ABSTRACT

Analyze Patients Adherence with Seizure Frequency and Serum Level of Phenytoin in Epileptic Outpatients Using Monotherapy Antiepileptic Drug Phenytoin

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Background : Epilepsy is an unprovoked seizure condition, while epileptic status is a seizure activity that does not improve spontaneously or seizures repeatedly without any improvements between seizures. Antiepileptic drugs are the main therapy for epilepsy to prevent seizures thoroughly and reduce or even combat seizure frequency. Non-adherence is considered as one of the important factors for controlling epileptic seizure. This study was developed to analyze the correlation of adherence (use ARMS questionnaire) with seizure frequency and level serum of Phenytoin in epileptic outpatients with monotherapy of Phenytoin.

Objective : This study was aimed to analyze the correlation of adherence with seizure frequency and level serum of Phenytoin on outpatients with monotherapy antiepileptic drug Phenytoin.

Methods : This study was cross sectional observational study. Twelve epileptic outpatients were chosen using consecutive sampling. ARMS score, seizure frequency and serum level of Phenytoin were measured. Ethical committee of RSUD Dr. Soetomo and RSUA Surabaya approved this study. Serum levels of Phenytoin were examined using ELISA (enzyme-linked immunosorbent assay), statistically processed using spearman correlation test.

Result : Percentage of adherence on epileptic outpatients in this study was 25% and non-adherence patient was 75%. Correlation between adherence using ARMS score categories of ARMS score 12 and >12 with categories of serum level of Phenytoin using spearman test was $r = -0.577$; $p = 0.049$ ($p<0.05$). Correlation between adherence using ARMS score categories with seizure categories (seizure or not seizure) using spearman test was $r = 0.293$; $p = 0.358$ ($p>0.05$). Correlation between categories of serum level of Phenytoin with seizure categories was $r = -0.507$; $p= 0.092$ ($p>0.05$).

Conclusion : There was significant correlation in adherence between ARMS score categories (score 12 and > 12) with categories of serum levels of Phenytoin.

Keywords: *Epilepsy, Phenytoin Level, Adherence, ARMS*