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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 wasconducted using cross sectional design. Patients were followed-up for 6 months and adherences weremeasured after 1 and 6 months therapy. The methods used to measure the adherenceswere 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 therapeutics 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 Parents/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[1].Stanaway et al[2] 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 adhere with 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 al[9] 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 Farmer[10] in his review of adherence