INTISARI

Latar belakang: Infeksi COVID-19 dikaitkan dengan disfungsi status imun dan inflamasi berlebihan yang pada banyak penelitian secara signifikan dihubungkan dengan peningkatan C-reactive protein (CRP), penurunan albumin, dan limfopenia dengan risiko tingginya mortalitas, sehingga indeks CALLY yang merupakan kombinasi sekaligus dari ketiganya dapat berpotensi menjadi prediktor yang lebih baik. Peran indeks CALLY sebagai prediktor mortalitas pasien COVID-19 terutama di Indonesia belum pernah diteliti.
Tujuan: mengevaluasi kemampuan indeks CALLY dengan *cut-off* <2,724 sebagai prediktor mortalitas pada pasien terinfeksi COVID-19 yang dirawat di rumah sakit.
Metode: Desain penelitian ini kohort retrospektif pada pasien rawat inap COVID-19 di RSUP Dr. Sardjito. Subjek penelitian dibagi menjadi kelompok terpapar (pasien dengan CALLY <2,724) dan kelompok tidak terpapar (pasien dengan CALLY ≥2,724). Pemantauan mortalitas diamati maksimal 30 hari perawatan setelah terkonfirmasi. Risiko mortalitas dianalisis dengan risiko relatif. Analisis kesintasan pada kedua kelompok dilakukan *survival analysis* dengan *Kaplan-Meier*. Nilai p<0,05 dianggap bermakna secara statistik.
Hasil: Jumlah subjek sebanyak 102 pasien, terdiri dari 51 subjek terpapar (CALLY <2,724) dan 51 subjek tidak terpapar (CALLY >2,724). Kelompok dengan nilai CALLY <2,724 mengalami kematian sebanyak 34 (66,7%) sedangkan kelompok lain (CALLY ≥2,724) mengalami kematian 10 (19,6%). Analisis *survival* kelompok pasien dengan nilai CALLY <2,724 memiliki risiko (HR) kematian 3,459 kali dibanding kelompok dengan nilai CALLY ≥2,724.
Simpulan: Nilai indeks CALLY <2,724 dapat digunakan sebagai prediktor mortalitas pada pasien COVID-19.

Kata kunci : COVID-19, indeks CALLY, mortalitas

ABSTRACT

Background: COVID-19 infection is associated with immune status dysfunction and excessive inflammation which in many studies is significantly associated with increased C-reactive protein (CRP), decreased albumin, and lymphopenia with a high risk of mortality, so the CALLY index which is a combination of all three can potentially be a better predictor. The role of the CALLY index as a predictor of mortality for COVID-19 patients, especially in Indonesia, has never been studied.
Objective: Evaluate the ability of the CALLY index with a cut-off of <2.724 as a predictor of mortality in hospitalized COVID-19 infected patients.
Methods: This research design is a retrospective cohort of COVID-19 inpatients at Dr. Sardjito Hospital. The study subjects were divided into exposed groups (patients with CALLY <2,724) and unexposed groups (patients with CALLY ≥2,724). Mortality monitoring was observed for a maximum of 30 days of treatment after confirmation. Mortality risk was analyzed by relative risk. Survival analysis was performed with Kaplan-Meier in both groups, p-value <0.05 considered statistically significant.
Results: The number of subjects was 102 patients, consisting of 51 exposed subjects (CALLY <2.724) and 51 unexposed subjects (CALLY >2.724). The group with a CALLY value <2,724 who experienced death were 34 (66.7%) while the other group (CALLY ≥2,724) experienced death 10 (19.6%). Survival analysis of patient groups with CALLY values <2,724 has a risk (HR) of death 3.459 times compared to the group with a CALLY value of ≥2,724.
Conclusion: C-reactive protein-albumin-lymphocyte (CALLY) index <2,724 can be used as a predictor of mortality in COVID-19 patients.

Keywords: COVID-19, CALLY index, mortality