

## INTISARI

**Latar belakang :** Pasien perawatan di rumah sakit dengan COVID-19 derajat berat yang menderita infeksi sekunder dapat meningkatkan lama rawat inap dan angka kematian. Infeksi sekunder merupakan faktor penting yang mempengaruhi pengobatan dan luaran pasien rawat inap dengan COVID-19. Studi sebelumnya menunjukkan bahwa pneumonia SARS CoV 2 derajat berat dikaitkan dengan admisi di unit perawatan intensif, peningkatan risiko infeksi sekunder, dan risiko tinggi dilakukan prosedur invasif. Infeksi bakteri pada aliran darah sering menjadi penyebab infeksi, sepsis, atau syok septik pada pasien rawat inap dan pasien kritis.

**Tujuan :** Mengetahui faktor-faktor risiko terjadinya infeksi bakterial darah pada pasien Covid-19 di ICU Covid Rumah Sakit Dr. Sardjito Yogyakarta

**Metode :** Penelitian ini menggunakan jenis penelitian observasional analitik dengan pendekatan kohort retrospektif pada pasien COVID-19 di ICU Covid Rumah Sakit Dr. Sardjito Yogyakarta pada periode bulan Maret 2020 – Agustus 2021.

**Hasil :** Pada penelitian ini total sampel sebanyak 269 pasien yang dilakukan kultur darah. Berdasarkan hasil analisis multivariat diketahui bahwa faktor komorbid CKD, penggunaan ventilator invasif, pasien syok dengan obat suportif dan severitas penyakit covid-19 bermakna terhadap kejadian infeksi bakterial darah. Pasien CKD berisiko infeksi 9,8 kali ( $p=0,001$  OR 9,8 95% CI 2,48-39,08), ventilator invasif berisiko infeksi 5,40 kali ( $p<0,001$  OR 5,40 95% CI 2,21-13,19), pasien syok berisiko 10,6 kali ( $p<0,001$  OR 10,60 95% CI 5,14-21,88), covid-19 derajat berat berisiko 3,3 kali ( $p<0,001$  OR 3,30 95% CI 1,23-12,58), dan covid-19 derajat kritis berisiko infeksi 5,6 kali ( $p<0,001$  OR 5,62 95% CI 2,18-14,47).

**Kesimpulan :** Faktor-faktor risiko terjadinya infeksi bakterial darah pada pasien covid-19 antara lain pasien dengan CKD, penggunaan ventilator invasif, pasien syok dengan terapi obat suportif dan severitas penyakit.

**Kata kunci :** COVID-19, infeksi sekunder, infeksi bakterial darah, faktor risiko

## **ABSTRACT**

**Background :** *Severe patients hospitalized with COVID-19 suffered secondary infections which greatly increased the length of hospital stay and the mortality. Secondary infection is an important factor that affects the treatment and outcome of inpatients with COVID-19. Previous studies demonstrated severe SARS CoV 2 pneumonia was associated with intensive care unit admission, increased secondary infection rate, and higher risk of invasive procedures. Bacterial Bloodstream infections (BSIs) are frequently causes of infection, sepsis, or septic shock in hospitalized and critically ill patients.*

**Purposed :** *Knowing the risk factors for blood bacterial infection of COVID-19 patients in the intensive care unit Dr. Sardjito Hospital Yogyakarta.*

**Methods :** *This study used an analytic observational study with a retrospective cohort approach in patient with COVID-19 who were hospitalized in the Covid ICU at Dr. Sardjito Hospital Yogyakarta in the period March 2020 to August 2021.*

**Results :** *In this study, the total sample of 269 patients underwent blood culture. Based on the results of multivariate analysis, it is known that the factors of comorbid CKD, use of invasive ventilator, shock patients with supportive drugs and severity of Covid-19 disease have a significant effect on the incidence of bacterial blood infections. CKD patients were at risk of infection 9,8 times ( $p=0,001$  OR 9,8 95% CI 2,48-39,08), invasive ventilators were at risk of infection 5,4 times ( $p<0,001$  OR 5,40 95% CI 2,21-13,19), shock patients were at risk 10,6 times ( $p<0,001$  OR 10,60 95% CI 5,14-21,88), severe covid-19 were at risk 3,3 times ( $p<0,001$  OR 3,30 95% CI 1,23-12,58), and critical covid-19 was at risk of infection 5,6 times ( $p<0,001$  OR 5,62 95% CI 2,18-14,47).*

**Conclusion :** *Risk factors for bacterial blood infection in Covid-19 patients include patients with CKD, use of invasive ventilators, shock patients with supportive drugs therapy and severity of illness*

**Keywords:** *COVID-19, Secondary infections, Bacterial bloodstream infections, risk factor.*