INTRODUCTION

● Chronic spontaneous urticaria (CSU) is a debilitating and unpredictable disease characterized by the spontaneous appearance of wheals (hives), itching, or pain that lasts for 4 weeks and can be due to known or unknown causes.

● Angioedema is characterized by a sudden pronounced edema or painful swelling of the lower dermis and subcutis or mucous membranes, and occurs mainly in the face and the inside of the mouth – it can cause airway complications.

● CSU patients with angioedema experience a higher negative impact on dermatology quality of life (DLQI) and greater disease severity than those without angioedema.

● Here, we explore the effects of ligelizumab, an anti-IgE monoclonal antibody, in patients with angioedema and compare the DLQI scores to baseline.

METHODS

The ligelizumab Phase 2b study was a dose-finding, multicenter, randomized, double-blind, active, placebo-controlled trial (Figure 1).

Adult patients (aged ≥18 to ≤75 years), diagnosed with refractory CSU who remained symptomatic despite treatment with at least one oral CSU pharmacologic, were included in the study.

Patients were randomized to 4 treatment groups: 72 mg, 120 mg, 240 mg or placebo over 12 weeks.

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RESULTS

Baseline demographics and disease characteristics

In this analysis, data of 207 patients from the core study and 200 patients from the extension study were evaluated.

The summary of patient demographics and disease characteristics of patients considered for the Phase 2b core and extension studies is provided in Table 1.

Table 1. Baseline demographics and disease characteristics of patients in the Phase 2b core and extension studies

<table>
<thead>
<tr>
<th>Group</th>
<th>Age (years)</th>
<th>Female sex</th>
<th>Angioedema</th>
<th>Presence of angioedema</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIG 72mg</td>
<td>24.0±11.2</td>
<td>68 (55.6)</td>
<td>45 (35.5)</td>
<td>46 (36.5)</td>
</tr>
<tr>
<td>LIG 240mg</td>
<td>24.0±11.2</td>
<td>68 (55.6)</td>
<td>45 (35.5)</td>
<td>46 (36.5)</td>
</tr>
<tr>
<td>OMA 300mg</td>
<td>24.0±11.2</td>
<td>68 (55.6)</td>
<td>45 (35.5)</td>
<td>46 (36.5)</td>
</tr>
<tr>
<td>PBO</td>
<td>24.0±11.2</td>
<td>68 (55.6)</td>
<td>45 (35.5)</td>
<td>46 (36.5)</td>
</tr>
</tbody>
</table>

Change in weekly Angioedema Activity Score (AAS7) over time

In the core study, the mean±SD of AAS7 at baseline in the core Phase 2b and extension studies, a) 43.1±16.1 vs 22.8±11.6 and b) 43.1±16.1 vs 22.8±11.6 for ligelizumab 72 mg and 240 mg, respectively.

Impact of angioedema on Dermatology Life Quality Index (DLQI)

In the core study overall, patients with angioedema in all treatment arms had higher mean and median DLQI at baseline (range: mean 14.3–20.1; median 14–16), indicating a worse-aware impact on dermatology QoL compared with patients without angioedema (range: mean 10.7–12.8; median 10–12; Figure 3a).

Similarly, in the extension study, overall, patients with angioedema at the extension baseline had a higher mean and median DLQI compared with patients without angioedema at the extension baseline (12.5; Figure 3a).

CONCLUSIONS

● CSU patients with angioedema experience a higher negative impact on dermatology QoL versus those without angioedema.

● Patients with lower AAS7 were significantly associated with lower impact on dermatology QoL.

● Comparison of other symptoms and urticaria may normalize patients’ treatment-related QoL.

● Ligelizumab may provide an effective therapeutic option for CSU patients with angioedema and is currently under investigation.

References


Footnotes

*The least squares (LS) mean change from baseline (CBO) for AAS7 evaluated for patients with angioedema in each treatment arm was larger with ligelizumab compared with omalizumab or placebo (Figure 2b and c).

**After 12 weeks, the mean±SD DLQI for angioedema versus angioedema-free patients were comparable: 30.0±7.0 vs 29.3±7.0 (P=0.157) for ligelizumab 72 mg and 30.0±7.0 vs 28.5±6.8 (P=0.078) for ligelizumab 240 mg.

***Significant difference between ligelizumab 72 mg and 240 mg vs placebo: P<0.0001 for ligelizumab 72 mg and 30.0±7.0 vs 28.5±6.8 (P=0.078) for ligelizumab 240 mg.

Conflict of interest

Note: the authors declare that they have no conflict of interest.

Acknowledgements

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Ligelizumab qualifies for inclusion in this year’s list of European Society for Dermatological Research (ESDR) top 50 dermatology researches of the year.