



We evaluated the pharmacokinetics and clinical efficacy of continuous infusion valproic acid in hospitalized patients with migraine and seizures” Cook et al (2015).

Abstract:

**INTRODUCTION:** Valproic acid is a versatile antiepileptic drug that is often used in the acute care setting. Intravenous valproic acid lends itself well to a continuous infusion as it exhibits a relatively short half-life. We evaluated the pharmacokinetics and clinical efficacy of continuous infusion valproic acid in hospitalized patients with migraine and seizures.

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**METHODS:** A retrospective cohort study was performed utilizing information from the medical records of patients receiving an intravenous continuous infusion of valproic acid. Patients were included if they were aged 1 month to 85 years and they received a continuous infusion of valproic acid. Therapeutic response, common adverse effects, and the pharmacokinetic profile of valproic acid were evaluated.

**RESULTS:** Continuous infusion valproic acid led to a concentration within the desired range (50-100 µg/ml) in 83.4 % of patients, a rate that was higher in pediatric patients. The clinical response rate was also higher in pediatric patients with seizures or migraines and appeared to be better when the concentration was >75 µg/ml. Analysis of safety parameters suggests

similar safety considerations to valproic acid when administered via intermittent infusion.

**CONCLUSIONS:** Continuous infusion valproic acid appears to be a safe, effective, and predictable manner by which to administer valproic acid to pediatric and adult patients admitted to the hospital.

Reference:

Cook, A.M., Zafar, M.S., Mathias, S., Stewart, A.M., Albuja, A.C., Bensalem-Owen, M., Kapoor, S. and Baumann, R.J. (2015) Pharmacokinetics and Clinical Utility of Valproic Acid Administered via Continuous Infusion. CNS Drugs. December 29th. .

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