years. Subcutaneous injections with 100 mg guselkumab or placebo were administered to fifteen or five patients, respectively, at baseline, week 4 and week 12. PASI scores were evaluated up to week 24 at in-clinic visits. Thereafter, remote follow-up was performed to obtain patient self-assessments of remission.

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