

INTISARI

PERBEDAAN ANTARA KETEBALAN LEMAK EPIKARDIAL PADA PASIEN INFARK MIOKARD AKUT DAN ANGINA PEKTORIS STABIL Jaya, F., Dinarti, L. K., Bagaswoto, H.P.

Latar Belakang: Lemak Epikardial merupakan lemak yang berada di antara miokardium dan perikardium viscerale. Lemak ini dapat mensekresi sitokin-sitokin proinflamasi seperti makrofag, IL-6, dan TNF- α yang dapat mempengaruhi proses aterosklerosis dan aterotrombosis arteri koroner melalui jalur parakrin dan vasokrin. Pengukuran lemak epikardial secara ekokardiografi mempunyai beberapa keuntungan seperti murah, praktis dalam praktek klinis dan mempunyai reliabilitas yang tinggi sehingga mampu memberikan informasi tentang ketebalan lemak epikardial secara presisi. Pengukuran ketebalan lemak epikardial dengan ekokardiografi di dinding bebas ventrikel kanan pada potongan *parasternal long axis* pada *end-diastole*. Belum ada penelitian di Indonesia yang membandingkan ketebalan lemak epikardial pada pasien Infark Miokard Akut (IMA) dan Angina Pectoris Stabil (APS).

Tujuan: Mengetahui perbandingan ketebalan lemak epikardial pada pasien IMA dan APS di RSUP dr Sardjito Yogyakarta sehingga dapat mengevaluasi peranan lemak epikardial sebagai penanda kerentanan ruptur plak.

Metode: Lima puluh pasien IMA dan 45 pasien APS sesuai kriteria inklusi dan eksklusi dilakukan pemeriksaan angiografi dan ekokardiografi ketebalan lemak epikardial. Hasil ekokardiografi ketebalan lemak epikardial antara kedua kelompok dibandingkan. Penelitian ini juga meneliti faktor-faktor yang mempengaruhi ketebalan lemak epikardial dan kejadian IMA.

Hasil: Rerata ketebalan lemak epikardial pada pasien IMA sebesar sebesar 6.68 ± 1.10 mm berbeda signifikan dengan ketebalan lemak epikardial pada pasien APS yaitu sebesar 3.83 ± 0.95 mm. Analisis komparatif antara ketebalan lemak epikardial pada kedua kelompok menggunakan *Independent t-test* didapatkan perbedaan signifikan kedua kelompok dengan $p=0.000$ dengan interval kepercayaan (IK) 95% sebesar (2.424 - 3.264). Pada analisis bivariat didapatkan faktor yang mempengaruhi ketebalan lemak epikardial yaitu DM, hipertensi, kreatinin, dan *Netrophil to Lymphocyte Ratio* (NLR). Dari hasil analisis multivariat didapatkan bahwa variabel NLR merupakan variabel independen yang berpengaruh signifikan terhadap ketebalan lemak epikardial ($p=0.004$). Pada analisis bivariat didapatkan faktor yang mempengaruhi IMA yaitu usia, IMT, DM, hipertensi, dislipidemia, dan ketebalan lemak epikardial. Dari hasil analisis multivariat didapatkan bahwa ketebalan lemak epikardial merupakan variabel independen yang berpengaruh signifikan terhadap kejadian IMA ($p=0.000$).

Simpulan: Pasien IMA mempunyai lemak epikardial yang lebih tebal secara signifikan dibandingkan dengan pasien APS dan ketebalan lemak epikardial dapat digunakan sebagai prediktor kejadian IMA.

Kata kunci: ketebalan lemak epikardial, IMA, APS, prediktor kejadian IMA

ABSTRACT

THE DIFFERENCE BETWEEN EPICARDIAL ADIPOSE TISSUE THICKNESS IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION AND STABLE ANGINA PEKTORIS

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Background: Epicardial adipose tissue (EAT) is an adipose tissue that located between myocardium and visceral pericard. This fat can secrete proinflammatory cytokines such as macrophages, IL-6, and TNF- α which can affect the process of atherosclerosis and atherothrombosis of coronary artery through the paracrine and vasocrine pathways. Echocardiographic measurements of EAT have several advantages such as inexpensive, practical in clinical practice and has high reliability so being able to provide information about the thickness of EAT precisely. The echocardiographic EAT thickness was measured on the free wall of the right ventricle from parasternal long axis at end-diastole. There were no studies in Indonesia comparing the thickness of epicardial adipose tissue in Acute Myocardial Infarction (AMI) and Stable Angina Pectoris (SAP)

Objective: To determine the comparison of the thickness of EAT in patients with AMI and SAP in Dr. Sardjito General Hospital Yogyakarta so the role of EAT as a marker of plaque rupture susceptibility can be evaluated.

Methods: Fifty AMI patients and 45 SAP patients according to inclusion and exclusion criteria were examined for angiographic and echocardiographic examination of EAT. Echocardiographic results of EAT between the two groups were compared. This study also examined the factors that influence the thickness of EAT and AMI.

Results: The mean of EAT thickness in AMI patients which was 6.68 ± 1.10 mm was significantly different from the EAT thickness in SAP patients which was 3.83 ± 0.95 mm. Comparative analysis between EAT thickness in the two groups using the Independent t-test found a significant difference between the two groups with $p = 0,000$ with a 95% confidence interval (2,424-3,264). Bivariate analysis found that the variables that impact EAT thickness were DM, hypertension, creatinine, leukocyte, and Netrophil to Lymphocyte Ratio (NLR). From the multivariate analysis it was found that NLR was an independent variable that had a significant effect on EAT thickness ($p = 0.004$). Bivariate analysis found that variables that impact of the incidence of AMI were age, BMI, DM, hypertension, dyslipidemia, and EAT thickness. From the multivariate analysis it was found that the EAT thickness was an independent variable that had a significant effect on the incidence of AMI ($p = 0.000$).

Conclusion: AMI patients have significantly thicker EAT compared to SAP patients and EAT thickness can be used as a predictor of the incidence of AMI.

Keywords: EAT thickness, AMI, SAP, predictors of the incidence of AMI