Lemborexant and Daridorexant for the Treatment of Insomnia: An Indirect Comparison, Using Number Needed to Treat, Number Needed to Harm, and Likelihood to Be Helped or Harmed

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Abstract

Background. To describe lemborexant and daridorexant for insomnia treatment using number needed to treat (NNT), number needed to harm (NNH), and likelihood to be helped or harmed (LHH).

Methods. Dichotomous outcomes were identified from the two registrational daridorexant randomized controlled trials. Analogous data were then extracted for lemborexant from the two lemborexant registration studies.

Results. Using pooled dosage data, lemborexant had a clinically relevant magnitude of therapeutic effect, as evidenced by NNT values versus placebo <10, and NNH values for lemborexant versus placebo were >10, suggesting that lemborexant is relatively tolerable. When comparing response versus discontinuation because of an adverse event (AE) for Month 3, the LHH ranges 5.2 to 10.4 for lemborexant pooled 5 mg and 10 mg doses (a favorable result). For daridorexant, the efficacy outcomes for pooled 25 mg and 50 mg doses generally result in NNT values versus placebo ≥10; in all instances, doses of 50 mg yield more robust NNT estimates than for the 25 mg dose. The rate of discontinuation because of an AE at Month 3 was higher for placebo than for daridorexant, rendering favorable LHH calculations for daridorexant despite the less robust NNT estimates, with an LHH in the range of 90.9 to 125 for Month 3 when comparing response versus discontinuation because of an AE (a favorable result).

Conclusions. Benefit-risk ratio for lemborexant and daridorexant is favorable as measured by NNT, NNH, and LHH. Indirect comparisons suggest an efficacy advantage for lemborexant and a tolerability advantage for daridorexant.

Funding. Eisai Inc.

https://doi.org/10.1017/S1092852923002183 Published online by Cambridge University Press