

INTISARI

Latar Belakang: Badai sitokin sebagai penyebab utama kematian COVID-19 memiliki peningkatan risiko pada pasien lansia. Sejumlah studi yang menganalisis penggunaan terapi anti-inflamasi dalam pengobatan COVID-19 masih menunjukkan inkonsistensi hasil dikarenakan sejumlah faktor.

Tujuan: Tujuan penelitian ini, yaitu untuk menganalisis efektivitas dan keamanan penggunaan terapi anti-inflamasi (tocilizumab dan kortikosteroid) pada pasien lansia dengan COVID-19 di ICU.

Metode: Penelitian dilakukan dengan metode observasional analitik menggunakan desain studi kohort retrospektif dan teknik pengumpulan *purposive sampling*. Subjek penelitian adalah pasien terdiagnosis COVID-19 derajat berat atau kritis secara klinis yang memenuhi kriteria inklusi dan eksklusi penelitian. Pengambilan data dilakukan di bagian Instalasi Catatan Medik (ICM) RSUP Dr. Sardjito selama 3 bulan pada periode Januari 2020 hingga Desember 2022. Analisis bivariat dilakukan dengan *Chi-Square Test* dan *Mann-Whitney Test*, sedangkan untuk pengambilan kesimpulan digunakan *Multivariate Multiple Logistic Regression* dengan syarat nilai signifikansi $<0,25$ pada analisis bivariat. Sub-analisis dilakukan terhadap sejumlah variabel perancu yang memiliki pengaruh signifikan untuk mengurangi bias dalam kesimpulan penelitian.

Hasil: Data yang diperoleh dari Rekam Medik (RM) berjumlah 104 pasien. 32 pasien mendapatkan terapi kombinasi (tocilizumab-kortikosteroid) dan 72 pasien mendapatkan monoterapi kortikosteroid. Efektivitas tocilizumab-kortikosteroid lebih baik dibandingkan kortikosteroid dalam meningkatkan nilai SpO_2 ($RR = 1,207$; $p > 0,05$) dan menurunkan kadar CRP ($RR = 1,104$; $p > 0,05$), namun secara signifikan lebih rendah dibandingkan kortikosteroid dalam menurunkan kadar IL-6 ($OR = 0,161$; $p < 0,05$) dan nilai NLR ($RR = 0,857$; $p > 0,05$). Tocilizumab-kortikosteroid berisiko lebih tinggi menyebabkan kejadian hiperglikemia ($RR = 1,303$; $p > 0,05$) dibandingkan kortikosteroid, sedangkan profil keamanan serupa dengan kortikosteroid dalam menyebabkan kejadian infeksi sekunder ($RR = 0,942$; $p > 0,05$).

Kesimpulan: Tocilizumab-kortikosteroid memiliki efektivitas yang lebih baik dalam meningkatkan nilai SpO_2 dan menurunkan kadar CRP, namun efektivitasnya lebih rendah dibandingkan kortikosteroid dalam menurunkan kadar IL-6 dan nilai NLR. Risiko hiperglikemia lebih tinggi pada kelompok kombinasi, tetapi profil keamanan terhadap infeksi sekunder serupa dengan kortikosteroid.

Kata Kunci: COVID-19, anti-inflamasi, tocilizumab, kortikosteroid, lansia

ABSTRACT

Background: Cytokine storm as the main cause of death from COVID-19 has an increased risk in elderly patients. A number of studies analyzing the use of anti-inflammatory therapy in the treatment of COVID-19 still show inconsistent results due to a number of factors.

Objective: The aim of this study is to analyze the effectiveness and safety of using anti-inflammatory therapy (tocilizumab and corticosteroids) in elderly patients with COVID-19 in the ICU.

Methods: The study was conducted by analytic observational method using a retrospective cohort study design and purposive sampling technique. The research subjects were patients diagnosed with severe or clinically critical COVID-19 who met the inclusion and exclusion criteria of the study. Data collection was carried out at the Medical Records Installation (ICM) RSUP Dr. Sardjito for 3 months in the period January 2020 to December 2022. Bivariate analysis was carried out using the Chi-Square Test and Mann-Whitney Test, while Multivariate Multiple Logistic Regression was used to draw conclusions with the condition that the significance value was <0.05 in the bivariate analysis. Sub-analysis was performed on a number of confounding variables that have a significant influence on reducing bias in the study conclusions.

Results: Data obtained from Medical Records (RM) totaled 104 patients. 32 patients received combination therapy (tocilizumab-corticosteroid) and 72 patients received corticosteroid monotherapy. The effectiveness of tocilizumab-corticosteroids was better than corticosteroids in increasing SpO_2 values ($RR = 1.207$; $p > 0.05$) and reducing CRP levels ($RR = 1.104$; $p > 0.05$), but significantly lower than corticosteroids in reducing IL-6 levels ($OR = 0.161$; $p < 0.05$) and NLR value ($RR = 0.857$; $p > 0.05$). Tocilizumab-corticosteroids had a higher risk of causing hyperglycemia ($RR = 1.303$; $p > 0.05$) than corticosteroids, while the safety profile was similar to corticosteroids in causing secondary infections ($RR = 0.942$; $p > 0.05$).

Conclusion: Tocilizumab-corticosteroids have better effectiveness in increasing SpO_2 values and reducing CRP levels, but their effectiveness is lower than corticosteroids in reducing IL-6 levels and NLR values. The risk of hyperglycemia was higher in the combination group, but the safety profile against secondary infection was similar to corticosteroids.

Keywords: COVID-19, anti-inflammatory, tocilizumab, corticosteroid, elderly