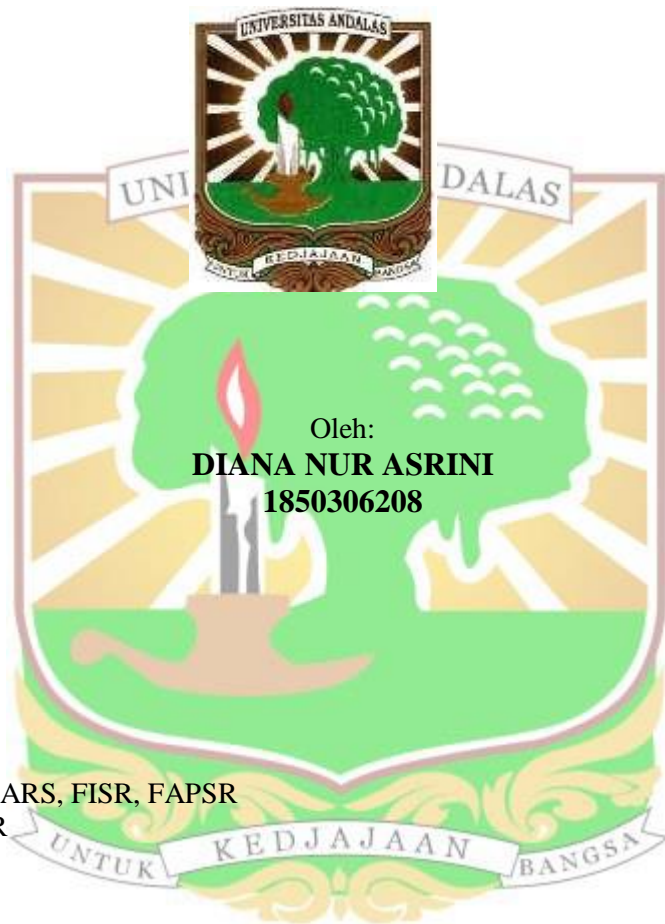


HUBUNGAN KADAR FERITIN DENGAN KEJADIAN SEPSISPADA PASIEN COVID-19 DI RSUP

DR M DJAMIL

TESIS



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Abstrak

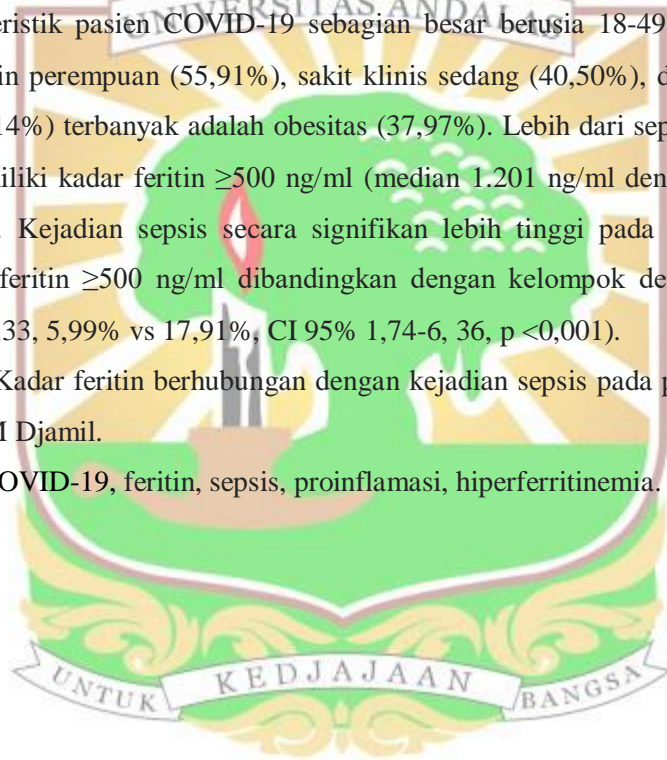
Latar belakang: Feritin adalah mediator penting dari disregulasi imunomodulator dan berefek pro-inflamasi, dimana berkontribusi pada badai sitokin yang dapat menyebabkan sepsis pada pasien COVID-19 yang sakit kritis. Peran feritin sebagai biomarker sepsis pada pasien tersebut masih belum sepenuhnya jelas. Tujuan dari penelitian ini adalah untuk mengetahui hubungan antara kadar feritin dengan kejadian sepsis pada pasien COVID-19.

Metode: Penelitian ini merupakan penelitian *cross-sectional* dengan pendekatan retrospektif pada 474 pasien COVID-19 yang menjalani rawat inap di RS DR M Djamil.

Hasil: Karakteristik pasien COVID-19 sebagian besar berusia 18-49 tahun (38,61%), berjenis kelamin perempuan (55,91%), sakit klinis sedang (40,50%), dan memiliki satu komorbid (41,14%) terbanyak adalah obesitas (37,97%). Lebih dari separuh pasien (54,22%) memiliki kadar feritin ≥ 500 ng/ml (median 1.201 ng/ml dengan kisaran 503–12.010 ng/ml). Kejadian sepsis secara signifikan lebih tinggi pada kelompok pasien dengan kadar feritin ≥ 500 ng/ml dibandingkan dengan kelompok dengan kadar < 500 ng/ml (OR = 3,33, 5,99% vs 17,91%, CI 95% 1,74-6,36, $p < 0,001$).

Kesimpulan: Kadar feritin berhubungan dengan kejadian sepsis pada pasien COVID-19 di RSUP DR M Djamil.

Kata kunci: COVID-19, feritin, sepsis, proinflamasi, hiperferritinemia.



ASSOCIATION BETWEEN FERRITIN LEVELS AND SEPSIS INPATIENTS WITH COVID-19 AT DR M DJAMIL HOSPITAL

Background: Ferritin is an important mediator of immunomodulatory dysregulation and pro-inflammatory effects, which contribute to cytokine storms that could lead to sepsis in critically ill patients with COVID-19. The role of ferritin as a biomarker of sepsis in those patients is yet fully understood. This study aims to investigate an association between ferritin levels and sepsis in patients with COVID-19.

Method: This study was a retrospective, cross-sectional study of 474 COVID-19 hospitalized patients at DR M Djamil Hospital.

Result: Most of the COVID-19 patients in this study were between the ages of 18 and 49 (38,61%), female (55,91%), with moderate clinical illness (40,50%), and had one comorbidity (41,14%) with obesity as the most common comorbidity (37,97%). More than half of patients (54,22%) had ferritin levels of ≥ 500 ng/mL (median 1,201 ng/mL with a range of 503–12,010 ng/mL). The incidence of sepsis was significantly higher in the group whose ferritin level was ≥ 500 ng/ml compared to those with less ferritin level (OR = 3,33, 5.99% vs 17.91%, CI 95% 1,74-6,36, $p < 0.001$).

Conclusion: There is a statistically significant association between the ferritin level and sepsis in patients with COVID-19 at DR M Djamil Hospital.

Keywords: COVID-19, ferritin, sepsis, pro-inflammatory, hyperferritinemia.