

INTISARI

Korelasi Indeks Aterogenik Plasma Terhadap Severitas Lesi Infark Miokard Akut Pada Usia Kurang Dari 45 Tahun

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Latar Belakang: Penyakit jantung iskemik menjadi salah satu masalah kesehatan utama secara global. Terjadi peningkatan insiden infark miokard akut pada usia muda dalam beberapa tahun terakhir. Dislipidemia merupakan faktor yang meningkatkan risiko terjadinya penyakit jantung iskemik. Indeks aterogenik plasma merupakan log dari trigliserida terhadap *high density lipoprotein* dianggap sebagai prediktor penyakit jantung iskemik.

Tujuan: Penelitian ini bertujuan untuk mengetahui korelasi indeks aterogenik plasma terhadap severitas lesi infark miokard akut pada usia kurang dari 45 tahun.

Metode: Penelitian ini merupakan studi potong lintang. Subjek penelitian adalah pasien infark miokard akut usia 18 - 44 tahun yang menjalani prosedur *percutaneous coronary intervention* di RSUP DR. Sardjito Yogyakarta. Sampel dilakukan dengan cara pengambilan data rekam medis. Didapatkan data trigliserida dan HDL serta hasil koroangiografi.

Hasil: Dari 63 pasien, didapatkan sebanyak 68.3% *single vessel disease*, 50.7% *oklusi total*, rerata IAP (0.23 ± 0.32), dari analisis ROC didapatkan cut off 0.345, IAP ≥ 0.345 dengan oklusi total sebanyak 12 (37.5%), IAP < 0.345 dengan oklusi total sebanyak 20 (62.5%) (τ 0.163; p 0.227; OR 1.97; CI 0.65-5.97). Faktor lain seperti obesitas, merokok, hipertensi, diabetes, LDL, riwayat penyakit jantung koroner, dan riwayat stroke tidak berpengaruh signifikan terhadap severitas lesi infark miokard ($p > 0.05$).

Kesimpulan: Peningkatan indeks aterogenik plasma tidak berkorelasi secara signifikan terhadap severitas lesi infark miokard akut pada usia kurang dari 45 tahun ($p > 0.05$). Walaupun demikian implikasi klinis penggunaan indeks aterogenik plasma tetap diperlukan, mengingat peran dari tingginya kadar trigliserida dan rendahnya kadar HDL menyebabkan terjadinya inflamasi serta aterosklerosis dimana hal itu berperan penting dalam terjadinya infark miokard.

Kata kunci: indeks aterogenik plasma, infark miokard akut, oklusi total, trigliserida, *high density lipoprotein*

ABSTRACT

Correlation of Atherogenic Index Plasma with the Severity of Acute Myocardial Infarction Lesions in Patients Under 45 Years of Age

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Background: Ischemic heart disease is one of the major health problems globally. There has been an increase in the incidence of acute myocardial infarction in young people in recent years. Dyslipidemia is a factor that increases the risk of ischemic heart disease. The atherogenic index of plasma, defined as the logarithm of triglycerides to high-density lipoprotein, is considered a predictor of ischemic heart disease.

Objective: This study aims to investigate the correlation between the atherogenic index of plasma and the severity of acute myocardial infarction lesions in individuals under 45 years of age.

Methods: This study is a cross-sectional study. The study subjects were patients with acute myocardial infarction aged 18–45 years who underwent percutaneous coronary intervention at Dr. Sardjito General Hospital, Yogyakarta. Data were collected from medical records. Data on triglycerides, HDL, and coronary angiography results were obtained.

Results: Out of 63 patients, 68.3% had single vessel disease, 50.7% had total occlusion, and the mean IAP was 0.23 ± 0.32 . From ROC analysis, a cutoff of 0.345 was obtained, with ≥ 0.345 indicating total occlusion in 12 (37.5%) cases and IAP < 0.345 indicating total occlusion in 20 (62.5%) cases (τ 0.163; p 0.227; OR 1.97; CI 0.65-5.97). Other factors such as obesity, smoking, hypertension, diabetes, LDL, history of coronary artery disease, and history of stroke did not significantly affect the severity of myocardial infarction lesions ($p > 0.05$).

Conclusion: An increase in atherogenic index of plasma is not significantly correlated with the severity of acute myocardial infarction lesions in individuals under 45 years of age ($p > 0.05$). Nevertheless, the clinical implications of using the atherogenic index of plasma remain necessary, given the role of elevated triglyceride levels and low HDL levels in causing inflammation and atherosclerosis, which play a significant role in the occurrence of myocardial infarction.

Keywords: acute myocardial infarction, atherogenic index of plasma, triglycerides, high density lipoprotein, total occlusion