FULL-LENGTH ARTICLE NPub.org/hilv3j

Efficacy and Safety of Rozanolixizumab in Moderate to Severe Generalized Myasthenia Gravis

A Phase 2 Randomized Control Trial

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Study Question

Can rozanolixizumab be an effective and tolerable treatment for generalized myasthenia gravis (gMG)?

What Is Known and What This Paper Adds

Rozanolixizumab prevents the recycling of immunoglobulin G (IgG) by inhibiting interactions between IgG and the neonatal Fc receptor (FcRn), thereby lowering pathogenic IgG autoantibodies in patients with gMG. This trial's results indicate that rozanolixizumab is well tolerated but did not significantly improve Quantitative MG (QMG) scores. However, overall data suggest that it may still provide clinical benefit.

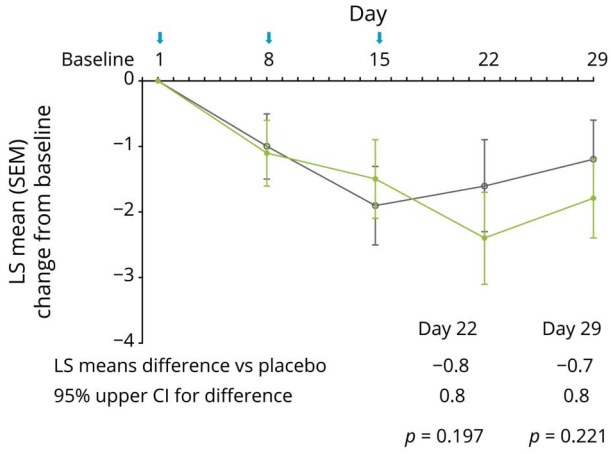
Methods

For this double-blind phase 2a trial, the investigators recruited 43 adults with gMG through 17 sites in the US, Canada, and the EU. Trial procedures occurred between May 2017 and August 2018. At baseline, the participants had QMG scores ≥11 and serum total IgG levels >6 g/L. In period 1 (days 1–15), participants were randomized (1:1) to receive 3 once-weekly subcutaneous infusions of rozanolixizumab (7 mg/kg; n = 21) or placebo (n = 22). After period 1, there was a 2-week treatment-free observation period (days 16–29), followed by period 2 (days 29–43) in which participants were re-randomized to receive 3 once-weekly infusions at either 4 or 7 mg/kg. The primary outcome was a comparison of the rozanolixizumab and placebo groups in terms of changes in QMG score between baseline and day 29. The secondary outcomes were between-group comparisons of changes in MG–Activities of Daily Living (MG-ADL) and MG-Composite (MGC) scores over the same period.

Results and Study Limitations

The rozanolixizumab group did not significantly differ from the placebo group in terms of QMG score changes from baseline to day 29 (difference in least squares [LS] mean changes, −0.7; 95% upper confidence limit, 0.8), but the rozanolixizumab group did experience greater-than-placebo improvements in MG-ADL and MGC scores. These findings provide Class I evidence that rozanolixizumab did not significantly improve QMG scores. Continuation of rozanolixizumab 7 mg/kg in period 2 resulted in further improvements in QMG, MG-ADL and MGC scores. The most common adverse event in the rozanolixizumab group to day 29 was headache. This trial's limitations include its small sample, short treatment duration, and its single-sided testing of the QMG score data.

Figure Longitudinal Changes in QMG Scores in the Rozanolixizumab (Green) and Placebo (Gray) Groups



The blue arrows indicate dosing timepoints. SEM = standard error of the mean.

Registration, Study Funding, and Competing Interests

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