PACU LITERATURE REVIEW

REFERENCE

Peter-Derex L, Philippeau F, Garnier P, et al. Safety and efficacy of prophylactic levetiracetam for prevention of epileptic seizures in the acute phase of intracerebral haemorrhage (PEACH): a randomised, double-blind, placebo-controlled, phase 3 trial. *Lancet Neurol*. 2022;21(9):781-791.

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SUMMARY

Levetiracetam might be effective in preventing acute seizures in intracerebral hemorrhage, but larger studies are needed to determine whether seizure prophylaxis improves functional outcome in patients with intracerebral hemorrhage.

BACKGROUND

- The incidence of early seizures after intracerebral hemorrhage reaches 30% when subclinical seizures are diagnosed by continuous EEG. Current guidelines do not recommend prophylactic antiseizure treatment in this setting

STUDY OBJECTIVE

- To assess whether prophylactic levetiracetam would reduce the risk of acute seizures in patients with intracerebral hemorrhage

STUDY DESIGN

- Parallel-group, double-blind, randomized, placebo-controlled, investigator-led, phase 3 trial in three hospitals in France.

STUDY INTERVENTION & COMPARISON

- **Levetiracetam 500mg IV q12h vs matching placebo**

RESULTS

- **Primary Outcome**
  - A clinical or electrographic seizure occurred in the first 72 hr in 3 (16%) patients in the levetiracetam group vs 10 (43%) in the placebo group (OR 0.16, p=0.043). Of note, all seizures recorded in this time period were electrographic
- **Secondary Outcomes**
  - Six seizures were recorded on cEEG monitoring in the levetiracetam group vs 158 in the placebo group (p=0.0021)
  - Median duration of seizure on cEEG was shorter in levetiracetam group (67 sec vs 780 sec, p=0.028)
  - One patient in the placebo group had an early clinical seizure (between 72 hr and 30 days) vs none in the levetiracetam group (p>0.99)

ADDITIONAL READINGS

- Gilmore EJ, Maciel CB, Hirsch LJ, Sheth KN. Review of the utility of prophylactic anticonvulsant use in critically ill patients with intracerebral hemorrhage. *Stroke* 2016; **47:** 2666–72.
- Leira R, Davalos A, Silva Y, et al. Early neurologic deterioration in intracerebral hemorrhage: predictors and associated factors. *Neurology* 2004; **63:** 461–67.
- Cordonnier C, Demchuk A, Ziai W, Anderson CS. Intracerebral haemorrhage: current approaches to acute management. *Lancet* 2018; **392:** 1257–68.