

FAKULTAS KEDOKTERAN UNIVERSITAS PEMBANGUNAN NASIONAL “VETERAN” JAKARTA

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HUBUNGAN PREDIABETES DAN PREHIPERTENSI DENGAN ELASTISITAS VASKULAR PADA MAHASISWA FAKULTAS KEDOKTERAN UNIVERSITAS PEMBANGUNAN NASIONAL VETERAN JAKARTA

Abstrak

Tujuan

Prediabetes dan prehipertensi dapat memengaruhi elastisitas vaskular. Diketahui prevalensi prediabetes dan prehipertensi pada usia muda mengalami peningkatan. Penelitian ini bertujuan untuk mengetahui hubungan prediabetes dan prehipertensi dengan elastisitas vaskular pada mahasiswa Fakultas Kedokteran Universitas Pembangunan Nasional Veteran Jakarta.

Metode

Penelitian menggunakan desain *cross-sectional* dan teknik *simple random sampling*. Besar sampel sebanyak 69 mahasiswa dengan kriteria: mahasiswa FKUPNVJ berusia 18-25 tahun, tidak merokok, tidak mengonsumsi alkohol, tidak mempunyai riwayat diabetes dan hipertensi, serta tidak minum obat yang memengaruhi tekanan darah dan kadar gula darah. Accelerated Photoplethysmograph (APG) Analyzer SA 3000-P, sphignomamometer digital, digital dan glukometer digunakan untuk mengukur berturut-turut elastisitas vaskular, tekanan darah, dan gula darah puasa

Hasil

Hasil penelitian didapatkan tidak terdapat perbedaan usia, jenis kelamin, IMT, dan aktivitas fisik antara kelompok elastisitas vaskuler sub-optimal dan kelompok elastisitas normal + optimal ($p > 0,05$). Hasil uji Chi-square menunjukkan terdapat perbedaan elastisitas vaskular antara kelompok prediabetes ($p = 0,009$; PR = 1,6; CI = 1,1-2,2), antara kelompok prehipertensi dan normal vaskular ($p = 0,026$; PR = 1,5; CI = 1,1 – 2,2) dan antara kelompok prediabetes+prehipertensi dan normal ($p = 0,002$; PR = 3,5; CI = 1,4 -8,3).

Kesimpulan

Dapat disimpulkan bahwa terdapat hubungan antara prediabetes dan prehipertensi dengan elastisitas vaskular.

Kata Kunci: Elastisitas Vaskular, Prediabetes, Prehipertensi, Mahasiswa Kedokteran

**UNIVERSITAS PEMBANGUNAN NASIONAL “VETERAN”
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**RELATIONSHIP BETWEEN PREDIABETES AND
PREHYPERTENSION WITH VASKULAR ELASTICITY
AMONG MEDICAL STUDENTS AT THE FACULTY OF
MEDICINE UNIVERSITAS PEMBANGUNAN NASIONAL
VETERAN JAKARTA**

Abstract

Objective

Prediabetes and prehypertension can affect vascular elasticity. It is known that the prevalence of prediabetes and prehypertension among young adults is increasing. This study aims to determine the relationship between prediabetes and prehypertension with vascular elasticity among medical students at the Faculty of Medicine Universitas Pembangunan Nasional Veteran Jakarta (FM UPNVJ).

Method

This study used *a cross-sectional* design and a *simple random sampling technique*. The sample size was 69 students with the criteria: medical students of FM UPNVJ who were 18-25 years old, did not smoke, did not consume alcohol, did not have a history of diabetes and hypertension, and did not take drugs that affect blood pressure and blood sugar levels. The Accelerated Photoplethysmograph (APG) Analyzer SA-3000P, a digital sphygmomanometer, and a glucometer were used consecutively to measure vascular elasticity, blood pressure, and fasting blood glucose.

Result

This study found no difference in age, gender, BMI, and physical activity between the sub-optimal vascular elasticity and normal+optimal elasticity groups ($p > 0.05$). The Chi-square test results showed differences in vascular elasticity between the prediabetes and normal groups ($p = 0.009$; PR = 1.6; CI = 1.1–2.2), between the prehypertension and normal groups ($p = 0.026$; PR = 1.5; CI = 1.1–2.2), and between the prediabetes+prehypertension and normal groups ($p = 0.002$; PR = 3.5; CI = 1.4–8.3).

Conclusion

Based on the result that there is a relationship between prediabetes and prehypertension with vascular elasticity among medical students.

Keyword: Medical Students, Prediabetes, Prehypertension, Vascular Elasticity