

ABSTRACT

Background: Tuberculosis cases in Indonesia are still very high, especially after the COVID-19 pandemic. The importance of early diagnosis in suppressing transmission makes the Neutrophil and Lymphocyte Ratio (NLR) examination easy, fast and inexpensive as an alternative supporting examination when gold standard is not yet available in helping diagnose Drug-Sensitive Tuberculosis and Drug-Resistant Tuberculosis.. The aim of the study to find out the difference between NLR in patients Drug-Sensitive Tuberculosis and Drug-Resistant Tuberculosis in Raden Mattaher Jambi Hospital.

Methods: This is an analytical study using cross sectional methods and sampling techniques using purposive samplings. The study was conducted at Raden Mattaher Jambi Hospital from July to September 2022. The differences of NLR between Drug-Sensitive Tuberculosis and Drug-Resistant Tuberculosis were analyzed using the Mann-Whitney test.

Results: Each sample of Drug-Sensitive Tuberculosis and Drug-Resistant Tuberculosis of 90 people obtained mean NLR Drug-Sensitive Tuberculosis 9.3 ± 5.2 and median NLR Drug-Sensitive Tuberculosis and Drug-Resistant Tuberculosis 3.9 ± 2.4 . The RNL cutoff value with ROC curve analysis is 5.55, with a sensitivity rate of 73.3%, specificity of 72.2%, positive prediction value of 72.5%, and negative prediction of 73,03%

Conclusion: There was significant difference of NLR between patients with Drug-Sensitive Tuberculosis and Drug-Resistant Tuberculosis with a cutoff value of RNL <5.55 more suggestive in TB RO patients.

Keywords: NLR, Drug-Sensitive Tuberculosis, Drug-Resistant Tuberculosis, pulmonary tuberculosis

ABSTRAK

Latar Belakang: Kasus tuberkulosis di Indonesia masih sangat tinggi terutama pasca pandemi COVID-19. Pentingnya diagnosis dini dalam menekan penularan menjadikan pemeriksaan Rasio Neutrofil dan Limfosit (RNL) yang mudah, cepat dan murah sebagai pemeriksaan penunjang alternatif saat diagnosis baku emas belum tersedia dalam membantu penegakan tuberkulosis sensitif obat (TB SO) dan tuberkulosis resisten obat (TB RO). Penelitian ini bertujuan untuk mengetahui perbedaan RNL pada pasien TB SO dan TB RO di RSUD Raden Mattaher Kota Jambi.

Metode: Penelitian ini merupakan jenis penelitian analitik dengan menggunakan metode cross sectional dan teknik pengambilan sampel menggunakan metode *purposive sampling*. Penelitian ini dilakukan di RSUD Raden Mattaher Kota Jambi pada Juli hingga September 2022. Perbedaan RNL TB SO dan TB RO dianalisis menggunakan uji *mann-whitney*.

Hasil: Jumlah masing-masing sampel TB SO dan TB RO sebanyak 90 orang didapatkan nilai mean RNL TB SO $9,3 \pm 5,2$ dan median RNL TB RO $3,9 \pm 2,4$. Nilai *cutoff* RNL dengan analisis kurva ROC adalah 5,55 dengan tingkat sensitivitas 73,3%, spesifisitas 72,2%, nilai prediksi positif 72,5% , dan nilai prediksi negatif 73,03%

Kesimpulan: Terdapat perbedaan nilai RNL yang bermakna pada pasien TB SO dan TB RO dengan nilai *cutoff* RNL $< 5,55$ lebih sugestif pasien TB RO.

Kata kunci: RNL, TB SO, TB RO, tuberkulosis paru