KORELASI KADAR VITAMIN D SERUM TERHADAP KADAR KOLESTEROL TOTAL SERUM PADA PASIEN EPILEPSI

Caraka Adhika Rahardjo[1], Hardian[2], Lusiana Batubara[3] Santoso[3]
[1]Undergraduate Program, Faculty of Medicine, Universitas Diponegoro, Semarang, Indonesia
[2]Department of Physiology, Faculty of Medicine, Universitas Diponegoro, Semarang, Indonesia
[3]Department of Medical Biology and Biochemistry, Universitas Diponegoro, Semarang, Indonesia
Corresponding author's Email: santoso@fk.undip.ac,id

ABSTRAK

Latar Belakang: Epilepsi adalah penyakit otak yang ditandai dengan kecenderungan kejang berulang pada sebagian atau seluruh tubuh akibat gangguan pada pola aktivitas listrik di otak berupa depolarisasi berkelanjutan dan/atau inhibisi neuron yang terhambat. Angka kejadian epilepsi adalah 5-7 per 10.000 anak pada usia 0-15 tahun. Terdapat beberapa terapi farmakologis pada pasien epilepsi dengan menggunakan obat, seperti asam valproat, karbamazepin, dan fenobarbital. Masing-masing terapi farmakologis di atas memiliki cara kerja yang berbeda-beda dalam menyebabkan hiperpolarisasi. Namun, masing-masing terapi farmakologis tersebut terbukti meningkatkan parameter lipid darah. Selain itu, terdapat beberapa terapi nonfarmakologis untuk epilepsi, seperti memperhatikan pasien dengan konsep menghindari 5K (kepanasan, kecapekan, kelaparan, kehausan, kepikiran) dan menghindari paparan sinar matahari yang terbukti menimbulkan kejang pada pasien epilepsi. Pada lain pihak, kebiasaan menghindari sinar matahari tersebut dapat menghambat pembentukan vitamin D karena tidak adanya paparan sinar UV. Padahal, vitamin D dalam bentuk kalsidiol penting untuk menurunkan lipid darah melalui penghambatan paratiroid. Penelitian ini bertujuan untuk mengetahui korelasi dan kuat hubungan antara kadar vitamin D serum dan kadar kolesterol total serum pada pasien epilepsi.

Metode : Penelitian ini merupakan penelitian observasional analitik dengan metode *cross-sectional*. Subjek penelitian adalah 29 sampel pasien epilepsi yang berobat di RSND Semarang. Sampel berupa darah vena pasien yang sudah diambil di laboratorium RSND yang kemudian dilakukan pemeriksaan kadar vitamin D serum di Laboratorium GAKI FK Undip dan kadar kolesterol total serum di laboratorium RSND. Data kemudian dianalisis dengan menggunakan uji korelasi pearson.

Hasil: Hasil uji korelasi antara kadar vitamin D serum [vitamin D 25(OH)] dan kadar kolesterol total serum dengan uji korelasi pearson didapatkan nilai $p = 0,981$ ($p > 0,05$) sehingga dapat disimpulkan tidak terdapat hubungan bermakna.

Kesimpulan : Tidak ada korelasi yang bermakna antara kadar vitamin D serum dan kadar kolesterol total serum pada pasien epilepsi.

Kata kunci: epilepsi, OAE (Obat Anti Epilepsi), vitamin D serum, kolesterol total serum.

ABSTRACT

Background: Epilepsy is a brain disease characterized by a tendency to recurrent seizures in part or all of the body due to disturbances in the pattern of electrical activity in the brain in the form of continuous depolarization and/or inhibited neuronal inhibition. The incidence of epilepsy is 5-7 per 10,000 children aged 0-15 years. There are several pharmacological therapies for epilepsy patients using drugs, such as valproic acid, carbamazepine, and phenobarbital. Each of the pharmacological therapies above has a different way of working in causing hyperpolarization. However, each of these pharmacological therapies has been proven to improve blood lipid parameters. In addition, there are several non-pharmacological therapies for epilepsy, such as paying attention to patients with the concept of avoiding 5K (overheating, tiredness, hunger, thirst, thinking) and avoiding exposure to sunlight which has been proven to cause seizures in epilepsy patients. On the other hand, the habit of avoiding sunlight can inhibit the formation of vitamin D because there is no exposure to UV rays. In fact, vitamin D in the form of calcidiol is important for lowering blood lipids through parathyroid inhibition. This study aims to determine the correlation and strength of the relationship between serum vitamin D levels and serum total cholesterol levels in epilepsy patients.

Method : This is an observational analytical study using a cross-sectional method. The subjects were 29 epilepsy patients receiving treatment at the Semarang Regional General Hospital (RSND). The samples consisted of venous blood drawn from the RSND laboratory. Serum vitamin D levels were then measured at the GAKI Laboratory, Faculty of Medicine, Diponegoro University (FK Undip), and total serum cholesterol levels were measured at the RSND laboratory. The data were then analyzed using the Pearson correlation test.

Result: The results of the correlation test between serum vitamin D levels [vitamin D 25(OH)] and serum total cholesterol levels using the Pearson correlation test obtained a p value = 0.981 ($p > 0.05$) so it can be concluded that there is no significant correlation.

Conclusion : There was no significant correlation between serum vitamin D and serum total cholesterol in epilepsy patients.

Keywords: epilepsy, AEDs (Anti-Epileptic Drugs), serum vitamin D, serum total cholesterol.