INTISARI

Latar belakang: Infeksi SARS-CoV-2 adalah infeksi virus yang dapat tanpa gejala hingga bergejala berat dan menimbulkan kematian. Peningkatan *C-reactive protein* (CRP), penurunan albumin dan limfopenia merupakan biomarker yang relevan dalam mencerminkan peradangan, status gizi, dan sistem imun tubuh pada keparahan COVID-19. Adanya heterogenitasnya pada pasien yang terinfeksi COVID-19 membuat satu biomarker saja memiliki keterbatasan serta menghasilkan hasil yang tidak konsisten. Kombinasi ketiganya pada indeks CALLY dapat menjadi biomarker baru yang kuat, sederhana dan mudah, tetapi perannya yang dihubungkan dengan derajat keparahan COVID-19 belum pernah diteliti.
Tujuan: Untuk mengetahui hubungan antara indeks CALLY dengan derajat keparahan pada pasien COVID-19 yang dirawat di RSUP Dr. Sardjito, Yogyakarta.
Metode: Desain penelitian ini *cross-sectional*. Kriteria inklusi pasien usia ≥18 tahun, terkonfirmasi COVID-19 serta menjalani rawat inap di RSUP Dr. Sardjito Yogyakarta dan mencantumkan data rekam medik lengkap. Kriteria eksklusi yaitu pasien dengan kehamilan, HIV, gangguan hati, dan menggunakan immunosupresan. Hubungan indeks CALLY dianalisis dengan uji korelasi *Spearman*. Nilai p<0,05 dianggap bermakna secara statistik.
Hasil: Jumlah subjek sebanyak 201 pasien, meliputi derajat ringan 5 (2,5%), sedang 62 (30,8%), berat 27 (13,4%), dan kritis 107 (53,2%). Karakteristik subjek lainnya adalah median usia 59 tahun, mayoritas laki-laki (51,7%), dan 80% memiliki komorbid. Terdapat hubungan terbalik dengan kategori sedang yang signifikan antara indeks CALLY dengan derajat keparahan COVID-19 (r=-0,409, p<0,001). Indeks CALLY <2,724 memiliki *prevalence ratio* sebesar 1,57 (95% CI: 1,29-1,93; p=0,001) terhadap luaran keparahan.
Simpulan: Terdapat hubungan yang signifikan secara statistik antara indeks CALLY dengan derajat keparahan pada pasien COVID-19 yang dirawat di RSUP Dr. Sardjito, Yogyakarta.

Kata kunci : COVID-19, indeks CALLY, derajat keparahan

ABSTRACT

Background: SARS-CoV-2 infection is a viral infection that can be asymptomatic to severely symptomatic and fatal. Elevated C-reactive protein (CRP), decreased albumin, and lymphopenia are relevant biomarkers reflecting inflammation, nutritional status, and the immune system in COVID-19 severity. The heterogeneity in patients infected with COVID-19 makes one biomarker alone have limitations and produces inconsistent results. The combination of the three in the CALLY index can be a powerful, simple, and easy new biomarker, but its role in the severity of COVID-19 has not been studied.
Objective: to determine the relationship between the CALLY index and the degree of severity in COVID-19 patients treated at Dr. Sardjito Hospital, Yogyakarta.
Methods: The design of this study was cross-sectional. Inclusion criteria were patients aged ≥18 years, confirmed COVID-19, and undergoing hospitalization at Dr. Sardjito Hospital Yogyakarta and including complete medical record data. Exclusion criteria were patients with pregnancy, HIV, liver disorders, and using immunosuppressants. The correlation of the CALLY index was analyzed by the Spearman correlation test. A p-value <0.05 was considered statistically significant.
Results: The total number of subjects was 201 patients, including mild 5 (2.5%), moderate 62 (30.8%), severe 27 (13.4%), and critical 107 (53.2%). Other subject characteristics were a median age of 59 years, the majority was male (51.7%), and 80% had comorbidities. There was a significant moderate negative relationship between the CALLY index and the severity of COVID-19 (r=-0,312,p< 0,05). CALLY index <2.724 had a prevalence ratio of 1.57 (95% CI: 1.29-1.93; p=0.001) for severity outcomes.
Conclusion: There is a statistically significant relationship between the CALLY index and the degree of severity in COVID-19 patients treated at Dr. Sardjito General Hospital, Yogyakarta.

Keywords: COVID-19, CALLY *index*, severity