

INTISARI

LATAR BELAKANG: Kondisi hiperglikemia dan variasi nilai kadar gula darah meningkatkan risiko infeksi, perbaikan luka yang lambat, kegagalan organ, memperlama masa tinggal di rumah sakit, serta kematian. Penelitian ini bertujuan untuk mengetahui hubungan variasi kadar gula darah pasien hiperglikemia dengan faktor risiko pasien *critically ill* setelah mendapatkan terapi insulin

METODE: Penelitian ini dilakukan secara retrospektif melalui penelusuran rekam medis pasien yang memiliki kadar gula darah > 200 mg/dL, umur > 18 tahun, perawatan ICU > 24 jam, pengambilan sampel darah 3 kali. Analisis statistik deskriptif univariat dan bivariate dilakukan untuk mengetahui karakteristik dan hubungan faktor risiko dengan variasi kadar gula darah (*Coefficient of Variation (CV)*)

HASIL DAN KESIMPULAN: Sebanyak 115 pasien memiliki rerata umur $58,40 \pm 13,58$ tahun, 53% lelaki, 64,8% pasien memiliki diabetes mellitus, median dosis insulin 25,33 (1,2 – 92) unit/hari, 39,1% pasien mengalami hipoglikemia, median kadar gula 181 (81 – 353,77) mg/dL. Rerata variasi kadar gula darah (CV) sebesar $40,77 \pm 11,64$ %. Sebanyak 3 pasien (2,6 %) termasuk kelompok dengan $CV < 20$ % dan 112 pasien (97,4 %) termasuk kelompok dengan $CV \geq 20$ %. Hasil uji statistik tidak menunjukkan hubungan yang bermakna faktor risiko (Indeks Massa Tubuh (IMT), umur, komedikasi kortikosteroid, status diabetes, komorbid, regimen insulin, frekuensi pengukuran kadar gula darah per hari, kejadian hipoglikemi, pencapaian target kadar gula darah) dengan variasi kadar gula darah ($CV < 20$ % dan $CV \geq 20$ %) ($p > 0,05$).

KATA KUNCI: hiperglikemi, *intensive care unit*, variasi kadar gula darah

ABSTRACT

BACKGROUND: The condition of hyperglycemia and the variation of the blood glucose levels increase the risk of infection, slow wound healing, organ failure, prolong hospital stay, and mortality. This study aims to investigate the relationship between risk factors for *critically ill* patients who have hyperglycemia with variations in a patient's blood glucose levels after receiving insulin therapy.

METHODS: This study was conducted retrospectively in patients who have blood glucose levels > 200 mg / dL, age > 18 years, ICU > 24 hours, measurement of blood glucose levels 3 times. Statistical analysis was performed to determine the characteristics and relationships of risk factors to variations in blood glucose levels (Coefficient of Variation (CV))

RESULTS AND CONCLUSION: A total of 115 patients had a mean age of 58.40 ± 13.58 years, 53% male, 64.8% of patients had diabetes mellitus, the median value of insulin dose 25.33 (1.2 to 92) units / day, 39.1% of patients experiencing hypoglycemia, the median value of blood glucose levels 181 (81 to 353.77) mg / dL. The mean of blood glucose variation (CV) is $40.77 \pm 11.64\%$. A total of 3 patients (2.6%) belong to a group with CV <20% and 112 patients (97.4%) belong to a group with CV $\geq 20\%$. Statistical test results showed no significant association of risk factors (body mass index (BMI), age, corticosteroids comedication, diabetic status, comorbidities, insulin regimen, the frequency of blood glucose measurement per day, the incidence of hypoglycemic, achievement of blood glucose targets) with variations blood glucose levels (CV <20% and CV $\geq 20\%$) ($p > 0.05$).

KEYWORDS: hyperglycemia, intensive care unit, blood glucose variations