Korelasi Persentase Lemak Tubuh Terhadap Kadar Vitamin D Serum Pada Populasi Obesitas di Rumah Sakit Umum Pusat Nasional Cipto Mangunkusumo = Correlation between Fat Mass Percentage with Serum Vitamin D of Obese Adult Population in Dr Cipto Mangunkusumo Hospital

Ardian Sandhi Pramesti, author

Abstrak

Latar Belakang: Obesitas adalah masalah kesehatan masyarakat di seluruh dunia terutama di negara berkembang. Obesitas dapat mempengaruhi status vitamin D, salah satunya dikarenakan adanya peningkatan penyimpanan vitamin D di jaringan adiposa sehingga mengakibatkan rendahnya bioavailabilitas vitamin D. Selain itu, banyaknya jaringan lemak berkaitan dengan inflamasi kronis tingkat rendah yang menyebabkan peningkatan penggunaan vitamin D pada sel imun sehingga menyebabkan rendahnya kadar vitamin D pada kasus obesitas. Penelitian ini bertujuan untuk melihat korelasi antara persentase massa lemak dengan kadar vitamin D serum pada populasi dewasa dengan penyandang obesitas.
Metode: Studi potong lintang ini dilakukan pada subjek dewasa dengan obesitas di Rumah Sakit Cipto Mangungkusumo, Pengukuran persentase massa lemak menggunakan bioelectrical impedance analysis (BIA) SECA mBCA 525. Pemeriksaan kadar vitamin D serum menggunakan kalsidiol serum dengan metode chemiluminescence immunoassay (CLIA).
Hasil: Sebanyak 90 subjek penelitian memiliki rerata usia 41 tahun dengan jumlah subjek terbanyak adalah perempuan (59%). Sebagian besar subjek tergolong status gizi obesitas derajat II. Median kadar vitamin D serum adalah 13,4 ng/dL dengan sebagian besar subjek tergolong defisiensi vitamin D. Rerata persentase massa lemak subjek adalah 37,2 ± 8,2. Terdapat korelasi negatif antara kadar vitamin D serum dengan persentase lemak tubuh pada pada dewasa penyandang obesitas (r=-0,378, p=0,000).
Kesimpulan: Terdapat korelasi bermakna berkekuatan sedang antara persentase massa lemak dengan kadar vitamin D serum pada subjek dewasa penyandang obesitas.
.....Background: Obesity is a global public health issue, especially in developing countries. Obesity can affect vitamin D status due to increased storage of vitamin D in adipose tissue. In addition, low bioavailability of vitamin D. Low levels of chronic inflammation is strongly associated with a large number of adipose tissue, which causes increased use of vitamin D in immune cells and causes low levels of vitamin D in obesity population. This study aims to see the correlation between the percentage of fat mass and serum vitamin D levels in the adult population with obesity.
Methods: This cross-sectional study was conducted on obese adult subjects at Cipto Mangunkusumo Hospital. First, the fat mass percentage was measured using bioelectrical impedance analysis (BIA) SECA mBCA 525. In addition, serum vitamin D levels were examined using serum calcidiol using the chemiluminescence immunoassay (CLIA) method.
Results: A total of 90 research subjects had an average age of 41; most were female. Most of the subjects were classified as obesity class II. The average serum vitamin D level was 13.4 ng/dL, with most of the subjects classified as deficient in vitamin D. The mean proportion of subjects in fat mass was 37.2 ± 8.2. There was a negative correlation between serum vitamin D levels and the proportion of body fat in obese

adults (r=-0.378, p=0.000).
Conclusion: There was a significant medium correlation between fat mass percentage with serum vitamin D in the adult with obesity.