

## Korelasi lemak visceral dengan tekanan darah dan fungsi ginjal pada pekerja kantor dengan obesitas di Jakarta = Correlation of visceral fat with blood pressure and kidney function in obese office workers in Jakarta

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### Abstrak

Latar Belakang: Prevalensi obesitas, hipertensi dan penyakit ginjal kronis (PGK) pada pekerja kantor di Jakarta cukup tinggi. Meningkatnya volume lemak visceral pada obesitas, khususnya obesitas sentral, memiliki kemaknaan klinis yang lebih besar dalam memprediksi kejadian hipertensi dan PGK. Studi ini bertujuan untuk meneliti korelasi nilai lemak visceral tubuh dengan tekanan darah (TD) dan fungsi ginjal pada populasi pekerja kantor dengan obesitas di Jakarta.

Metode: Studi potong lintang dilakukan pada 101 pekerja kantor dengan obesitas di RSUPN Cipto Mangunkusumo Jakarta. Pengukuran volume lemak visceral menggunakan alat bioelectrical impedance analysis multifrekuensi SECA mBCA 525. TD diukur dengan tensimeter digital, fungsi ginjal dari hasil perhitungan estimasi laju filtrasi glomerulus (eLFG) berdasarkan nilai kreatinin serum.

Hasil: Subjek terbagi menjadi dua kelompok berdasarkan kategori lemak visceral. Sebanyak 91% subjek berada di dalam kelompok lemak visceral tidak normal, dimana didominasi perempuan serta rerata usia dan indeks massa tubuh lebih tinggi dibandingkan kelompok normal. Pada kelompok tersebut, 33,7% diantaranya memiliki TD sistolik 140 dan/ atau diastolik 90 mmHg, dan 18,5% memiliki eLFG <90 ml/menit/1,73 m<sup>2</sup>. Adanya korelasi positif antara nilai lemak visceral dengan tekanan darah sistolik ( $r = 0,436$ ,  $p = 0,000$ ) dan diastolik ( $r = 0,306$ ,  $p = 0,002$ ), serta korelasi negatif dengan eLFG ( $r = -0,284$ ,  $p = 0,004$ ).

Kesimpulan: Terdapat korelasi yang bermakna antara lemak visceral dengan tekanan darah dan fungsi ginjal pada pekerja kantor dengan obesitas.

.....Background: The prevalence of obesity, hypertension and chronic kidney disease (CKD) among office workers in Jakarta is relatively high. Increased visceral fat in obesity, especially central obesity, has greater clinical significance in predicting the incidence of hypertension and CKD. This study aims to examine the correlation of visceral fat values with blood pressure (BP) and kidney function in office workers in an obese population in Jakarta.

Methods: A cross-sectional study was conducted on 101 office workers with obesity at Cipto Mangunkusumo General Hospital, Jakarta. Visceral fat volume was measured using a multi-frequency bioelectrical impedance analysis SECA mBCA 525. BP was measured with a digital tensimeter, and kidney function was taken from the estimated glomerular filtration rate (eGFR) calculation based on serum creatinine.

Results: Subjects were divided into two groups based on the category of visceral fat. About 91% of the subjects were in the abnormal visceral fat group, dominated by women, and the mean age and body mass index were higher than the normal group. In this group, 33.7% had systolic BP 140 and/or diastolic 90 mmHg, and 18.5% had an eGFR <90 ml/min/1.73 m<sup>2</sup>. There was a positive correlation between visceral fat values with systolic ( $r = 0.436$ ,  $p = 0.000$ ) and diastolic BP ( $r = 0.306$ ,  $p = 0.002$ ) and a negative correlation

with eGFR ( $r = -0.284$ ,  $p = 0.004$ ).

Conclusion: There is a significant correlation between visceral fat and blood pressure and kidney function in office workers with obesity.