

KORELASI GAMBARAN RADIOGRAFI TORAKS PNEUMONIA COVID-19 MENURUT SKOR BRIXIA TERHADAP *SYSTEM IMMUNE* *INFLAMMATION INDEKS*

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ABSTRAK

Pendahuluan: Coronavirus telah menyebabkan 2 pandemi skala besar pada 2 dekade yang lalu yaitu virus SARS dan *Middle East respiratory syndrome* (MERS). Kasus baru disebabkan wabah pneumonia yang tidak teridentifikasi di Wuhan, provinsi Hubei, Cina tengah dimulai dari pasar makanan laut lokal berkembang pesat menginfeksi 2.761 orang di China, 80 kematian dan infeksi pada 33 orang di 10 negara lain per 26 Januari 2020. Pencitraan, khususnya foto polos dan CT torak telah berkembang sejak penemuan awal penyakit di Wuhan, Cina, dan sejak Organisasi Kesehatan Dunia secara resmi mencirikan COVID-19 sebagai pandemi. Perkembangan dan penggunaan prediktor yang akurat untuk prognosis COVID-19 akan bermanfaat bagi manajemen klinis pasien COVID-19 dan akan membantu mengurangi angka kematian.

Tujuan: Penelitian ini bertujuan untuk mengetahui apakah terdapat korelasi gambaran radiografi toraks pneumonia menurut skor Brixia terhadap *systemic immune inflammation* (SII) indeks.

Metode: Penelitian ini merupakan penelitian observasional retrospektif. Sampel berjumlah 52 pasien terkonfirmasi COVID-19 dengan hasil RT-PCR usap nasofaring positif dengan CXR dengan gambaran tipikal pneumonia COVID-19 pada bulan Maret 2021 sampai Agustus 2021. Hasil pengukuran skor Brixia dibandingkan dengan nilai SII indeks untuk diteliti korelasinya.

Hasil: Korelasi gambaran radiografi toraks pneumonia COVID-19 menurut skor Brixia terhadap SII indeks ($p = 0,214$) dengan nilai r sebesar 0,175. Korelasi derajat keparahan pneumonia COVID-19 menurut skor Brixia terhadap SII indeks ($p = 0,254$) dengan nilai r sebesar 0,069. Derajat keparahan pneumonia COVID-19 menurut skor Brixia, didapatkan nilai SII indeks untuk derajat ringan (0-6), sedang (7-12), dan berat (13-18) berturut-turut sebesar $771,07 \pm 178,08$, $1398,55 \pm 1674,31$, dan $1962,62 \pm 2019,17$ (dalam 109/L).

Kesimpulan: Tidak terdapat korelasi yang bermakna secara statistik antara gambaran radiografi toraks pneumonia COVID-19 menurut skor Brixia terhadap SII indeks. Tidak terdapat korelasi yang bermakna secara statistik derajat keparahan pneumonia COVID-19 menurut skor Brixia terhadap SII. Secara deskriptif didapatkan semakin tinggi derajat keparahan pneumonia COVID-19 menurut skor Brixia maka diikuti peningkatan nilai SII indeks.

Kata kunci: COVID-19, *systemic immune inflammation* indeks, *chest x ray*

CORRELATION CHEST RADIOGRAPHY OF COVID-19 PNEUMONIA ACCORDING BRIXIA SCORE WITH SYSTEMIC IMMUNE INFLAMMATION INDEX

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ABSTRACT

Introduction: Coronavirus has caused 2 pandemics scale big 2 decades ago namely the SARS virus and *Middle East Respiratory Syndrome* (MERS). New case caused a pneumonia outbreak that doesn't identified in Wuhan, Hubei province, China started from the local seafood market develop fast infected 2,761 people in China, 80 deaths and infections in 33 people in 10 other countries as of January 26, 2020. Imaging with plain photo and chest CT has developed since detection disease in Wuhan, China, and since World Health Organization officially declared COVID-19 as pandemic. Development accurate predictor for the prognosis of COVID-19 will be beneficial for management clinical COVID-19 patients and will help reduce number of mortality.

Purpose: This research aim for find out correlation radiography pneumonia COVID-19 according to score Brixia to systemic immune inflammation (SII) index.

Method: This is study observational retrospective research. 52 patients confirmed COVID-19 with positive swab RT-PCR and CXR typical COVID-19 pneumonia in the March 2021 until August 2021. Measurement Brixia score correlation with SII index.

Result: Correlation pneumonia COVID-19 according to score Brixia and SII index ($p = 0.214$) with r value of 0.175. Correlation severity grading of COVID-19 pneumonia according to Brixia score and SII index ($p = 0.254$) with r value of 0.069. Severity grading of COVID-19 pneumonia according to score Brixia, SII index value for mild (0-6), moderate (7-12), and severe (13-18) respectively were 771.07 ± 178.08 , 1398.55 ± 1674.31 , and 1962.62 ± 2019.17 (in 109/L).

Conclusion: There is no significant correlation statistically among chest radiography pneumonia COVID-19 according to score Brixia to SII index. There is no significant correlation statistically severity grading of COVID-19 pneumonia according to Brixia score and SII index. Increased severity grading of COVID-19 pneumonia according to Brixia score followed by SII index value.

Keywords: COVID-19, systemic immune inflammation index, chest x ray