

## Obesitas Sentral dan Dislipidemia di Nangapanda, Flores Indonesia: Peran Leptin, Adiponektin, dan Resistin = Obesity and Dyslipidemia in Nangapanda, Flores, Indonesia The Role of Leptin, Adiponectin, and Resistin

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### Abstrak

Obesitas sentral di dunia dan Indonesia terus meningkat. Dislipidemia pada obesitas sentral merupakan kelainan metabolik yang paling sering ditemui, paling awal muncul, dan hubungannya paling kuat dengan komplikasi kardiovaskular. Penelitian mengenai obesitas sentral dan dislipidemia, di daerah rural Indonesia sangatlah terbatas. Belum ada penelitian yang menilai kontribusi leptin, adiponektin, dan resistin terhadap dislipidemia pada obesitas sentral secara bersamaan.

Tujuan: Mengetahui prevalensi obesitas sentral dan dislipidemia di kecamatan Nangapanda, NTT. Selain itu juga mengevaluasi hubungan antara obesitas sentral dengan kadar TG, K-HDL, K-LDL, leptin, adiponektin, dan resistin. Metode: Penelitian ini merupakan penelitian potong lintang yang menganalisis data sekunder penelitian SugarSpin yang dilakukan di 3 desa di Kecamatan Nangapanda, NTT. Kriteria inklusi adalah seluruh pasien yang tercatat dan sesuai periode penelitian yang berusia >18 tahun dan <60 tahun. Sedangkan kriteria eksklusi bila terdapat komponen data yang tidak lengkap, kadar TG lebih dari 400 mg/dl, dan menggunakan terapi obat dislipidemia, steroid, dan kontrasepsi hormonal. Hasil: Prevalensi obesitas sentral di kecamatan Nangapanda, NTT sebesar 31.2%

(40% pada perempuan dan 17.0% pada laki-laki). Sedangkan prevalensi dislipidemia sebesar 70.9% (71.6% pada perempuan dan 69.9% pada laki-laki). Pada subyek dengan obesitas sentral, proporsi dislipidemia sebesar 88.2% (87.0% pada perempuan dan 92.9% pada laki-laki). Obesitas sentral yang dinilai dengan lingkaran pinggang, baik pada perempuan maupun laki-laki berkorelasi positif dengan kadar TG dan kadar K-LDL, serta berkorelasi negatif dengan kadar K-HDL. Obesitas sentral, baik pada perempuan maupun laki-laki, berkorelasi positif dengan kadar leptin dan negatif dengan kadar adiponektin. Korelasi negatif sangat lemah didapatkan antara obesitas sentral dengan kadar resistin hanya pada laki-laki. Didapatkan korelasi positif antara kadar leptin dengan kadar TG dan kadar KLDL, serta korelasi negatif dengan kadar K-HDL, baik pada perempuan maupun laki-laki. Didapatkan korelasi positif yang lemah antara kadar adiponektin dengan kadar K-HDL baik pada perempuan maupun laki-laki. Kadar resistin berkorelasi negatif sangat lemah dengan kadar HDL hanya pada perempuan.

Simpulan: Prevalensi obesitas sentral dan dislipidemia di 3 desa di kecamatan Nangapanda, NTT sebagai salah satu daerah rural di Indonesia cukup tinggi sehingga memerlukan perhatian khusus. Leptin nampaknya memegang peranan penting dalam patofisiologi terjadinya dislipidemia pada obesitas sentral.

.....Background: The global trend of central obesity has increased dramatically as well as in Indonesia. Dyslipidemia is the most common and the earliest metabolic disease component that concurrently found in central obesity. Moreover, dyslipidemia in central obesity was remarked to have the strongest correlation with the risk of cardiovascular complication. Studies regarding central obesity and dyslipidemia in rural area in Indonesia were limited. In addition, there was no study

that observed the contribution of leptin, adiponectin, and resistin in dyslipidemia and central obesity concurrently.

**Objective:** This study aims to determine the prevalence of central obesity and dyslipidemia in Nangapanda district, East Nusa Tenggara and to evaluate the correlation between central obesity and triglyceride, HDL-C, LDL-C, leptin, adiponectin, and resistin levels.

**Methods:** This study was cross-sectional study that analyzed secondary data from SugarSpin that was conducted in three sub-district in Nangapanda district, East Nusa Tenggara. Inclusion criteria were all subjects recorded in SugarSpin database within specific study period, aged > 18 years and < 60 years. Exclusion criteria were incomplete data, subjects who had triglyceride level > 400 mg/dl, as well as consumed lipid lowering agent, steroid and hormonal contraception.

**Results:** The prevalence of central obesity and dyslipidemia in Nangapanda district, East Nusa Tenggara was 31.2% (40% female and 17.0% male) and 70.9% (71.6% female and 69.9% male), respectively. In subjects with central obesity, the proportion of dyslipidemia was 88.2% (87.0% female and 92.9% male). Central obesity that was remarked by waist circumference measurement had positive correlation with triglyceride and LDL-C level while had negative correlation with HDL-C level. Central obesity, both in female and male, had positive correlation with leptin level and had negative correlation with adiponectin level. A very weak negative correlation was found between central obesity and resistin level only in male. While, a positive correlation was found between leptin level and triglyceride as well as LDL-C level, a negative correlation was found between leptin level and HDL-C level, both in female and male. In addition, a weak positive correlation between adiponectin and HDL-C level was found in female and male. Resistin level had a very weak negative correlation only in female.

**Conclusions:** Prevalence of central obesity and dyslipidemia in three sub-districts in Nangapanda district, East Nusa Tenggara, a rural area in Indonesia, was high. The growing prevalence required attention due to its cardiovascular risk. Leptin was seemingly played an important role in pathophysiology of dyslipidemia in central obesity