

EFFICACY AND SAFETY OF LACOSAMIDE VERSUS LEVETIRACETAM MONOTHERAPY IN
NEW ONSET FOCAL SEIZURE IN ADULT PATIENTS: A NON INFERIORITY RANDOMIZED
CONTROLLED TRIAL

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Objective: To assess efficacy and tolerability of Lacosamide (LCM) monotherapy compared to Levetiracetam (LEV) in adult patients with new onset focal epilepsy.

Materials and methods: Open-label single centre randomized non-inferiority trial of adult patients with new onset focal seizures. Demographic, seizure details, LCM and LEV daily dose at baseline and at 6 months of follow-up were compared.

Results: 35 patients were enrolled in each group. The baseline characteristics (age, duration of illness, seizure frequency) were comparable in both the groups. The most common type of seizure was FBTCS 70% in both the group followed by FIAS and FAS. Structural abnormality was found in 21(60%) patient of LCM group and 22(63%) in 35 LEV group. The average daily dose of LCM was 385.71 ± 49.36 mg/day, and for LEV was 1885.71 ± 501.25 mg/day. In LCM group the seizure frequency decreased from 3.33 ± 1.88 to 0.85 ± 1.09 ($p=0.001$) at six months and from 3.61 ± 3.12 to 0.94 ± 1.24 ($p=0.001$) in LEV group and found non significant different between the two groups ($p=0.74$). At 6-month follow-up 78.9% in the LCM arm and 87.9% in the LEV arm had 50% reduction in seizure frequency. During the maintenance period, 43.3% of patients in both the LCM and LEV arms attained seizure freedom ($p=1.0$), showing that LCM recipients were noninferior to LEV. There was no significant adverse event in both the groups.

Conclusion: Treatment with lacosamide monotherapy was non inferior to levetiracetam monotherapy in seizure control in patient of new onset focal seizure.

