Korelasi antara kadar serum vitamin D dengan derajat keparahan pada pasien stroke iskemik = Severity stroke patients in correlation vitamin D levels

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Abstrak

Latar Belakang: Stroke iskemik merupakan penyebab kematian terbanyak kedua dan penyebab utama disabilitas di seluruh dunia. Beberapa faktor risiko yang sudah diketahui diantaranya pola hidup, penyakit komorbid, usia, jenis kelamin, dan ras. Namun, kadar serum vitamin D yang kurang ternyata juga dikaitkan dengan penyakit neurodegeneratif, serta luaran klinis yang lebih buruk. Penelitian ini dilakukan untuk mengetahui korelasi kadar serum vitamin D dengan derajat keparahan pada stroke iskemik yang dinilai berdasarkan NIHSS. Pada penelitian ini juga akan menilai asupan vitamin D serta pajanan sinar matahari.
Metode: Penelitian ini merupakan studi potong lintang pada pasien stroke iskemik di RSUPN dr. Cipto Mangunkusumo dan RS Universitas Indonesia. Karakteristik subjek penelitian berupa usia, jenis kelamin, faktor risiko, penyakit komorbid dengan komplikasi, asupan protein, asupan lemak, asupan vitamin D, pajanan sinar matahari, kadar serum vitamin D, serta derajat keparahan. Dilakukan analisis korelasi kadar serum vitamin D dengan derajat keparahan berdasarkan NIHSS.
Hasil: Terdapat 59 subjek dengan diagnosis stroke iskemik dengan rerata usia 63 tahun dan mayoritas laki-laki (62,7%). Faktor risiko terbanyak adalah hipertensi (83,1%), berat badan lebih dan obesitas (64,4%), merokok (57,6%), dan diabetes melitus (42,4%). Penyakit komorbid dengan komplikasi tersering yang ditemukan adalah gangguan jantung (35,6%). Sebanyak 79,7% subjek penelitian memiliki asupan protein yang kurang, sedangkan asupan lemak seluruhnya tergolong cukup. Sebagian besar (52,5%) subjek penelitian memiliki status asupan vitamin D kurang, 5 orang mengonsumsi suplementasi vitamin D secara rutin, derajat pajanan sinar matahari rendah (89,8%). Sebanyak 59,3% memiliki status kadar serum vitamin D defisiensi dengan derajat keparahan terbanyak adalah skor NIHSS 5-15 (76,3%). Terdapat korelasi antara asupan vitamin D dengan derajat keparahan stroke iskemik (r -0,307, p 0,018).
Kesimpulan: Kadar serum vitamin D memiliki korelasi dengan derajat keparahan stroke iskemik (r -0,469, p <0,001). Kadar serum vitamin D yang kurang berbanding terbalik dengan skor NIHSS yang didapatkan pada penderita stroke iskemik onset akut.
.....Background: Ischemic stroke is the second leading cause of death and the leading cause of disability worldwide. Some of the known risk factors include lifestyle, comorbid diseases, age, gender, and race. However, deficient serum vitamin D levels are also associated with neurodegenerative diseases, as well as worse clinical outcomes. This study was conducted to determine the correlation of serum vitamin D levels with severity in ischemic stroke as assessed by the NIHSS. This study will also assess vitamin D intake and sunlight exposure.
Methods: This study is a cross-sectional study on ischemic stroke patients at RSUPN dr. Cipto Mangunkusumo and University of Indonesia Hospital. Characteristics of the study subjects included age, gender, risk factors, comorbid diseases with complications, protein intake, fat intake, vitamin D intake, sun exposure, serum vitamin D levels, and severity. Correlation analysis of serum vitamin D levels with severity based on NIHSS was conducted.

Results: There were 59 subjects with a diagnosis of ischemic stroke with an average age of 63 years and the majority were male (62.7%). The most common risk factors were hypertension (83.1%), overweight and obesity (64.4%), smoking (57.6%), and diabetes mellitus (42.4%). Comorbid disease with the most common complication found were cardiac disorders (35.6%). A total of 79.7% of the study subjects had insufficient protein intake, while the fat intake was entirely considered adequate. Most (52.5%) of the study subjects had deficient vitamin D intake status, 5 people took vitamin D supplementation regularly, the degree of sun exposure was low (89.8%). A total of 59.3% had vitamin D deficiency serum level status with the most severity being NIHSS score 5-15 (76.3%). There was a correlation between vitamin D intake and ischemic stroke severity (r -0,307, p 0,018).
Conclusion: Serum vitamin D levels have a correlation with ischemic stroke severity (r -0,469, p <0,001). Insufficient serum vitamin D levels are inversely proportional to the NIHSS score obtained in patients with acute onset ischemic stroke.