INTRODUCTION

The presence of angioedema is an indicator of more severe disease in patients with chronic spontaneous urticaria (CSU)1.

In patients with uncontrolled CSU, anti-IgE therapy is recommended as an add-on therapy to H1-antihistamines1,2

Ligelizumab, a next-generation high-affinity humanized monoclonal anti-IgE antibody, has been shown to be effective in patients with CSU inadequately controlled by H1-antihistamines alone or in combination with H1-antihistamine and/or leukotriene receptor antagonist during a 2-week core Phase 2b study (NCT02477332).

Here, we analyzed the effect of ligelizumab and omalizumab in subsets of patients, with or without angioedema, at baseline using the Phase 2b study data.

METHODS

The ligelizumab Phase 2b trial was a multicenter, randomized, double-blind, active-, placebo-controlled study and included treatments with ligelizumab 72 mg or 240 mg, omalizumab 300 mg, or placebo every 4 weeks (q4w) for 20 weeks.

In this post hoc analysis, data across timepoints (ligelizumab 72 mg, ligelizumab 240 mg, and omalizumab) from the Phase 2b study were analyzed.

The proportion of patients with complete response on hives and itch (weekly Urticaria Activity Score (UAS7)=0) in the ligelizumab and omalizumab arms within patient subgroups stratified by the presence or absence of angioedema, assessed by weekly angioedema activity score in the week prior to baseline.

The logistic regression analyses model the complete response on hives and itch (UAS7=0) was performed and adjusted for angioedema status at baseline and chronic urtica index.

Ligelizumab (72 mg and 240 mg q4w) and omalizumab q4w results were analyzed using odds ratio (OR) and 95% confidence interval (CI).

RESULTS

For the current analysis, data of 297 patients from the ligelizumab 72 mg, 240 mg, omalizumab, and placebo arms of the core study were used.

Baseline demographics and clinical characteristics of the Phase 2b core study were balanced across treatment arms (Table 1).

At Week 12, the proportion of patients with UAS7=0 on ligelizumab and omalizumab were numerically greater versus placebo in both subsets were considered:

Patients with angioedema achieving UAS7=0 at Week 12:

- Ligelizumab 72 mg, 240 mg, and omalizumab versus placebo at 248%, 43%, and 27% versus 0%, respectively (Figure 1A)

- Patients without angioedema achieving UAS7=0 at Week 12: ligelizumab 72 mg, 240 mg, and omalizumab versus placebo at 35.9%, 0%, and 24.3% versus 0%, respectively (Figure 1B)

At Week 12, change from baseline-UAS7 (least squares means ± standard error) was numerically greater with ligelizumab 72 mg, 240 mg, and omalizumab versus placebo, as shown below:

- Patients with angioedema: –21.4 ± 2.1, –20.5 ± 2.2, and –17.9 ± 2.0 versus –10.8 ± 3.1 (Figure 2B)

- Patients without angioedema: –19 ± 1.9, –16 ± 2.0, and –17 ± 2.0 versus –10 ± 3.1 (Figure 2B)

At Week 12, 6 patients (2.3%) in the ligelizumab 72 mg q4w arm reported serious adverse events (SAEs) versus 3 (0.9%) in the placebo arm.

CONCLUSION

Angioedema status at baseline is unlikely to have an impact on the response to ligelizumab treatment in patients with CSU.

In this Phase 2b study, patients receiving ligelizumab or omalizumab showed a high likelihood of achieving complete response on hives and itch versus placebo, independent of their baseline angioedema status.

The study results support that ligelizumab could be considered as an effective therapeutic option for patients with CSU.

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Figure 3. Odds of achieving UAS7=0 response with ligelizumab at Week 12 in patients with or without angioedema at baseline

UAS7=0 response vs. omalizumab

Patients with angioedema at baseline

 Patients with CSU are with or without angioedema who achieved complete response on hives and itch (UAS7=0) at Week 12. ORS were calculated. CI, confidence interval; CSU, chronic spontaneous urticaria; n, number of patients with UAS7=0 response per treatment arm; N, total number of patients that are with or without angioedema per treatment arm and used as a weight; D, weekly urticaria activity score.

Figure 2. Change from baseline in UAS7 in patients with or without angioedema

Figure 1. Proportion of patients with or without angioedema (B) achieving complete response on hives and itch (UAS7=0)

Table 1. Demographic and clinical characteristics of patients with CSU in the Phase 2b ligelizumab core study

Table 2. UAS7, weekly Urticaria Activity Score; n, number of patients; CI, confidence interval; OR, odds ratio; 95% CI, 95% confidence interval; P value, statistically significant difference at the 0.05 level; QoL, quality of life; DLQI, Dermatology Life Quality Index; FUP, follow-up; N, total number of patients per treatment arm; S, safety population; P, per protocol population. *All data are expressed as mean ± standard deviation (SD), except percentage, except for baseline DLQI score, which is expressed as median (IQR).

References
