

KORELASI BRIXIA SCORE FOTO TORAKS DAN RASIO MONOSIT LIMFOSIT SAAT AWAL MASUK RUMAH SAKIT DENGAN DERAJAT KEPARAHAN KLINIS COVID-19

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INTISARI

Latar Belakang: Pemeriksaan foto toraks dan pemeriksaan darah lengkap merupakan pemeriksaan rutin yang dilakukan pada pasien yang masuk ke IGD. Analisis Brixia score foto toraks dan Rasio Monosit Limfosit (RML) dapat berperan dalam diagnosis pneumonia Covid-19 dan memberikan gambaran derajat keparahan klinis.

Tujuan: Penelitian ini bertujuan untuk mengetahui korelasi antara Brixia score foto toraks dan Rasio Monosit Limfosit (RML) terhadap derajat keparahan klinis Covid-19.

Metode: Penelitian *cross sectional* ini dilakukan di RSUP Dr. Sardjito pada Juni-Juli 2023 dengan mengambil data sekunder dari pasien rawat inap Covid-19 periode Mei 2021-April 2022. Subjek diambil dengan menggunakan *consecutive sampling*. Foto toraks dan hasil pemeriksaan RML sejumlah 190 subjek yang memenuhi kriteria inklusi diambil untuk dianalisis. Data diambil dari PACS dan SIMETRIS.

Hasil: Analisis bivariat dengan uji *Spearman rho* menunjukkan Brixia score foto toraks menunjukkan korelasi yang signifikan terhadap derajat keparahan klinis ($p < 0,001$, $r = 0,875$). Adapun RML tidak menunjukkan korelasi yang signifikan dengan $p = 0,08$ dan $r = -0,135$. Analisis multivariat menggunakan uji regresi multinomial yang mengikutsertakan variabel Brixia score dan usia menunjukkan hanya variabel Brixia score yang memiliki pengaruh terhadap derajat keparahan klinis, $p = 0,03$ (OR=3,894; CI=1,127 - 13,45).

Kesimpulan: Semakin tinggi Brixia score foto toraks, maka derajat keparahan klinis Covid-19 semakin parah, tetapi Rasio Monosit Limfosit (RML) tidak menunjukkan korelasi terhadap derajat keparahan klinis Covid-19.

Kata Kunci: Brixia score, RML, foto toraks, Covid-19

THE CORRELATION OF BRIXIA SCORE FROM CHEST X-RAY AND MONOCYTE-LYMPHOCYTE RATIO AT THE BEGINNING OF HOSPITALIZATION WITH THE SEVERITY OF COVID-19

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ABSTRACT

Background: Chest x-ray and complete blood count are the routine examinations performed on patients admitted to the emergency center. Brixia score analysis of chest x-ray and Monocyte Lymphocyte Ratio (MLR) have an emerging role in the diagnosis of Covid-19 pneumonia and in assessing the disease severity.

Objective: This study aims to determine the correlation between Brixia score of chest x-ray and the Monocyte Lymphocytes Ratio (MLR) to predict the clinical severity of Covid-19.

Methods: This cross sectional study was conducted at Dr. Sardjito General Hospital in June-July 2023 by extracting secondary data from Covid-19 inpatients for May 2021-April 2022 period. Subjects were recruited using consecutive sampling. Chest x-ray and MLR examination results of 190 subjects who fulfill the inclusion criteria were selected for analysis. Data were retrieved from PACS and SIMETRIS.

Results: Bivariate analysis using Spearman rho test showed a significant correlation between brixia score of chest x-ray with clinical severity ($p < 0.001$, $r = 0.875$). The MLR did not show a significant correlation with $p = 0.08$ and $r = -0.135$. Multivariate analysis that included both Brixia score and age variables showed that Brixia score had an influence on Covid-19 severity, $p = 0.03$ (OR=3.894; CI=1.127 - 13.45).

Conclusion: Higher Brixia score of chest x-ray increased the clinical severity of Covid-19, but the Monocyte Lymphocyte Ratio (MLR) shows no correlation with the clinical severity of Covid-19.

Keywords: Brixia score, MLR, chest x-ray, Covid-19