

## INTISARI

Epilepsi adalah salah satu kondisi neurologis kronis yang serius dan paling umum terjadi secara global, terjadi pada 40-50% anak-anak di Indonesia. Sekitar 20-30% diantaranya mengalami kekambuhan kejang setelah mendapatkan terapi obat anti epilepsi. Penelitian ini bertujuan untuk mengetahui hubungan kesesuaian estimasi kadar obat dalam darah terapi asam valproat terhadap tercapainya remisi pada pasien epilepsi anak.

Penelitian ini merupakan penelitian observational deskriptif-analitik dengan desain *Nasted case control*. Pengambilan data dilakukan secara retrospektif untuk pemantauan remisi pasien dan prospektif untuk wawancara kepatuhan minum obat pasien. Waktu penelitian dilaksanakan selama 2 bulan. Pengambilan sampel dengan metode *Consecutive sampling* dengan memperhatikan kriteria inklusi dan eksklusi. Analisis data yang digunakan adalah deskriptif, *Chi-Square*, *Mann Whitney*, dan analisis regresi logistik.

Didapatkan 46 pasien epilepsi anak yang memenuhi kriteria inklusi. Sebanyak 82,6% pasien berjenis kelamin laki-laki, dengan rata-rata usia subjek  $9,86 \pm 3,93$ , dan rata-rata berat badan  $28,52 \pm 15,05$ . Formulasi asam valproat yang paling banyak digunakan pada pasien anak ialah sediaan sirup, dengan rata-rata dosis harian asam valproat  $14,15 \pm 7,44$ . Rata-rata skor kepatuhan pasien pada kelompok kasus ialah 6,57, dan pada kelompok kontrol sebesar 6,87. Berdasarkan hasil perhitungan kadar obat dalam darah diperoleh rata-rata kadar obat asam valproat pada kelompok kasus ialah  $52,34 \pm 19,88 \mu\text{g/mL}$ , dan pada kelompok kontrol ialah  $46,39 \pm 23,88 \mu\text{g/mL}$ . Hasil perhitungan perkiraan kadar obat asam valproat tidak berpengaruh signifikan terhadap peningkatan tercapainya periode remisi pada pasien epilepsi anak dengan nilai  $p = 0,333$ . Variabel perancu jenis kelamin, status gizi, penyakit penyerta, interaksi obat, jenis terapi serta kepatuhan minum obat dilakukan analisis regresi linier untuk melihat pengaruhnya terhadap tercapainya periode remisi.

Kesesuaian estimasi kadar obat asam valproat dalam darah tidak berpengaruh signifikan terhadap peningkatan tercapainya periode remisi pada pasien epilepsi anak.

Kata kunci : Epilepsi pediatrik, asam valproat, estimasi kadar obat dalam darah.

## ABSTRACT

Epilepsy is one of the most common and serious chronic neurological conditions globally, occurring in 40-50% of children in Indonesia. About 20-30% of them experience seizure recurrence after receiving antiepileptic drug therapy. This study aims to determine the relationship between the estimation of valproic acid blood levels and the achievement of remission in pediatric epilepsy patients.

This study was a descriptive-analytic observational study with a nested case-control design. Data were collected retrospectively for monitoring patient remission and prospectively for interviewing patient medication compliance. The study was conducted for 2 months. Consecutive sampling method was used to collect the sample by considering the inclusion and exclusion criteria. Data analysis used was descriptive, Chi-Square, Mann Whitney, and logistic regression analysis.

There were 46 pediatric epilepsy patients in both hospitals who met the inclusion criteria. A total of 82.6% of patients were male, with an average subject age of  $9.86 \pm 3.93$ , and an average body weight of  $28.52 \pm 15.05$ . The most widely used valproic acid formulation in pediatric patients was syrup, with an average daily dose of valproic acid of  $14.15 \pm 7.44$ . The average patient compliance score in the case group was 6.57, and in the control group it was 6.87. Based on the calculation of drug levels in the blood, the average level of valproic acid in the case group was  $52,34 \pm 19,88 \mu\text{g/mL}$ , and in the control group was  $46,39 \pm 23,88 \mu\text{g/mL}$ . The results of the calculation of estimated valproic acid drug levels did not have a significant effect on the achievement of the remission period in pediatric epilepsy patients with a p value = 0.333. Confounding variables of gender, nutritional status, comorbidities, drug interactions, type of therapy and drug compliance were carried out linear regression analysis to see their influence on the achievement of the remission period.

The appropriateness of estimating blood levels of valproic acid did not have a significant effect on increasing the achievement of remission periods in pediatric epilepsy patients.

**Keywords:** Pediatric epilepsy, valproic acid, estimation of blood drug levels.