INTISARI

Disfungsi *renin-angiotensin-system* (RAS) telah diamati pada pasien COVID-19. Disfungsi ini dapat memunculkan bentuk COVID-19 yang parah. Efek pemberian terapi penghambat RAS, seperti *Angiotensin Converting Enzyme Inhibitor* (ACEI) dan *Angiotensin 2 Receptor Blocker* (ARB) pada ACE2 pada manusia masih menimbulkan kekhawatiran bahwa pengobatan ini dapat meningkatkan kematian pasien COVID-19. Penelitian bertujuan mengetahui hubungan monoterapi ACEI/ARB dan non-ACEI/ARB terhadap luaran klinis pasien COVID-19 disertai hipertensi di RSUP DR. Sardjito Yogyakarta.

Penelitian dilakukan secara observasional-analitik dengan desain kohort retrospektif. Pemilihan sampel secara *consecutive sampling* hingga mendapatkan 37 pasien pada setiap kelompok terapi antihipertensi. Sumber data menggunakan data rekam medis pasien rawat inap berusia ≥18 tahun, terkonfirmasi COVID-19 disertai hipertensi, menerima protokol terapi COVID-19, mendapatkan perawatan di bangsal isolasi, serta menerima terapi tunggal ACEI/ARB dan Non-ACEI/ARB periode tahun 2020 - 2023 di RSUP Dr. Sardjito. Luaran klinis yang diamati adalah: angka mortalitas, admisi ke ICU, penggunaan ventilator dan lama rawat inap. Analisis hubungan terapi dan luaran klinis menggunakan uji *Chi-Square* dan *Fisher* dengan nilai signifikansi p< 0,05. Uji multivariat dengan M*ultiple Logistic Regression* untuk menilai variabel perancu yang paling signifikan, dengan kemaknaan p <0,05.

Total 74 pasien yang memenuhi kriteria inklusi dan eksklusi dengan persentase terbanyak pasien laki-laki 45 (60,85%), usia 18-60 tahun 45 (60,8%) dan pasien dengan COVID-19 derajat berat 64 (86,5%). Penyakit penyerta terbanyak adalah DM 24 (32,4%) dan ARDS 17 (23%). Berdasarkan uji statistik *Chi-Square* dan *Fisher* didapatkan nilai signifikansi antara terapi ACEI/ARB dan Non-ACEI/ARB dengan luaran klinis tidak berbeda signifikan p> 0,05 yaitu admisi ICU p= 0,611 (OR:0,772; CI 95%:0,284-2,098), penggunaan ventilator p= 0,674 (OR: 2,121; CI 95%:0,364-12,363), mortalitas p= 0,480; (OR: 0,716; CI 95%:0,283-1,810) dan lama rawat inap p= 0,327 (OR:1,925; CI 95%:0,512-7,237). Hasil ini menunjukkan tidak terdapat hubungan antara monoterapi ACEI/ARB dan Non-ACEI/ARB terhadap luaran klinis pasien COVID-19 dengan hipertensi di RSUP Dr. Sardjito Yogyakarta.

Kata Kunci: Hipertensi; COVID-19; ACEI/ARB; non-ACEI/ARB; luaran klinis

ABSTRACT

Renin-angiotensin-system (RAS) dysfunction has been observed in COVID-19 patients. This dysfunction can give rise to severe forms of COVID-19. The effect of RAS inhibitor therapy, such as Angiotensin Converting Enzyme Inhibitor (ACEI) and Angiotensin 2 Receptor Blocker (ARB) on ACE2 in humans still raises concerns that this treatment may increase the mortality of COVID-19 patients. This study aims to determine the relationship between ACEI/ARB and non-ACEI/ARB monotherapy on the clinical outcomes of COVID-19 patients with hypertension at the General Hospital DR. Sardjito Yogyakarta.

The study was conducted observational-analytically with a retrospective cohort design. Sample selection was consecutive sampling to get 37 patients in each antihypertensive therapy group. The data source used medical record data of inpatients aged ≥18 years, confirmed COVID-19 with hypertension, receiving COVID-19 therapy protocols, getting treatment in isolation wards and received monotherapy ACEI/ARB and Non-ACEI/ARB therapy for the period 2020-2023 at Dr. Sardjito Hospital. The clinical outcomes observed were: mortality rate, admission to ICU, ventilator use and length of hospitalization. Analysis of the relationship between therapy and clinical outcomes used Chi-Square and Fisher's test with a significance value of $p< 0,05$. Multivariate test with Multiple Logistic Regression to assess the most significant confounding variables, with significance $p< 0,05$.

A total of 74 patients met the inclusion and exclusion criteria the highest percentage of male patients 45 (60,85%), age 18-60 years 45 (60,8%) and patients with severe COVID-19 64 (86,5%). The most common comorbidities were DM 24 (32,4%) and ARDS 17 (23%). Based on Chi-Square and Fisher statistikal tests, the significance value between ACEI/ARB and Non-ACEI/ARB therapy with clinical outcomes are not significantly different $p> 0,05$, namely ICU admission $p= 0,611$ (OR:0,772; CI 95%:0,284-2,098), ventilator use $p= 0,674$ (OR: 2,121; CI 95%:0,364-12,363), mortality $p= 0,480$; (OR: 0,716; CI 95%:0,283-1,810) and length of hospitalization $p= 0,327$ (OR:1,925; CI 95%:0,512-7,237). These results indicate that there were no relationship between ACEI/ARB and Non-ACEI ARB monotherapy on the clinical outcomes of COVID-19 patients with hypertension at RSUP Dr. Sardjito Yogyakarta.

Keywords: Hypertension; COVID-19; ACEI/ARB; non-ACEI/ARB; clinical outcomes