

Kadar vitamin d pada anak epilepsi yang menggunakan antikonvulsan jangka panjang = Vitamin d level in epileptic children with long term anticonvulsant therapy / Fathy Zuandi Pohan

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Abstrak

ABSTRAK

Latar belakang. Penggunaan antikonvulsan jangka panjang, terutama golongan penginduksi enzim, berkaitan dengan penurunan kadar 25-hidroksivitamin D (25[OH]D) dan peningkatan prevalens defisiensi vitamin D. Namun demikian, hasil yang tidak konsisten ditunjukkan pada penggunaan antikonvulsan nonpenginduksi enzim seperti asam valproat. Sampai saat ini belum ada penelitian di Indonesia yang melihat hubungan penggunaan antikonvulsan jangka panjang dengan kadar 25(OH)D.

Tujuan. Penelitian ini bertujuan untuk mengetahui kadar 25(OH)D dan prevalens defisiensi/insufisiensi vitamin D pada anak epilepsi yang menggunakan antikonvulsan jangka panjang serta faktor-faktor yang memengaruhinya.

Metode. Penelitian potong lintang di dua poliklinik neurologi anak di Jakarta pada bulan Maret hingga Juni 2013 pada anak epilepsi usia 6 – 11 tahun yang menggunakan asam valproat, karbamazepin, fenobarbital, fenitoin, atau okskarbazepin, baik tunggal maupun kombinasi, selama 1 tahun atau lebih.

Penelitian menggunakan kontrol matching usia dan jenis kelamin. Pemeriksaan kadar 25(OH)D menggunakan metode enzyme immunoassay.

Hasil. Terdapat 31 subjek epilepsi dan 31 kontrol dengan rerata usia 9,1 (SD 1,8) tahun. Sebagian besar subjek menggunakan asam valproat (25/31) dan diberikan monoterapi (21/31). Rerata lama pemakaian antikonvulsan adalah 41,9 (SD 20) bulan. Rerata kadar 25(OH)D subjek epilepsi adalah 41,1 (SD 16) ng/mL, lebih rendah dibanding kontrol dengan selisih 9,7 ng/mL (IK95% 1,6 sampai 17,9).

Tidak ditemukan defisiensi vitamin D pada kedua kelompok. Prevalens insufisiensi vitamin D pada subjek epilepsi lebih besar dibanding kontrol (12/31 vs 4/31; p=0,020). Berdasarkan analisis multivariat, tidak ada faktor yang memengaruhi penurunan kadar 25(OH)D pada anak epilepsi yang menggunakan antikonvulsan jangka panjang.

Simpulan. Kadar vitamin D pada anak epilepsi yang menggunakan antikonvulsan jangka panjang lebih rendah dibanding dengan kontrol namun tidak sampai menyebabkan defisiensi vitamin D.

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ABSTRACT

Background. Long-term anticonvulsants therapy, especially the enzyme inducer, are associated with low level of 25-hydroxyvitamin D (25[OH]D) and high

prevalence of vitamin D deficiency. However, studies had showed inconsistent results on long-term usage of non-enzyme inducer anticonvulsant such as valproic acid. Until now, there is no study ever conducted in Indonesia to evaluate the association between long-term usage of anticonvulsant with 25(OH)D level.

Objectives. To investigate 25(OH)D level and the prevalence of vitamin D deficiency/insufficiency in epileptic children who are using long-term anticonvulsant and to describe the associated factors.

Method. This was a cross-sectional study conducted at two pediatric outpatient neurology clinics in Jakarta, between March to June 2013. Subjects were epileptic children, aged 6 – 11 years old who had been using valproic acid, carbamazepine, phenobarbital, phenytoin, or oxcarbazepine, as single or combination therapy, for 1 year or more. We performed a matched control for age and sex. The 25(OH)D level was measured with enzyme immunoassay method.

Results. There were 31 epileptic children and 31 controls. The mean age was 9,1 (SD 1.8) years old. Most of the subjects were treated with valproic acid (25/31) and administered as monotherapy (21/31). The mean duration of anticonvulsant consumption was 41.9 (SD 20) months. The mean 25(OH)D level of epileptic children was 41.1 (SD 16) ng/mL, lower than control with difference 9.7 ng/mL (95% CI 1.6 to 17.9). There was no vitamin D deficiency found in this study. The prevalence of vitamin D insufficiency in epileptic children was higher than control (12/31 vs 4/31; $p=0,020$). Based on the multivariate analysis, no identified risk factors were associated with low level of 25(OH)D in epileptic children with longterm anticonvulsant therapy.

Conclusion. Vitamin D level in epileptic children with long-term anticonvulsant therapy is lower than control but none have vitamin D deficiency.