

ABSTRAK
PENGARUH SKOR MODIFIED BRIXIA TERHADAP DERAJAT
KEPARAHAN COVID-19 DI RSUP DR. SARDJITO

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Latar Belakang

Skor *Modified* BRIXIA adalah suatu sistem skoring derajat keparahan dari hasil rontgen toraks yang merupakan modifikasi dari sistem BRIXIA. Sistem skoring *Modified* BRIXIA bertujuan untuk menempatkan lebih banyak penekanan pada perubahan konsolidatif dalam kasus COVID-19 daripada model asli dan menciptakan alat yang sederhana dan mudah digunakan bagi non-radiologis di praktek klinis. Penelitian ini bertujuan untuk mengetahui pengaruh skor MBRIXIA terhadap derajat keparahan COVID-19.

Metode

Penelitian *cross sectional* dengan mengambil data admisi pasien terkonfirmasi COVID-19 simptomatik yang dirawat di RSUP dr. Sardjito periode Maret 2020 hingga Maret 2022. Analisis bivariat dengan uji Spearman dan multivariat menggunakan uji *backward* atau *forward stepwise logistic regression*.

Hasil

Terdapat total 144 subjek penelitian. Hasil analisis menunjukkan bahwa skor Modified BRIXIA memiliki kemampuan prediksi yang cukup baik untuk memprediksi kejadian COVID-19 berat selama perawatan di rumah sakit (AUC = 0,723, 95% CI 0,637-0,809, $p < 0,001$). Nilai cut-off optimal skor Modified BRIXIA untuk memprediksi COVID-19 berat adalah > 4 dengan sensitivitas sebesar 73,3% dan spesifisitas sebesar 67,2%. Hasil uji *backward* atau *forward stepwise logistic regression*, menyatakan bahwa Modified BRIXIA memiliki pengaruh yang independen dengan kejadian COVID-19 berat (adj OR 6,22, CI 95% 2,919-13,257, $p < 0,001$)

Kesimpulan

Skor Modified BRIXIA terbukti berpengaruh secara bermakna terhadap derajat keparahan COVID-19. Subjek yang memiliki skor Modified BRIXIA > 4 memiliki risiko 6 kali lebih tinggi untuk mengalami kejadian COVID-19 berat jika dibandingkan dengan pasien dengan skor Modified BRIXIA ≤ 4 (adj OR 6,22, CI 95% 2,919-13,257, $p < 0,001$)

Kata Kunci: Skor modified BRIXIA (MBRIXIA), derajat keparahan COVID-19, prediktor

ABSTRACT
**THE INFLUENCE OF MODIFIED BRIXIA SCORE ON THE SEVERITY
OF COVID-19 AT DR. SARDJITO GENERAL HOSPITAL**

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Background

The Modified BRIXIA score is a severity scoring system from chest X-ray results which is a modification of the BRIXIA system. The Modified BRIXIA scoring system aims to place more emphasis on consolidative changes in COVID-19 cases than the original model and create a simple and easy-to-use tool for non-radiologists in clinical practice. This study aims to determine the effect of the MBRIXIA score on the severity of COVID-19.

Methods

A cross-sectional study was conducted by collecting admission data of symptomatic confirmed COVID-19 patients treated at dr. Sardjito General Hospital from March 2020 to March 2022. Bivariate analysis was performed using the Spearman test, and multivariate analysis was conducted using backward or forward stepwise logistic regression analysis

Results

A total of 144 subjects were included. The analysis results showed that the Modified BRIXIA score has a fairly good predictive ability for predicting severe COVID-19 events during hospitalization (AUC = 0.723, 95% CI 0.637-0.809, $p < 0.001$). The optimal cut-off value for the Modified BRIXIA score to predict severe COVID-19 is > 4 , with a sensitivity of 73.3% and a specificity of 67.2%. Backward or forward stepwise logistic regression analysis indicated that the Modified BRIXIA score has an independent effect on severe COVID-19 events (adj OR 6,22, CI 95% 2,919-13,257, $p < 0,001$)

Conclusion

The Modified BRIXIA score has been proven to have a significant effect on the severity of COVID-19. Subjects who have a Modified BRIXIA score > 4 have a 6 times higher risk of experiencing severe COVID-19 events when compared with patients with a Modified BRIXIA score ≤ 4 (adj OR 6,22, CI 95% 2,919-13,257, $p < 0,001$)

Key Words: Modified BRIXIA (MBRIXIA) score, severity of COVID-19, predictor