

ABSTRAK

ANALISIS HUBUNGAN RASIO MONOSIT – LIMFOSIT (MLR) TERHADAP KATEGORI HASIL PEMERIKSAAN *Xpert MTB/RIF* PADA PASIEN TUBERKULOSIS PARU di RSUD MELAWI KABUPATEN MELAWI

D. Asri Winarsih⁽¹⁾, H. Mat Yasin⁽²⁾, Ariffialdi Nurhidayatullah⁽³⁾
Politeknik ‘Aisyiyah Pontianak
E-mail : asriwinarsih12@gmail.com

Tuberkulosis paru masih menjadi masalah kesehatan global, termasuk di Indonesia. Pemeriksaan *Xpert MTB/RIF* merupakan metode diagnostik molekuler cepat untuk mendeteksi *Mycobacterium tuberculosis* sekaligus menentukan kategori semi-kuantitatif beban bakteri. Rasio monosit–limfosit (MLR) merupakan parameter hematologi yang berpotensi mencerminkan respons inflamasi pada tuberkulosis. Penelitian ini bertujuan menganalisis hubungan MLR dengan kategori hasil pemeriksaan *Xpert MTB/RIF* pada pasien tuberkulosis paru di RSUD Melawi Kabupaten Melawi. Penelitian menggunakan desain analitik observasional dengan pendekatan *cross-sectional*. Sampel terdiri atas 30 pasien yang dipilih menggunakan teknik *total sampling*. Analisis data meliputi uji *Shapiro–Wilk*, *Kruskal–Wallis*, korelasi *Spearman*, dan kurva *Receiver Operating Characteristic* (ROC). Hasil menunjukkan data MLR tidak berdistribusi normal ($p < 0,05$). Uji *Kruskal–Wallis* menunjukkan tidak terdapat perbedaan nilai MLR antar kategori hasil *Xpert MTB/RIF* ($H=1,646$; $p=0,649$), sedangkan uji *Spearman* menunjukkan tidak terdapat hubungan yang signifikan antara MLR dan kategori hasil *Xpert MTB/RIF* ($r=0,203$; $p=0,282$). Analisis ROC menghasilkan AUC 0,621 dengan nilai *cut-off* 0,20479, sensitivitas 81,3%, spesifisitas 28,6%, dan *Youden Index* 0,099. Disimpulkan bahwa MLR tidak memiliki hubungan signifikan dengan kategori hasil *Xpert MTB/RIF* dan hanya berpotensi sebagai parameter pendukung skrining awal, bukan pengganti metode diagnostik utama.

Kata Kunci: Tuberkulosis Paru, Rasio Monosit Limfosit, *Xpert MTB/RIF*

ABSTRACT

ANALYSIS OF THE RELATIONSHIP BETWEEN MONOCYTE TO LYMPHOCYTE RATIO (MLR) AND XPERT MTB/RIF RESULT CATEGORIES IN PULMONARY TUBERCULOSIS PATIENTS AT RSUD MELAWI MELAWI REGENCY

D. Asri Winarsih⁽¹⁾, H. Mat Yasin⁽²⁾, Ariffialdi Nurhidayatullah⁽³⁾
Politeknik 'Aisyiyah Pontianak
E-mail : asriwinarsih12@gmail.com

Pulmonary tuberculosis remains a major global health problem, including in Indonesia. The Xpert MTB/RIF assay is a rapid molecular diagnostic method used to detect *Mycobacterium tuberculosis* and determine the semi-quantitative bacterial load. The monocyte-to-lymphocyte ratio (MLR) is a hematological parameter that may reflect the inflammatory response in tuberculosis. This study aimed to analyze the association between MLR and Xpert MTB/RIF result categories in patients with pulmonary tuberculosis at Melawi Regional Hospital, Melawi Regency. An observational analytic study with a cross-sectional design was conducted on 30 patients selected using total sampling. Data were analyzed using the Shapiro–Wilk test, Kruskal–Wallis test, Spearman correlation, and Receiver Operating Characteristic (ROC) curve analysis. The results showed that MLR data were not normally distributed ($p < 0.05$). No significant difference in MLR was found among Xpert MTB/RIF categories ($H = 1.646$; $p = 0.649$), and no significant correlation was observed between MLR and Xpert MTB/RIF categories ($r = 0.203$; $p = 0.282$). ROC analysis yielded an AUC of 0.621, with a cut-off value of 0.20479, sensitivity of 81.3%, specificity of 28.6%, and a Youden Index of 0.099. In conclusion, MLR was not significantly associated with Xpert MTB/RIF categories and may serve only as a supportive screening parameter rather than a substitute for Xpert MTB/RIF.

Keywords : Pulmonary Tuberculosis, Monocyte to Lymphocyte Ratio, Xpert MTB/RIF