ABSTRAK

Latar Belakang: Diabetes mellitus (DM) diketahui meningkatkan risiko terhadap penyakit jantung seperti *acute coronary syndrome* (ACS). HbA1c merupakan pengukuran kadar gula yang akurat pada kondisi DM kronis. Beberapa penelitian menggunakan skor dan hasil yang beragam dalam menilai hubungan antara HbA1c terhadap derajat keparahan ACS pada pasien DM. Namun, tidak banyak yang secara spesifik mengulas hubungan dari kadar HbA1c dengan derajat keparahan ACS pada pasien yang memiliki riwayat diabetes mellitus.

Tujuan: Menilai hubungan antara kadar HbA1c dengan derajat keparahan ACS yang diukur menggunakan *TIMI Risk score*, *Killip class*, dan kadar troponin pada pasien diabetes mellitus.

Metode Penelitian: Penelitian ini menggunakan desain penelitian retrospektif. Sampel penelitian adalah pasien ACS dengan diabetes mellitus di RSUP Dr. Kariadi Semarang. Teknik pengambilan sampel adalah *total sampling* dengan minimal sampel sebanyak 32 orang. Data dikumpulkan melalui pencatatan kadar HbA1c, nilai troponin jantung, serta perhitungan skor rTIMI dan skor Killip pada setiap sampel.

Hasil: Tidak terdapat hubungan bermakna antara kadar HbA1c dengan pengukuran *TIMI score* (p = 0,345), *Killip class* (p = 0,105), dan kadar troponin (p = 0,796) pada pasien diabetes mellitus.

Simpulan: Tidak terdapat hubungan antara kadar HbA1c terhadap derajat keparahan ACS yang yang diukur dengan *TIMI score, Killip class,* dan kadar troponin pada pasien diabetes mellitus.

Kata Kunci: *DM, ACS, TIMI score, Killip class, Troponin*

ABSTRACT

Background: Diabetes mellitus (DM) is known to increase the risk of heart diseases such as acute coronary syndrome (ACS). HbA1c is an accurate measurement of glucose levels in chronic DM conditions. Various studies have employed different scoring systems and outcomes to assess the relationship between HbA1c levels and the severity of ACS in DM patients. However, there is not much specifically discussed about the relationship between HbA1c levels and the severity of ACS in patients with a history of diabetes mellitus.

Objective: To evaluate the association between HbA1c levels and the severity of ACS, measured using TIMI score, Killip class, and troponin levels in patients with diabetes mellitus.

Methods: This study used a retrospective research design. The study sample consisted of ACS patients with diabetes mellitus at Dr. Kariadi Hospital Semarang. The total sampling technique was used, with a minimum sample size of 32 individuals. Data were collected by recording HbA1c levels, cardiac troponin values, and calculating TIMI and Killip scores for each sample.

Results: There was no significant association found between HbA1c levels and the measurements of TIMI score ($p = 0.345$), Killip class ($p = 0.105$), and troponin levels ($p = 0.796$) in patients with diabetes mellitus.

Conclusion: No relationship was observed between HbA1c levels and the severity of ACS measured by TIMI score, Killip class, and troponin levels in patients with diabetes mellitus.

Keywords: DM, ACS, TIMI score, Killip class, Tropon