

ABSTRACT

THE RELATIONSHIP OF ABSOLUTE LYMPHOCYTE COUNT (ALC) VALUE WITH PLATELET COUNT IN COVID-19 PATIENTS AT PESAWARAN HOSPITAL PERIOD JULY 2020-JULY 2021

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Background : *Coronavirus Disease 2019* (COVID-19) is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV-2) that was first discovered in Wuhan, Hubei Province, China in December 2019. On August 13, 2020, there were 20,162,474 million confirmed cases worldwide, the human-to-human spread of SARS-CoV-2 being the main source of transmission through droplets. There were several clinical indicators or biomarkers in assisting with early diagnosis in COVID-19, those were the ALC value and platelet count to see the severity in COVID-19 patients. The purpose of this research was to find out the relationship between the value of Absolute Lymphocyte Count (ALC) and the number of platelets in COVID-19 patients at Pesawaran hospital.

Method : This research used analytical observational research with a cross-sectional design. The sample was COVID-19 patients at Pesawaran Hospital as many as 76 people. The data statistically analyzed by univariate and bivariate analysis using the Chi-square test and the result is 0,008.

Result : The results showed 61.4 % of patients had ALC values < 1500 and 38.1 % patients had ALC values > 1500. 56.5 % patients had normal platelet counts between 150,000-400,000/mm³ with p value 0,008 and there was relation between ALC with Trombosit.

Conclusion : There was a relationship between the absolute lymphocyte count (ALC) value with the number of platelets in COVID-19 patients at Pesawaran Hospital.

Keywords ; *Absolute Lymphocyte Count, Coronavirus Disease 2019, Platelets*

ABSTRAK

HUBUNGAN NILAI *ABSOLUTE LYMPHOCYTE COUNT* (ALC) DENGAN JUMLAH TROMBOSIT PADA PASIEN COVID-19 DI RSUD PESAWARAN PERIODE JULI 2020-JULI 2021

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Latar Belakang : *Coronavirus Disease 2019* (COVID-19) merupakan penyakit infeksi yang disebabkan oleh *Severe Acute Respiratory Syndrome Coronavirus* (SARS- CoV-2) yang ditemukan pertama kali di Wuhan, Provinsi Hubei, China pada Desember 2019. Pada tanggal 13 Agustus 2020 terdapat 20.162.474 juta kasus konfirmasi di seluruh dunia, penyebaran SARS-CoV-2 dari manusia ke manusia menjadi sumber transmisi utama yaitu melalui *droplet*. Terdapat beberapa indikator klinis atau *biomarker* dalam membantu diagnosis awal pada COVID-19 yaitu nilai ALC dan jumlah trombosit untuk melihat tingkat keparahan pada pasien COVID-19. Tujuan penelitian ini adalah mengetahui apakah terdapat hubungan antara nilai *Absolute Lymphocyte Count* (ALC) dengan jumlah trombosit pada pasien COVID-19 di RSUD Pesawaran.

Metode : Penelitian ini menggunakan penelitian *observasional analitik* dengan rancangan *cross-sectional*. Sampel yang digunakan adalah pasien COVID-19 di RSUD Pesawaran sebanyak 76 orang. Analisis statistik yang digunakan yaitu analisis univariat dan bivariat dengan menggunakan uji *Chi-square* dan didapatkan $p < 0,05$ yaitu 0,008.

Hasil : Hasil penelitian ini menunjukkan 61,4% pasien memiliki nilai ALC < 1500 dan 38,1% pasien memiliki nilai ALC > 1500 . 56,5% pasien memiliki jumlah trombosit antara 150.000-400.000/mm³ dengan nilai $p = 0,008$ dan terdapat hubungan antara ALC dengan nilai trombosit.

Simpulan : Terdapat hubungan antara nilai *Absolute Lymphocyte Count* (ALC) dengan jumlah trombosit pada pasien COVID-19 di RSUD Pesawaran.

Kata Kunci; *Absolute Lymphocyte Count, Coronavirus Disease 2019, trombosit*