FAKULTAS KEDOKTERAN UNIVERSITAS PEMBANGUNAN NASIONAL "VETERAN" JAKARTA

Skripsi, Desember 2023

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HUBUNGAN ANTARA RASIO MASSA OTOT DAN LEMAK VISERAH DENGAN ELASTISITAS VASKULAR PADA MAHASISWA FAKULTAS KEDOKTERAN UNIVERSITAS PEMBANGUNAN NASIONAL "VETERAN" JAKARTA TAHUN 2023

RINCIAN HALAMAN (104 halaman, 5 tabel, 6 gambar, 10 lampiran)

ABSTRAK

Tujuan:
Penyakit kardiovaskular adalah penyakit yang paling banyak menyebabkan kematian sehingga diperlukan pemeriksaan dini elastisitas vaskular sebagai *biomarker*. Mahasiswa Kedokteran cenderung memiliki gaya hidup yang menyebabkan penumpukan lemak viseral dan penurunan massa otot. Hal tersebut dapat mempengaruhi elastisitas vaskular. Penelitian ini bertujuan untuk mengetahui hubungan rasio massa otot dan lemak viseral dengan elastisitas vaskular pada mahasiswa FK UPN Veteran Jakarta tahun 2023 **Metode**:
Penelitian menggunakan desain *cross-sectional* dan teknik *stratified random sampling*. Besar sampel 51 mahasiswa sesuai kriteria penelitian. Rasio massa otot dan lemak viseral diukur menggunakan *Bioelectrical Impendance Analysis* (BIA). Elastisitas vaskular diukur menggunakan alat *Accelerated Photoplethysmograph* (APG) *Analyzer* SA-3000P.

Hasil:
Hasil penelitian menunjukkan 68,6% subjek memiliki rasio massa otot dan lemak viseral paling rendah (Q1) dan 54,9% subjek memiliki elastisitas vaskular sub-optimal. Tidak terdapat perbedaan karakteristik usia, jenis kelamin, aktivitas fisik dan kebiasaan makan antar kelompok elastisitas vaskular ($p > 0,05$). Hasil uji *Chi-square* menunjukkan terdapat hubungan yang signifikan antara rasio massa otot dan lemak viseral dengan elastisitas vaskular ($p = 0,009$; OR = 6,545; CI = 1,7 – 24,9).

Kesimpulan:
Rasio massa otot dan lemak viseral yang rendah memiliki risiko 6,5 kali lipat mengalami elastisitas vaskular sub-optimal disebabkan oleh resistensi insulin dan sekresi sitokin proinflamasi.

Daftar Pustaka: 90 (2013 – 2023)
Kata Kunci: Rasio Massa Otot dan Lemak Viseral, Elastisitas Vaskular, Kardiovaskular, Mahasiswa Kedokteran

FACULTY OF MEDICINE UNIVERSITAS PEMBANGUNAN NASIONAL "VETERAN" JAKARTA

Undergraduate Thesis, Desember 2023

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THE ASSOCIATION BETWEEN THE RATIO OF MUSCLE MASS TO VISCERAL FAT WITH VASCULAR ELASTICITY IN MEDICAL STUDENTS OF PEMBANGUNAN NASIONAL "VETERAN" JAKARTA UNIVERSITY IN 2023

PAGE DETAIL (104 pages, 5 tables, 6 picture, 10 appendices)

ABSTRACT

Objective:
Cardiovascular illnesses are the most common cause of death, so it is necessary to early examine vascular elasticity as a biomarker. Medical students tend to have a lifestyle that causes visceral fat accumulation and decreased muscle mass. This will affect vascular elasticity. This study aims to determine the relationship between the ratio of muscle mass to visceral fat with vascular elasticity in FK UPN Veteran Jakarta students in 2023.

Methods:
The study used a cross-sectional design and stratified random sampling technique. The sample size was 51 students who met the research criteria. The ratio of muscle mass to visceral fat was measured using Bioelectrical Impendance Analysis (BIA). Vascular elasticity was measured using Accelerated Photoplethysmograph (APG) Analyzer SA-3000P.

Results:
The results showed 68.6% of the subjects had the lowest ratio of muscle mass to visceral fat (Q1) and 54.9% of them had sub-optimal vascular elasticity. There were no differences in the characteristics of age, gender, physical activity and eating habits between vascular elasticity groups ($p \leq 0.05$). Chi-square test results showed a significant association between the ratio of muscle mass and visceral fat with vascular elasticity ($p = 0.009$; OR 6.545; CI (1.7 - 24.9)).

Conclusion:
A low ratio of muscle mass to visceral fat has a 6. 5 times risk of sub-optimal vascular elasticity due to insulin resistance and secretion of pro-inflammatory cytokines.

Reference **:** 90 (2013 – 2023)
Keywords : *Muscle Mass to Visceral Fat Ratio, Vascular Elasticity, Cardiovascular, Medical Students*