

# Korelasi persentase lemak tubuh dengan kadar angiotensinogen plasma penderita hipertensi etnik Minangkabau di kota Padang = Correlation body fat percentage with plasma angiotensinogen level in hypertensive Minangkabau ethnic in Padang

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## Abstrak

Sekitar 60-70% hipertensi pada orang dewasa berhubungan dengan kelebihan lemak tubuh yang berhubungan peningkatan kadar angiotensinogen (AGT) yang berperan dalam peningkatan tekanan darah. Penelitian ini bertujuan untuk mengetahui korelasi persentase lemak tubuh, indeks massa tubuh (IMT), dan lingkar pinggang (LP) dengan kadar AGT plasma pada penderita hipertensi etnik Minangkabau. Sebanyak 63 orang penderita hipertensi, berusia 35–54 tahun, di Padang diambil secara konsekuatif. Pada seluruh subyek dilakukan wawancara untuk mengetahui karakteristik dan aktivitas fisik. Penilaian asupan makanan, pengukuran persentase lemak tubuh, antropometri dan pemeriksaan kadar AGT plasma juga dilakukan. Data dianalisis menggunakan uji t tidak berpasangan dan uji korelasi. Rerata asupan lemak lebih besar dibanding yang dianjurkan untuk orang Indonesia. Rerata persentase lemak tubuh subyek penelitian adalah  $37,45 \pm 5,95\%$  (pada subyek laki-laki  $27,70 \pm 2,58$  dan pada subyek perempuan  $38,29 \pm 5,38$ ) dan rerata IMT  $26,83 \pm 3,59 \text{ kg/m}^2$ . Sebanyak 92,1% subyek mempunyai LP yang lebih besar dari nilai normal. Rerata kadar AGT plasma  $40.113 \pm 8.033 \text{ ng/mL}$ . Tidak terdapat hubungan yang bermakna antara jenis kelamin dan usia dengan kadar AGT plasma. Persentase lemak tubuh mempunyai korelasi yang sedang dengan kadar AGT plasma ( $r=0,426$ ;  $p<0,001$ ), begitu juga korelasi IMT dengan kadar AGT plasma ( $r=0,418$ ;  $p=0,001$ ), sedangkan korelasi LP dengan kadar AGT lemah ( $r=0,378$ ;  $p=0,002$ ). Hasil ini menunjukkan bahwa terdapat korelasi derajat sedang antara persentase lemak tubuh dan IMT dengan kadar AGT plasma penderita hipertensi etnik Minangkabau, sedangkan korelasi LP dengan kadar AGT plasma lemah.

.....Approximately 60-70% of hypertension in adults associated with obesity that related with increased of plasma angiotensinogen (AGT) levels. This study aimed to determine the correlation of percentage body fat, body mass index (BMI) and wrist circumference (WC) with plasma AGT levels in hypertensive Minangkabau ethnic. Sixty three hypertensive patients, 35–54 years old, in Padang were enrolled consecutively. All subjects were interviewed to determine the characteristics and physical activity. Food intake assessment, body fat percentage measurement, anthropometric and plasma AGT levels examination were done. Data were analyzed using unpaired t-test and correlation test. The mean fat intake is greater than suggested for Indonesian. The mean body fat percentage of subjects is  $27.70 \pm 2.58$  in male subjects and  $38.29 \pm 5.38$  in female subjects, and the mean BMI is  $26.83 \pm 3.59 \text{ kg/m}^2$ . A total of 92.1% of subjects have WC larger than normal value. The mean plasma levels of AGT  $40.113 \pm 8.033 \text{ ng/mL}$ . There was no significant relationship between gender and age with plasma AGT levels. Percentage of body fat has moderate correlation with plasma AGT levels ( $r = 0.426$ ,  $p < 0.001$ ), as well as correlation of IMT with plasma AGT levels ( $r=0.418$ ,  $p=0.001$ ), and correlation of WC with plasma AGT level is weak ( $r=0.378$ ,  $p=0.002$ ). These result show a moderate correlation between body fat percentage and BMI with plasma AGT levels in hypertensive Minangkabau ethnic group. There is also a weak correlation between WC with plasma AGT levels.