

ABSTRAK

HUBUNGAN INDEKS KARDIO-METABOLIK TRIGLISIERIDA/*HIGH-DENSITY LIPOPROTEIN* TERHADAP MORTALITAS SINDROMA KORONER AKUT PADA PASIEN DIABETES MELITUS TIPE 2 YANG MENJALANI ANGIOGRAFI KORONER

Yusuf Taqwa Muladi¹, Vita Yanti Anggraeni², Vina Yanti Susanti²

¹PPDS Ilmu Penyakit Dalam FKKMK UGM

²Divisi Kardiologi, Departemen Ilmu Penyakit Dalam FKKMK UGM

³Divisi Endokrinologi, Departemen Ilmu Penyakit Dalam FKKMK UGM

Pendahuluan : Salah satu komplikasi dari diabetes melitus ialah gangguan pada organ kardiovaskular termasuk sindrom koroner akut (SKA) dan penyebab utama angka morbiditas dan mortalitas pasien rawat inap. Peran indeks kardio-metabolik TG/HDL sebagai prediktor mortalitas pada pasien SKA dengan DM tipe 2 yang dilakukan angiografi koroner masih terbatas di Indonesia.

Tujuan Penelitian : Mengevaluasi indeks kardio-metabolik *triglisierida/high-density lipoprotein* terhadap mortalitas sindroma koroner akut pada pasien diabetes melitus tipe 2 yang telah menjalani angiografi koroner.

Metode Penelitian : Penelitian kohort retrospektif ini menggunakan data rekam medis elektronik pasien SKA dengan DM tipe 2 yang telah menjalani angiografi koroner dan dirawat inap di RSUP Dr. Sardjito periode Januari 2022-Juni 2024. Data yang dikumpulkan meliputi usia, jenis kelamin, index massa tubuh (IMT), CMI TG/HDL, merokok, HbA1C, hipertensi, jenis SKA, hasil angiografi koroner, kolesterol total, LDL. Luaran pada penelitian ini adalah mortalitas di rumah sakit. Analisis *bivariat* dilakukan dengan menggunakan *chi-square* dengan terlebih dahulu melakukan analisis *Receiving Operator Curve* (ROC) untuk menentukan titik potong nilai TG/HDL.

Hasil Penelitian : Penelitian ini melibatkan 228 pasien SKA dengan DM tipe 2 yang dilakukan angiografi koroner. Mortalitas di rumah sakit ditemukan lebih tinggi pada kelompok dengan indeks CMI TG/HDL >2,89 (30,7%), kadar LDL <100 (36,7%) serta pada kelompok penyakit 3 pembuluh darah dan LM *disease* (32,3%). Pada analisis multivariat, CMI TG/HDL >2,89 (OR tersesuaikan 9,009; IK 95%: 3,006-26,996; p=0,000), kadar LDL (OR tersesuaikan 3,162; IK 95%: 1,529-6,541; p=0,002), serta penyakit 3 pembuluh dan LM *disease* (OR tersesuaikan 3,257; IK 95%: 1,609-6,595; p=0,001), berhubungan secara independen dengan peningkatan risiko mortalitas di rumah sakit.

Kesimpulan : Terdapat hubungan antara indeks kardio-metabolik TG/HDL dengan mortalitas sindrom koroner akut pada pasien diabetes mellitus tipe 2 yang menjalani angiografi koroner.

Kata kunci : CMI TG/HDL, diabetes melitus, sindrom koroner akut, mortalitas.

Association Between Triglyceride/High-Density Lipoprotein Cardio-Metabolic Index with Acute Coronary Syndrome Mortality in Type 2 Diabetes Mellitus Patients Undergoing Coronary Angiography

Yusuf Taqwa Muladi¹, Vita Yanti Anggraeni², Vina Yanti Susanti²

¹Department of Internal Medicine, FKMK UGM

²Division of Cardiology, ¹Department of Internal Medicine, FKMK UGM

³Division of Endocrinology, ¹Department of Internal Medicine, FKMK UGM

Introduction: One of the primary complications of diabetes mellitus is cardiovascular dysfunction, including acute coronary syndrome (ACS), which remains a leading cause of morbidity and mortality among hospitalized patients. The role of the TG/HDL cardio-metabolic index as a mortality predictor in ACS patients with type 2 diabetes mellitus (T2DM) undergoing coronary angiography is still limited in Indonesia.

Objective: To evaluate the association between the triglyceride/high-density lipoprotein (TG/HDL) cardio-metabolic index and mortality in acute coronary syndrome patients with type 2 diabetes mellitus who have undergone coronary angiography.

Methods: This retrospective cohort study utilized electronic medical record data from ACS patients with T2DM who underwent coronary angiography and were hospitalized at Dr. Sardjito General Hospital between January 2022 and June 2024. Data collected included age, sex, body mass index (BMI), CMI TG/HDL, smoking status, HbA1C, hypertension, ACS type, coronary angiography results, total cholesterol, and LDL. The primary outcome was in-hospital mortality. Bivariate analysis was performed using the chi-square test, preceded by a Receiver Operating Characteristic (ROC) curve analysis to determine the optimal cutoff point for the TG/HDL value.

Results: The study included 228 ACS patients with T2DM who underwent coronary angiography. In-hospital mortality was found to be higher in the group with a CMI TG/HDL index >2.89 (30.7%), LDL levels <100 mg/dL (36.7%), and those with three-vessel disease or Left Main (LM) disease (32.3%). In multivariate analysis, CMI TG/HDL >2.89 (adjusted OR 9.009; 95% CI: 3.006–26.996; $p=0.000$), LDL levels (adjusted OR 3.162; 95% CI: 1.529–6.541; $p=0.002$), and three-vessel/LM disease (adjusted OR 3.257; 95% CI: 1.609–6.595; $p=0.001$) were independently associated with an increased risk of in-hospital mortality.

Conclusion: There is a significant association between the TG/HDL cardio-metabolic index and acute coronary syndrome mortality in type 2 diabetes mellitus patients undergoing coronary angiography.

Keywords: CMI TG/HDL, diabetes mellitus, acute coronary syndrome, mortality