

HUBUNGAN *NEUTROPHIL-LYMPHOCYTE RATIO* (NLR) TERHADAP *VISUAL ANALOGUE SCALE* (VAS) SCORE PADA PASIEN ENDOMETRIOSIS DI RSUD PROF. DR. MARGONO SOEKARJO

ABSTRAK

Latar belakang: Endometriosis adalah inflamasi kronik yang ditandai dengan nyeri pelvis kronik, dismenorea, atau dispareunia pada berbagai stadium nyeri dan sering kali mengalami keterlambatan diagnosis. Pendekatan diagnostik diperlukan untuk mengintegrasikan penilaian subjektif (VAS *score*) dan objektif (NLR) secara bersamaan untuk menggambarkan proses inflamasi dan mengatasi keterlambatan diagnosis endometriosis. Namun, penelitian khusus yang mengkaji hubungan NLR terhadap VAS *score* pada pasien endometriosis di Indonesia ataupun tingkat lokal masih terbatas dan hasil tidak konsisten. **Tujuan:** Penelitian ini bertujuan untuk mengetahui hubungan *Neutrophil-Lymphocyte Ratio* (NLR) terhadap *Visual Analogue Scale* (VAS) *score* pada pasien endometriosis di RSUD Prof. Dr. Margono Soekarjo. **Metode:** Penelitian desain *cross-sectional* menggunakan data sekunder rekam medis elektronik (RME) yang terintegrasi *Laboratory Information System* (LIS). Subjek penelitian terdiri dari 60 pasien endometriosis yang sudah terkonfirmasi secara histopatologi di RSUD Prof. Dr. Margono Soekarjo tahun 2020-2024. Analisis korelasi *Spearman* digunakan untuk menilai hubungan antara NLR dan VAS *score*. Analisis regresi logistik ordinal digunakan untuk mengidentifikasi variabel yang berpengaruh terhadap derajat nyeri. **Hasil:** Terdapat hubungan negatif lemah yang signifikan secara statistik antara NLR dan VAS *score* ($\rho = -0,264$; $p = 0,041$) yang mengindikasikan bahwa semakin tinggi NLR maka derajat nyeri cenderung lebih rendah. Analisis multivariat NLR tidak berpengaruh signifikan terhadap derajat nyeri (OR 0,923; $p = 0,059$; $\beta = -0,080$). Namun, faktor usia <25 tahun (OR = 18,54; $p = 0,039$; CI 95% 1,160–296,190) dan indeks massa tubuh (IMT) kategori *underweight* (OR = 0,0098; $p = 0,023$; CI 95% 0,00018–0,527) berpengaruh signifikan terhadap tingkat nyeri pasien endometriosis. **Kesimpulan:** Terdapat hubungan negatif lemah yang signifikan secara statistik antara NLR dan VAS *score* pada pasien endometriosis. Namun, NLR bukan merupakan prediktor independen terhadap derajat nyeri pada analisis multivariat. Faktor usia dan status gizi (IMT) ditemukan lebih berpengaruh terhadap tingkat nyeri endometriosis dibandingkan NLR.

Kata kunci: endometriosis, inflamasi, *neutrophil-lymphocyte ratio* (NLR), nyeri, *visual analogue scale score* (VAS *score*)

**THE RELATIONSHIP BETWEEN NEUTROPHIL-LYMPHOCYTE RATIO
(NLR) AND VISUAL ANALOGUE SCALE (VAS) SCORE IN
ENDOMETRIOSIS PATIENTS AT PROF. DR. MARGONO SOEKARJO
HOSPITAL**

ABSTRACT

Background: Endometriosis is a chronic inflammation characterized by chronic pelvic pain, dysmenorrhea, or dyspareunia at various stages of pain and often delays in diagnosis. A diagnostic approach is needed to integrate subjective (VAS score) and objective assessments (NLR) simultaneously to describe inflammatory processes and address the delay in diagnosis of endometriosis. However, specific studies examining the relationship between NLR and VAS scores in endometriosis patients in Indonesia or at the local level are still limited and results are inconsistent. **Objective:** This study aimed to investigate the relationship between the Neutrophil-Lymphocyte Ratio (NLR) and Visual Analogue Scale (VAS) score in patients with endometriosis at Prof. Dr. Margono Soekarjo Hospital. **Methods:** This study employed a cross-sectional design using secondary data obtained from electronic medical records (EMRs) integrated with the Laboratory Information System (LIS). The study included 60 patients with histopathologically confirmed endometriosis treated at Prof. Dr. Margono Soekarjo Hospital between 2020 and 2024. Spearman correlation analysis was used to assess the relationship between NLR and VAS scores. Ordinal logistic regression analysis was used to identify variables that affect the degree of pain. **Results:** There is a statistically significant weak negative association between NLR and VAS score ($p = -0,264$; $p = 0,041$), indicating that the higher the NLR, the lower the degree of pain. Multivariate analysis of NLR has no significant effect on the degree of pain (OR 0,923; $p = 0,059$; $\beta = -0,080$). However, the age factor <25 years (OR = 18,54; $p = 0,039$; 95% CI 1,160–296,190) and body mass index (BMI) of the underweight category (OR = 0,0098; $p = 0,023$; 95% CI 0,00018–0,527) have a significant effect on the pain level of endometriosis patients. **Conclusions:** A statistically significant and weakly negative association between NLR and VAS score in endometriosis patients. However, NLR is not an independent predictor of pain severity in multivariate analyses. Age factors and BMI are found to have more influence on the level of endometriosis pain than NLR.

Keywords: endometriosis, inflammation, neutrophil-lymphocyte ratio (NLR), pain, visual analogue scale (VAS score)