Korelasi kadar lemak viseral dengan kadar vitamin D 25 (OH) pada pasien stroke akut = Correlation between visceral fat levels and vitamin D 25 (OH) levels in acute stroke patients

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Abstrak

Latar Belakang: Vitamin D memiliki efek non-skeletal dalam mempertahankan fungsi endovaskular dan mengatur aktivitas inflamasi dalam dinding pembuluh darah. Lemak viseral, disebutkan sebagai prediktor risiko yang baik untuk penyakit vaskular karena berperan aktif secara metabolik serta bersifat meningkatkan pengeluaran sitokin proinflamasi Kedua hal ini berpengaruh dalam peningkatan risiko kejadian stroke akut. Sampai saat ini penelitian yang membahas korelasi antara kedua faktor tersebut masih inkosisten. Penelitian ini bertujuan untuk mengetahui korelasi antara kadar lemak viseral dan kadar vitamin D serum pada pasien stroke akut.
Metode: Studi potong lintang dilakukan pada subyek berusia >18 tahun dengan stroke akut yang menjalani perawatan di RSUPN Dr. Cipto Mangunkusumo dan RS Universitas Indonesia selama bulan November - Desember 2023. Pengukuran kadar lemak viseral menggunakan bioelectrical impedance analysis (BIA) bedridden multifrekuensi. Penilaian kadar serum vitamin D (25 (OH)D) menggunakan metode chemiluminescent immunoassay (CMIA). Analisis bivariat dan multivariat digunakan untuk menilai korelasi dan hubungan antara variable bebas dan terikat, serta mengidentifikasi faktor perancu lain yang berhubungan dengan kadar vitamin D serum.
Hasil: Terdapat total 73 subyek penelitian, sebanyak 55 subyek (75,3%) dengan insufisiensi dan 15 subyek (20,5%) mengalami defisiensi vitamin D, dengan nilai rerata di 17,08±7,85 ng/mL. Sejumlah 78,1% subyek memiliki kadar lemak viseral yang tinggi. Terdapat korelasi negatif (r= -0,271) yang signifikan (p <0,021) antara kadar lemak viseral dan kadar vitamin D serum pada stroke akut. Dilakukan analisis multivariat lanjutan dengan regresi linear untuk faktor perancu lain, hanya didapatkan kadar lemak viseral dan jenis pakaian (pakaian tertutup) yang menjadi faktor paling signifikan dalam menilai kadar vitamin D serum.
Kesimpulan: Terdapat korelasi yang signifikan antara kadar lemak viseral dengan kadar vitamin D 25 (OH) pada pasien stroke akut.
.....Background: Vitamin D has non-skeletal effects in maintaining endovascular function and regulating inflammatory activity in the vascular wall. Visceral fat is said to be a good risk predictor for vascular disease because it plays a metabolically active role and increases the release of pro-inflammatory cytokines, both of which are influential in increasing the risk of acute stroke events. Until now, studies that discuss the correlation between these two factors are still inconsistent. This study aims to determine the correlation between visceral fat levels and serum vitamin D levels in acute stroke patients.
Methods: A cross-sectional study was conducted on subjects aged >18 years with acute stroke who underwent treatment at Dr. Cipto Mangunkusumo Hospital and University of Indonesia Hospital during November - December 2023. Measurement of visceral fat levels using bioelectrical impedance analysis (BIA) bedridden multifrequency. Assessment of serum vitamin D (25(OH)D) levels using chemiluminescent immunoassay (CMIA) method. Bivariate and multivariate analyses were used to assess the correlation and relationship between independent and dependent variables, as well as identify other confounding factors

associated with serum vitamin D levels.
Results: In a total of 73 subjects, 55 (75.3%) subjects had vitamin D insufficiency and 15 (20,5%) subject had deficiency, with mean values at 17.08±7.85 ng/mL. A total of 78.1% of subjects had high visceral fat levels. There was a significant ($p<0.021$) negative correlation ($r= -0.271$) between visceral fat and serum vitamin D levels in acute stroke. In a further multivariate analysis with linear regression for other confounding factors, only visceral fat content and type of clothing (concealing clothing) was found to be the most significant factor in assessing serum vitamin D levels.
Conclusion: There is a significant correlation between visceral fat levels and 25 (OH) vitamin D levels in acute stroke patients.