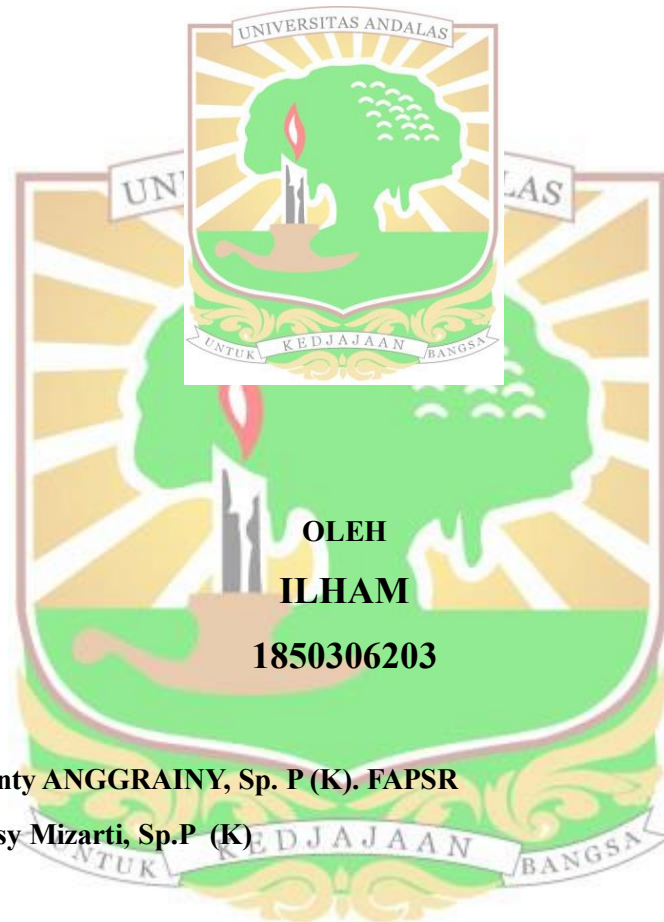


**HUBUNGAN OBESITAS DENGAN LUARAN PASIEN COVID-19 YANG  
DIRAWAT DI RUANG INTENSIF RSUP DR. M. DJAMIL PADANG**

**TESIS**



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# HUBUNGAN OBESITAS DENGAN LUARAN PASIEN COVID-19 YANG DIRAWAT DI RUANG INTENSIF RSUP DR. M. DJAMIL PADANG

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## Abstrak

**Latar belakang:** Obesitas merupakan salah satu faktor risiko untuk mengalami COVID-19 dengan klinis berat, hal ini karena pasien tersebut cenderung memiliki komorbid seperti penyakit metabolik dan penyakit kardiovaskuler. Obesitas dapat memberikan luaran yang buruk, seperti durasi rawatan yang lebih lama, angka kejadian ARDS dan kematian yang lebih tinggi. Tujuan dari penelitian ini adalah untuk mengetahui hubungan obesitas dengan luaran pasien COVID-19 terkonfirmasi.

**Metode:** Penelitian analitik dengan desain kohort retrospektif pada pasien COVID-19 yang dirawat di ruang intensif RSUP Dr. M. Djamil Padang. Data diambil dari rekam medis pasien mulai dari November 2021 sampai Februari 2022. Hubungan obesitas dengan lama rawatan dan mortalitas pasien dilakukan menggunakan uji *Chi-square*.

**Hasil:** Penelitian ini mendapatkan hasil karakteristik pasien COVID-19 dengan obesitas terbanyak adalah perempuan (54,20%). Kelompok usia terbanyak adalah 60-69 tahun (31,3%). 83,3% pasien obesitas didapatkan dengan derajat klinis kritis. Penanda inflamasi berupa Prokalsitonin, ferritin, IL6 dan d-dimer tidak berhubungan signifikan dengan obesitas. Diabetes mellitus berhubungan signifikan terhadap luaran pasien COVID-19 dengan obesitas dan non obesitas (0,009%). Obesitas tidak berhubungan dengan lama rawatan pasien pasien COVID-19 di rumah sakit, namun berhubungan signifikan terhadap lama rawatan di ruang intensif [OR 3,67 (95% CI, 1,09-12,35)]. Obesitas berhubungan signifikan terhadap mortalitas [OR 2,84 (95% CI, 1,12-7,18)] dan lama konversi pasien COVID-19 di ruang intensif [OR 30,00 (95% CI, 2,85-31,61)]. Pada obesitas ditemukan perluasan jaringan adiposa baik subkutan dan visceral yang dapat meningkatkan keadaan proinflamasi, protrombotik, dan vasokonstriksi yang berpengaruh terhadap perburukan klinis pasien COVID-19. Keadaan tersebut juga dapat bermanifestasi sebagai resistensi insulin, hipertensi, aterosklerosis, penyakit kardiovaskular dan keadaan immunokompromais yang berujung pada tingginya angka mortalitas.

**Kesimpulan:** Obesitas didapatkan berhubungan bermakna terhadap mortalitas, lama konversi dan lama rawatan pasien COVID-19 di ruang intensif.

**Kata kunci:** COVID-19, obesitas, lama rawatan, lama konversi, mortalitas

# ASSOCIATION BETWEEN OBESITY AND THE OUTCOMES OF COVID-19 PATIENTS IN INTENSIVE CARE UNIT AT RSUP DR. M.DJAMIL PADANG

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## Abstract

**Background:** Obesity is one of the risk factors for severe clinical COVID-19, this is because these patients tend to have comorbidities such as metabolic disease and cardiovascular disease. Obesity in COVID-19 patients associated with bad outcomes, such as prolonged hospital stay, higher incidence of ARDS and mortality. The purpose of this study was to determine the relationship between obesity and the outcome of confirmed COVID-19 patients.

**Methods:** This is an analytical study with retrospective cohort design on COVID-19 patients treated in the intensive care unit of RSUP Dr. M. Djamil Padang. Data were taken from patient medical records between November 2021 and February 2022. The relationship between obesity with hospital length of stay and patient mortality was analyzed using *Chi-square test*.

**Results:** This study found that the characteristics of COVID-19 patients with obesity were mainly women (54.20%). The most dominant age group is 60-69 years (31.3%). 83.3% of obese patients were found to be clinically critical. Inflammation markers such as procalcitonin, ferritin, IL6 and d-dimer were not significantly associated with obesity. Diabetes mellitus was significantly related to the outcome of COVID-19 patients with obesity and without obesity (0.009%). Obesity was not associated with hospital stay of COVID-19 patients in hospital generally, but significantly associated with length of stay in the intensive care unit [OR 3.67 (95% CI, 1.09-12.35)]. Obesity was significantly associated with mortality [OR 2.84 (95% CI, 1.12-7.18)] and length of conversion for COVID-19 patients in the intensive care unit [OR 30.00 (95% CI, 2.85-31, 61)]. The expansion of adipose tissue both subcutaneously and viscerally which can be found in obese patients can increase the proinflammatory, prothrombotic, and vasoconstrictive state that could affect the clinical worsening of COVID-19 patients. This condition also manifests as insulin resistance, hypertension, atherosclerosis, cardiovascular disease and immunocompromised conditions which can result in high mortality rate.

**Conclusion:** Obesity was found to be significantly related to mortality, conversion time and length of stay for COVID-19 patients in the intensive care unit.

**Keywords:** COVID-19, obesity, length of stay, length of conversion, mortality