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.

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:


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Continuous infusion of valproic acid in hospitalized patients