FAKULTAS KEDOKTERAN
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HUBUNGAN ANTARA LEMAK VISCERAL DAN PENANDA INFLAMASI (LEUKOSIT, NLR, PLR) PADA MAHASISWA FAKULTAS KEDOKTERAN UNIVERSITAS PEMBANGUNAN

ABSTRAK

Tujuan
Mahasiswa fakultas kedokteran cenderung melakukan *sedentary lifestyle* yang berakibat pada penumpukan lemak visceral. Penumpukan lemak visceral meningkatkan risiko sindrom metabolik, penyakit kardiovaskular, dan inflamasi sistemik. Inflamasi sistemik dapat dilihat dari kadar leukosit, *neutrophil-to-lymphocyte ratio* (NLR), dan *platelet-to-lymphocyte ratio* (PLR). Penelitian ini bertujuan untuk mengetahui hubungan lemak visceral dengan penanda inflamasi (leukosit, NLR, PLR) pada mahasiswa Fakultas Kedokteran Universitas Pembangunan Nasional Veteran Jakarta.

Metode
Penelitian menggunakan desain cross sectional dan teknik simple random sampling. Pengukuran lemak visceral menggunakan BIA (*Bioelectric Impedance Analysis*) meliputi kadar lemak visceral tubuh, rasio lemak visceral dan protein, rasio otot tubuh, total body water, basal metabolic rate (BMR), dan uji hematologi menggunakan *Abbot hematology analyzer alinity HQ* untuk melihat nilai eritrosit, retikulosit, hematokrit, hemoglobin, leukosit, NLR, PLR dan Trombosit

Hasil
Pada penelitian didapatkan sebanyak 43% subjek memiliki nilai lemak visceral yang tinggi. Terdapat perbedaan usia, indeks massa tubuh (IMT) dan total lemak tubuh antara kelompok lemak visceral normal dan tinggi ($p < 0,05$). Tidak terdapat perbedaan sejumlah hasil lab darah

antar kelompok kadar lemak visceral normal dan tinggi ($p > 0,05$), tetapi ditemukan adanya perbedaan monosit dan leukosit antar kelompok lemak visceral ($p < 0,05$). Hasil uji Mann whitney menunjukkan terdapat perbedaan ($p = 0,021$) dan tidak terdapat perbedaan antara NLR ($p = 0,614$) dan PLR ($p = 0,761$) kelompok lemak visceral tinggi dan normal.

Kesimpulan
Mahasiswa Kedokteran memiliki kecenderungan lemak visceral yang tinggi dan disarankan menjaga pola makan dengan menghindari konsumsi karbohidrat sederhana, mengurangi konsumsi karbohidrat kompleks, dan mengurangi konsumsi lemak jenuh

Daftar Pustaka **:** 30 (2014 - 2024)

Kata Kunci **:** Obesitas sentral, Lemak Visceral, Penanda Inflamasi, Leukosit, NLR, PLR

RELATIONSHIP BETWEEN VISCERAL FAT AND INFLAMMATION MARKERS (LEUKOCYTES, NLR, PLR) IN STUDENTS OF THE FACULTY OF MEDICINE, VETERAN NATIONAL DEVELOPMENT UNIVERSITY, JAKARTA

ABSTRACT

Objective

Medical students tend to have a sedentary lifestyle, which leads to the accumulation of visceral fat. The accumulation of visceral fat increases the risk of metabolic syndrome, cardiovascular disease, and systemic inflammation. Systemic inflammation can be detected by leukocyte levels, neutrophil-to-lymphocyte ratio (NLR), and platelet-to-lymphocyte ratio (PLR). The aim of this study is to determine the relationship between visceral fat and inflammatory markers (leukocytes, NLR, PLR) in students at the Faculty of Medicine, Veteran National Development University, Jakarta.

Method

This study used a cross-sectional design and a simple random sampling technique. Measurement of visceral fat using BIA (Bioelectrical Impedance Analysis) includes visceral body fat percentage, visceral fat to protein ratio, body muscle to body water ratio, basal metabolic rate (BMR) and hematological tests using Abbott Hematology Analyzer alinity HQ to see red blood cell counts, reticulocytes, hematocrit, hemoglobin, leukocytes, NLR, PLR and platelets

Result

This study found that 43% of the subjects had high visceral fat. There were differences in age, body mass index (BMI), and total body fat between the normal and high visceral fat groups ($p < 0.05$). There was no difference in the number of blood laboratory results between the normal and high visceral fat groups ($p > 0.05$). However, there was a difference in monocytes and leukocytes between the visceral fat groups ($p < 0.05$). The results of the Mann-Whitney test showed that there was a difference ($p = 0.021$) between the high and normal visceral fat groups and no difference in NLR ($p = 0.614$) and PLR ($p = 0.761$).

Conclusion

Medical students tend to have high levels of visceral fat and are advised to follow a diet that avoids the consumption of simple carbohydrates, reduces the consumption of complex carbohydrates, and reduces the consumption of saturated fats.

Reference ***:*** 30 (2014 - 2024)

Keywords ***:*** *Visceral fat, Leukocytes, neutrophil-to-Lymphocyte Ratio, Platelet-to-Lymphocyte Ratio, Inflammation*