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Title: Tolerability, efficacy and retention rate of BRV in patients previously treated with LEV: a monocenter retrospective outcome analysis

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Highlights:

- Improved seizure control due to BRV treatment in patients with prior LEV treatment
- Seizure freedom in some patients on BRV even with prior treatment failure with LEV
- Considerable reduction of psychiatric adverse effects due to switch from LEV to BRV
- Potential for higher dosing of BRV as compared to LEV due to a better tolerability
- 80% retention rate of BRV after 6 months

Purpose:

To determine the potential for improvement of tolerability and efficacy by the use of Brivaracetam (BRV) in patients previously treated with Levetiracetam (LEV).

Methods:

We retrospectively analyzed data from patients treated with BRV at the Freiburg Epilepsy Center.

Results:

102 patients with a minimum follow up of 6 months were included. The mean duration of treatment was 301.6 (± 156.8) days. 60 patients underwent an overnight switch from LEV to BRV, 42 patients have had LEV at some time in the past.

Out of 46 patients with a quantifiable seizure baseline and follow-up of 6 months 10 patients (21.7%) had an increase in seizure frequency, 15 (32.6 %) were 50%-responders, and 10 patients (21.7%) became newly seizure-free. Patients with an overnight switch from LEV to BRV who had a reduction in seizure frequency had the highest dose ratio of the final BRV dose to LEV (1:10.1) and the biggest difference between the starting and final dose of BRV, suggesting that previously seizure control was limited by the tolerated LEV dosage. The retention rate after 6 months was 80.4%.