Hubungan Skor SAPS 3 dengan Mortalitas 28 Hari pada Pasien Covid-19 yang Dirawat di ICU RSCM dan RSUI = Correlation between SAPS 3 Score and 28 Days Mortality in Covid-19 Patients in ICU RSCM and RSUI

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Abstrak

Latar Belakang: COVID-19 telah ditetapkan WHO sebagai Kedaruratan Kesehatan Masyarakat Yang Meresahkan Dunia dengan case fatality rate (CFR) di Indonesia mencapai 8,7% pada April 2020. Sampai saat ini belum ada biomarker prognosis untuk membedakan pasien yang membutuhkan perhatian segera dan menjadi prediktor mortalitas COVID-19 di ICU. Skor Simplified Acute Physiology Score 3 (SAPS 3) menilai kondisi pasien sejak pertama kali datang ke rumah sakit dan mengevaluasi data yang diperoleh saat masuk ICU dalam menentukan prediktor mortalitas 28 hari. Tujuan: Studi ini menganalisis hubungan skor SAPS 3 dengan mortalitas 28 hari pada pasien COVID-19 yang dirawat di ICU RSCM dan RSUI.

Metode: Penelitian ini merupakan studi kohort retrospektif di Rumah Sakit Cipto Mangunkusumo selama bulan Maret-Agustus 2020. Sebanyak 208 subjek yang sesuai kriteria inklusi dianalisis dari data rekam medis. Data demografis dan penilaian skor SAPS 3 dicatat sesuai data rekam medis. Variabel SAPS 3 yang berpengaruh terhadap mortalitas 28 hari dilakukan analisis bivariat dan regresi logistik multivariat. Kesahihan dinilai menggunakan uji diskriminasi dengan melihat Area Under Curve (AUC) dan uji kalibrasi Hosmer Lemeshow. Titik potong optimal ditentukan secara statistik.

Hasil: Angka mortalitas 28 hari akibat COVID-19 periode Maret-Agustus sebesar 43.8%. Variabel SAPS 3 yang secara statistik berpengaruh signifikan ($p<0.05$) terhadap mortalitas 28 hari pasien COVID-19 di ICU adalah usia, riwayat penggunaan obat vasoaktif sebelum masuk ICU, penyebab masuk ICU (defisit neurologis fokal dan gagal napas), kadar kreatinin dan trombosit. Skor SAPS 3 menunjukkan nilai diskriminasi yang baik (AUC 80.5% Interval Kepercayaan 95% 0.747-0.862) dan kalibrasi yang baik (Hosmer-Lemeshow p=0.395). Titik potong optimal skor SAPS 3 adalah 39 dengan sensitivitas 70.3% dan spesifisitas 74.4%.

Kesimpulan: Skor SAPS 3 memiliki hubungan dengan mortalitas 28 hari pada pasien COVID-19 yang dirawat di ICU.

......Background: COVID-19 has been declared as a Public Health Emergency of International Concern by WHO with case fatality rate (CFR) of 8,7% in April 2020 in Indonesia. Until now, there is no prognostic biomarker to differentiate patients who require immediate attention and be a mortality predictor for COVID-19 patients in ICU. Simplified Acute Physiology Score 3 (SAPS 3) score assessed the patient's condition since the first time he came to the hospital and evaluated the data obtained in the first hour of admission to the ICU in predicting 28-days mortality. Goals: This study aims to analyze the correlation between SAPS 3 score and 28-days mortality caused by COVID-19 in the ICU RSCM and RSUI.

Methods: This retrospective cohort study was conducted in Cipto Mangunkusumo Hospital from March to August 2020 on 208 subjects who met the inclusion criteria. Demographic data and SAPS 3 score were recorded, the data was taken from medical records. Bivariate and multivariate logistic regression was used to investigate the relationship between SAPS 3 variables and 28-days mortality. The validity of SAPS 3 score

was assessed by measurement of the Area Under Curve (AUC) and Hosmer- Lemeshow calibration test. The optimal cut-off point was determined statistically.

Results: The mortality rate of COVID-19 in our study from March to August 2020 is 43.8%. Five SAPS 3 variables were found to be significantly associated with 28-days mortality of COVID-19 patients in the ICU ($p < 0.05$) are age, use of vasoactive drugs before ICU admission, reason for ICU admission (focal neurologic defisit and respiratory failure), creatinine, and thrombocyte level. SAPS 3 showed a good discrimination ability (AUC 80.5% Confidence Interval 95% 0.747-0.862) and calibration ability (Hosmer-Lemeshow p=0.395). The optimal cut off point of SAPS 3 score was 39 with sensitivity 70.3% and specificity 74.4%.

Conclusion: SAPS 3 score have a correlation with 28-days mortality caused by COVID-19 in the ICU.