

# Korelasi ketebalan adiposa epikardial dengan derajat stenosis arteri koroner pada pasien penyakit jantung koroner stabil = Correlation of epicardial adipose thickness with the severity of coronary artery stenosis in stable coronary heart disease patient

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## Abstrak

[<b>ABSTRAK</b><br>

### Latar Belakang

Jaringan adiposa epikardial (JAE) sebagai jaringan adiposa visera penting peranannya dalam proses aterosklerosis di arteri koroner. Studi sebelumnya menunjukkan ketebalan adiposa epikardial lebih besar pada pasien dengan penyakit jantung koroner (PJK)

### Tujuan

Mengetahui korelasi antara ketebalan adiposa epikardial dengan derajat stenosis arteri koroner pada pasien PJK stabil

### Metode

Dilakukan studi potong lintang pada tujuh puluh pasien PJK stabil yang menjalani angiografi koroner. Derajat stenosis arteri koroner dinilai dengan skor Gensini > 40 (berat) dan < 40 (ringan-sedang). Ketebalan adiposa epikardial dinilai dengan ekokardiografi transtorakal pada fase sistolik akhir tampilan parasternal long axis.

### Hasil

Nilai rerata ketebalan adiposa epikardial adalah 5,96 mm (SB 1,76) dan nilai median skor Gensini adalah 35,0 (kisaran 2-126). Analisis bivariat menunjukkan korelasi positif kuat yang bermakna ( $r = 0,768$ ,  $p < 0,001$ ). Nilai titik potong terbaik dari ketebalan adiposa epikardial yang memiliki nilai klinis berkaitan dengan derajat stenosis arteri koroner berdasarkan skor Gensini adalah 6,15 mm dengan sensitivitas 85,29%, spesifisitas 83,33%, nilai duga positif 82%, nilai duga negatif 85% dengan AUC sebesar 0,893 (IK 95% 0,814-0,971,  $p < 0,001$ ).

### Simpulan

Ketebalan adiposa epikardial berkorelasi signifikan dengan derajat stenosis arteri koroner berdasarkan skor Gensini. Ketebalan adiposa epikardial 6,15 mm memiliki kemampuan yang cukup baik untuk membedakan pasien PJK stabil ringan-sedang dan berat berdasarkan skor gensini.

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<b>ABSTRACT</b><br>

### Background:

Epicardial adipose tissue (EAT) as part of visceral adipose tissue, has an integral role in the atherosclerotic cardiovascular disease. Previous studies have shown that EAT is thicker in those with coronary heart disease.

### Objective:

To determine the correlation of epicardial adipose thickness with the severity of coronary artery stenosis in stable coronary heart disease (CHD) patient

Method:

A cross-sectional study was conducted on seventy stable CHD patient undergoing coronary angiography. Severity of coronary artery stenosis was evaluated using Gensini scoring system : > 40 (severe) and 40 (mild-moderate). Epicardial adipose tissue was measured using transthoracic echocardiography at end-systole from parasternal longaxis view.

Results :

Mean value of epicardial adipose thickness was 5,96 mm (SD 1,76) and median value of Gensini score was 35,0 (range 2-126). The correlation test showed a significant strong-positive correlation ( $r = 0,768$ ,  $p < 0,001$ ). The best cut-off point of epicardial adipose thickness which has a clinical value correlating to severity of coronary artery stenosis based on Gensini scoring system was 6,15 mm with the sensitivity 85,29 %, specificity 83,33%, positive predictive value 82 %, negative predictive value 85 % and AUC of 0,893 (CI 0,814-0,971,  $p < 0,001$ )

Conclusion :

Epicardial fat thickness is significantly correlated to the severity of coronary artery stenosis based on Gensini scoring system. The thickness cutoff point of 6,15 mm has a good capability in discriminating mild-moderate dan severe stable CHD patient based on Gensini scoring system;

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