**LACK OF CORRELATION BETWEEN ADHERENCE MEASUREMENT METHODS IN NEW-ONSET EPILEPSY**

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**ABSTRACT**

Study aims were (1) to document adherence measurement using 3 different methods. (2) to determine the relationship between each methods. The study was conducted using cross sectional design. Patients were followed-up for 6 months and adherences were measured after 1 and 6 months therapy. The methods used to measure the adherences were 1) Patient/parent-self reported (MMAS-8 questionnaires); 2) Drug level assay and 3) seizure frequency observation. Participants enrolled were 50 patients with new-onset general epilepsy (M age = 7.2 ± 2.0; 54 % male; 46% female Indonesian). Patient/parent-self reported methods resulted mean overall adherence scores across patients during this 6-months period was 4.07 ± 1.15 (81.4%). Meanwhile phenytoin assay indicated only 18% patients reached therapeutic concentration. Seizure frequency observation revealed 81% improvement in seizure frequency (t= 7.63, P=0.000) after 6 months therapy. Negative correlations were found between Patients/patients-self reporting with drug levels(rho=-0.082, P=0.59); Parents/patients-self reporting with seizure frequency(rho=-0.17, P=0.24). Correlation between seizure frequency with phenytoin level was also proved by Spearman test as no significant (rho=0.12, P=0.42). 7 patients (14%) remain had seizure after 6 months but only 2 patients were having miss dose. There were lack of correlation between the various methods of adherence measurement but it does not necessarily reflect a minimum in adherence.

**Key words:** Adherence measurement, Parents/patients-self report, epilepsy

**INTRODUCTION**

Patient adherence to Antiepileptic Drug (AED) continues to be a cause of concern within epileptic patients. For individuals with epilepsy, adherence to medication is crucial in preventing or minimizing seizures and their cumulative impact on everyday life. Non-adherence to antiepileptic drugs can result in breakthrough seizures many months or years after a previous episode and can have serious repercussions on an individual’s perceived quality of life. Stanaway et al2 found that 31% of seizures were precipitated by nonadherence to medication. And, as with other chronic medical conditions, estimates suggest that between 30% and 60% of patients with epilepsy are not adhering to their drug regimens.3,4,5 In assessing the effectiveness of prescribed medication there is a strong emphasis on the ability of the patient to adhere to the regime recommended by the clinician.6,7 Various tools have been developed to measure adherence but have limitations. Most research has concentrated on quantifying levels of compliance/adherence without first defining what is meant by both terms.8 In a review of adherence studies, Vermeire et al9 report that adherence has largely been measured using process-orientated definitions involving number of doses missed or taken incorrectly rather than looking at the end result to health. As Farmer10 in his review of adherence