

HUBUNGAN MASSA OTOT DAN GULA DARAH PUASA DENGAN ELASTISITAS VASKULAR PADA MAHASISWA FAKULTAS KEDOKTERAN UNIVERSITAS PEMBANGUNAN NASIONAL “VETERAN” JAKARTA TAHUN 2023

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Abstrak

Elastisitas vaskular yang merupakan penentu awal penyakit kardiovaskular dipengaruhi oleh banyak faktor. Penelitian ini bertujuan untuk mengetahui hubungan antara massa otot dan gula darah puasa dengan elastisitas vaskular pada mahasiswa Fakultas Kedokteran Universitas Pembangunan Nasional “Veteran” Jakarta (FKUPNVJ). Penelitian menggunakan desain potong lintang di Unit Laboratorium Fisiologi dan Nutrisi, Medical Education Research Center, UPN “Veteran” Jakarta. Besar sampel sebanyak 53 orang diambil dengan teknik *stratified random sampling*. Kriteria subjek penelitian adalah mahasiswa FKUPNVJ berusia 18-25 tahun, tidak merokok, tidak mengonsumsi alkohol, tidak mempunyai riwayat diabetes dan hipertensi, serta tidak minum obat yang mempengaruhi tekanan darah, kadar gula darah, dan kadar kolesterol. Hasil penelitian ini didapatkan tidak terdapat perbedaan usia, tekanan darah, jenis kelamin, IMT, dan kebiasaan makan antara kelompok elastisitas vaskuler sub-optimal dan kelompok elastisitas normal + optimal ($p > 0,05$). Hasil analisis regresi logistik didapatkan gula darah puasa merupakan *variabel cofounding*. *Odds ratio* (OR) variabel massa otot = 9,656; $p = 0,009$; CI = 1,757-53,075 dan OR variabel gula darah puasa = 2,329; $p = 0,386$; CI = 0,344 – 15,776. Kesimpulan penelitian ini dibandingkan dengan kadar gula darah puasa, massa otot paling besar pengaruhnya terhadap elastisitas vaskuler. Subjek dengan massa otot kurang berisiko mengalami elastisitas vaskular sub-optimal dibandingkan dengan massa otot normal atau tinggi setelah dikontrol dengan kadar gula darah puasa.

Kata Kunci : Elastisitas Vaskular, Gula Darah Puasa, Massa Otot.

THE RELATIONSHIP OF MUSCLE MASS AND FASTING BLOOD SUGAR WITH VASCULAR ELASTICITY IN STUDENTS OF THE FACULTY OF MEDICINE, UNIVERSITAS PEMBANGUNAN NASIONAL “VETERAN” JAKARTA 2023

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Abstract

Vascular elasticity which is an early determinant of cardiovascular disease is influenced by many factors. This study aims to determine the relationship between muscle mass and fasting blood sugar with vascular elasticity in students of the Faculty of Medicine, Universitas Pembangunan Nasional "Veteran" Jakarta (FKUPNVJ). The study used a cross-sectional design in the Physiology and Nutrition Laboratory Unit, Medical Education Research Center, UPN "Veteran" Jakarta. The sample size of 53 people was taken with stratified random sampling technique. The criteria for research subjects were FKUPNVJ students aged 18-25 years, not smoking, not consuming alcohol, not having a history of diabetes and hypertension, and not taking drugs that affect blood pressure, blood sugar levels, and cholesterol levels. The results of this study found no difference in age, blood pressure, gender, BMI, and eating habits between the sub-optimal vascular elasticity group and the normal + optimal elasticity group ($p > 0.05$). The results of logistic regression analysis showed that fasting blood sugar was a confounding variable in this study. The odds ratio (OR) of muscle mass variable = 9.656; $p = 0.009$; CI = 1.757-53.075 and OR of fasting blood sugar variable = 2.329; $p = 0.386$; CI = 0.344 - 15.776. The conclusion of this study is that compared to fasting blood sugar levels, muscle mass has the greatest effect on vascular elasticity. Subjects with less muscle mass were at risk of sub-optimal vascular elasticity compared to those with normal or high muscle mass after controlling for fasting blood sugar levels.

Keywords : *Fasting Blood Sugar, Muscle Mass, Vascular Elasticity.*