

# Pengaruh Obesitas Sentral Terhadap Kejadian Prediabetes di Kota Bogor Selama Enam Tahun Pemantauan = The Influence of Central Obesity on The Incidence Prediabetes in Bogor City Over Six Years of Monitoring

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## Abstrak

Prediabetes adalah toleransi glukosa terganggu, kadar glukosa darah puasa berkisar dari 100- 125 mg/dl dan kadar glukosa darah 2 jam pasca pembebanan 75 gr berkisar 140-199 mg/dl. Skrining pada prediabetes diperlukan dapat rangka pengobatan dini serta pencegahan komplikasi. Peningkatan lingkaran perut meningkatkan risiko mengalami kondisi prediabetes. Penelitian ini bertujuan menganalisis pengaruh obesitas sentral terhadap kejadian prediabetes. Pendekatan studi menggunakan desain kohort retrospektif. Diagnosis obesitas sentral menggunakan ukuran lingkaran perut pria:  $\geq 90$  cm wanita:  $\geq 80$  cm sedangkan diagnosis prediabetes menggunakan kadar gula darah pasca pembebanan 75 gr: 140-199 mg/dL dengan data studi kohort faktor risiko PTM yang dikelola oleh Balitbangkes Kemenkes RI di Kecamatan Bogor Tengah dalam enam tahun pemantauan. Hasil penelitian ini menunjukkan bahwa insiden kumulatif : 31,4% dan insiden rate: 49 per 1000 orang/tahun. Analisis bivariat menunjukkan terdapat pengaruh yang bermakna secara statistik antara obesitas sentral dengan kejadian prediabetes dengan HR: 1,67 (95% CI: 1,42 -1,97) dengan p-value =  $< 0,00$ . Pengaruh yang bermakna secara statistik antara obesitas sentral terhadap kejadian prediabetes dengan nilai 1,7 (95% CI 1,1-2,4) p-value =  $< 0,001$  setelah dikontrol oleh variabel councounder yaitu IMT dan adanya interaksi dengan variabel trigliserida dan status perkawinan. Trigliserida dan status perkawinan memberikan pengaruh pada obesitas sentral terhadap kejadian prediabetes. Trigliserida pada kategori kadar trigliserida tinggi nilai HR 1,7 (1,1-2,4). Status perkawinan pada kategori tidak menikah/janda/duda berkontribusi dalam meningkatkan risiko prediabetes untuk responden yang memiliki obesitas sentral dengan nilai HR 1,8 (95% CI: 1,2-2,9). Rekomendasi pencegahan prediabetes dilakukan dengan pemeriksaan trigliserida pada obesitas sentral supaya prognosis tidak jelek dan mudah diintervensi untuk dapat kembali ke keadaan normal.

.....Prediabetes is defined by a reduced ability to process glucose, with fasting blood glucose levels between 100-125 mg/dl and 2-hour post-load blood glucose levels of 140-199 mg/dl following the consumption of 75 grams of glucose. Early detection and treatment of prediabetes through screening is crucial in order to avert problems. An increase in waist circumference increases the risk of developing prediabetes. The study revealed that an increase in waist circumference is directly linked to a greater likelihood of developing prediabetes. The objective of this study is to examine the impact of central adiposity on an individual's ability to resist the development of prediabetes. The study employed a retrospective cohort design. The diagnosis of central obesity was established based on waist circumference measurements, with a threshold of 90 cm for men and 80 cm for women. Prediabetes was diagnosed by analyzing post-load blood glucose levels (ranging from 140-199 mg/dL) obtained from the 75-gram glucose load test. These diagnostic criteria were derived from a six-year monitoring of a cohort study on non-communicable disease risk factors, which the Health Research and Development Agency conducted under the Ministry of Health of the Republic of Indonesia in Central Bogor District.

The results of this study show a cumulative incidence of 31.4% and an incidence rate of 49 per 1000 people/year. Bivariate analysis indicated a statistically significant association between central obesity and the incidence of prediabetes, with an HR of 1.67 (95% CI: 1.42-1.97) and a p-value 0.00. After controlling for confounding variables such as BMI and interactions with triglyceride levels and marital status, central obesity remained significantly associated with the incidence of prediabetes, with an HR of 1.7 (95% CI: 1.1-2.4) and a p-value 0.001. Triglyceride levels and marital status influenced the impact of central obesity on the incidence of prediabetes. High triglyceride levels had an HR of 1.7 (1.1-2.4), while being unmarried/widowed/divorced contributed to an increased risk of prediabetes in respondents with central obesity, with an HR of 1.8 (95% CI: 1.2-2.9). The recommendation is that prevention of prediabetes should involve monitoring triglyceride levels in individuals with central obesity to improve prognosis and facilitate interventions aimed at returning to a normal state.