International Archives of Allergy and Immunology

Clinical Immunology – Commentary

Int Arch Allergy Immunol 2021;182:461–462
DOI: 10.1159/000512373

Received: October 15, 2020
Accepted: October 16, 2020
Published online: December 15, 2020

High-Dose Omalizumab versus Ligelizumab for the Treatment of Chronic Spontaneous Urticaria: Do Not We Need a Head-To-Head Comparison?

Murat Türk[a] İnsu Yılmaz[b]

[a]Clinic of Clinical Immunology and Allergic Diseases, Kayseri Şehir Research and Training Hospital, Kayseri, Turkey; [b]Division of Clinical Immunology and Allergy, Erciyes University, Kayseri, Turkey

In their phase 2b dose-finding trial, Maurer et al. [1] reported that in moderate-to-severe chronic spontaneous urticaria (CSU) patients, ligelizumab at a dose of 72 mg resulted in higher percentage of complete control of symptoms than omalizumab. Based on the results of this study, two 1-year phase 3 trials (NCT03580356 and NCT03580369) were launched with randomizing patients to 2 different doses of ligelizumab (72 and 240 mg) or 300 mg/4 weeks of omalizumab in a similar patient population.

Ligelizumab has higher affinity for IgE and showed superior inhibition of IgE binding to Fc-RI than omalizumab and expected to be more efficacious in Fc-RI-driven diseases like CSU [2]. Still, even though no such difference in efficacy was reported in preliminary studies with different doses, many studies with real-life data have reported that high-dose omalizumab could lead to better disease control up to 64% in patients in whom disease is not under control with standard doses [3]. However, high-dose omalizumab is still off-label or needs private permissions for the treatment of CSU in many countries and, due to lack of high-quality evidence, it is not recommended by the current urticaria guideline for now [4]. If ligelizumab accomplishes the procedures and is approved for usage in CSU, 2 main questions will come up for us – as the clinicians – to answer: (1) Which anti-IgE treatment should we primarily use considering cost-efficiency?, and (2) For patients who do not benefit from standard doses of omalizumab, should we continue with high-dose omalizumab or switch to ligelizumab directly?

The main problem regarding the monoclonal antibodies, which are increasingly used in many different diseases, is the lack of head-to-head comparative studies since monoclonal antibodies targeting the same target are almost always produced by different pharmaceutical companies. Omalizumab and ligelizumab are produced by the same company; therefore, may be this time 2 different monoclonal antibodies with the same target could be compared for the first time in these 2 phase 3 randomized-controlled studies. Still it would be very interesting to know whether high-dose omalizumab is more effective than the standard dose or whether ligelizumab has higher efficacy than high-dose omalizumab in CSU. In order to give a clarifying answer to all these questions, we believe

Edited by: H.-U. Simon, Bern.

karger@karger.com
www.karger.com/iaa

Murat Türk
Clinic of Clinical Immunology and Allergic Diseases
Kayseri Şehir Research and Training Hospital
Melikgazi, Kayseri 38080 (Turkey)
mrttrk@gmail.com

this chance should not be missed and studies comparing efficacy and cost-effectiveness of ligelizumab and high-dose omalizumab should be designed.

Conflict of Interest Statement

Murat Türk reports grants and personal fees from Novartis, outside the submitted work. İnsu Yılmaz reports grants and personal fees from Novartis and AstraZeneca, outside the submitted work.

Funding Sources

The authors did not receive any funding.

Author Contributions

Both authors contributed equally to the submitted work.

References

1 Maurer M, Giménez-Arnau AM, Sussman G, Metz M, Baker DR, Bauer A, et al. Ligelizumab for chronic spontaneous urticaria. N Engl J Med. 2019;381(14):1321–32.

2 Gasser P, Tarchevskaya SS, Guntern P, Brigger D, Ruppli R, Zbären N, et al. The mechanistic and functional profile of the therapeutic anti-IgE antibody ligelizumab differs from omalizumab. Nat Commun. 2020;11(1):165.

3 Türk M, Carneiro-Leão L, Kolkhir P, Bonnekoh H, Buttgereit T, Maurer M. How to treat patients with chronic spontaneous urticaria with omalizumab: questions and answers. J Allergy Clin Immunol Pract. 2020;8(1):113–24.

4 Zuberbier T, Aberer W, Asero R, Abdul Latiff AH, Baker D, Ballmer-Weber B, et al. The EAACI/GA²LEN/EDF/WAO guideline for the definition, classification, diagnosis and management of urticaria. Allergy. 2018;73(7):1393–414.