

INTISARI

Latar belakang: Pemfigus adalah penyakit autoimun kronik pada kulit dan mukosa yang ditandai dengan akantolisis akibat autoantibodi terhadap desmoglein. Penilaian keparahan pemfigus secara klinis penting untuk menentukan tatalaksana dan evaluasi penyakit. Pemeriksaan serologis seperti ELISA antidesmoglein memiliki keterbatasan karena biaya dan ketersediaan, sehingga diperlukan biomarker alternatif yang lebih sederhana. Indeks hematologi seperti rasio neutrofil-limfosit (RNL), rasio trombosit-limfosit (RTL), rasio trombosit-neutrofil (RTN), dan indeks imunitas-inflamasi sistemik (IIS) berpotensi mencerminkan derajat keparahan pemfigus namun belum banyak dikaji secara spesifik di Indonesia.

Tujuan: Mengetahui korelasi antara RNL, RTL, RTN dan IIS terhadap derajat keparahan pemfigus berdasarkan skor *Pemphigus Disease Area Index* (PDAI).

Metode: Penelitian ini menggunakan desain analitik observasional *cross sectional*. Data diambil dari rekam medis pasien dengan diagnosis pemfigus di RSUP Dr. Sardjito Yogyakarta. Subjek penelitian dipilih berdasarkan kriteria inklusi dan eksklusi dengan variabel bebas berupa RNL, RTL, RTN, dan IIS, serta variabel terikat berupa derajat keparahan pemfigus menurut skor PDAI. Analisis data dilakukan menggunakan uji korelasi Spearman.

Hasil: Subjek yang memenuhi kriteria inklusi sebanyak 60 subjek. Subjek penelitian didominasi perempuan (68,3%) dengan rerata usia $50,17 \pm 14,75$ tahun. Jenis pemfigus terbanyak adalah pemfigus vulgaris (60%) dan foliaceus (35%). Median skor PDAI adalah 37 (12–89), termasuk kategori berat. Ditemukan korelasi positif antara RNL ($r=0,467$), IIS ($r=0,430$) serta RTL ($r=0,275$), dan korelasi negatif pada RTN ($r=-0,371$) terhadap skor PDAI ($p<0,05$). Pada analisa subtipe pemfigus, didapatkan RNL, RTN dan IIS berkorelasi terhadap skor PDAI pemfigus foliaceus. Berdasarkan analisis ROC, RNL memiliki AUC terbesar, menunjukkan potensi terbaik sebagai indikator keparahan penyakit.

Kesimpulan: Indeks hematologis sederhana seperti RNL, RTL, RTN, dan IIS memiliki potensi sebagai marker non-invasif untuk menilai derajat keparahan pemfigus. Temuan ini dapat menjadi dasar pengembangan pemeriksaan indeks hematologis sebagai alat bantu dalam evaluasi klinis dan perencanaan terapi.

Kata kunci: *pemfigus, rasio neutrofil limfosit, rasio trombosit limfosit, rasio trombosit neutrofil, indeks imunitas-inflamasi sistemik, PDAI*

ABSTRACT

Background: Pemphigus is a chronic autoimmune disease affecting the skin and mucous membranes, characterized by acantholysis resulting from autoantibodies against desmogleins. Clinical assessment of disease severity is essential for appropriate management and disease monitoring. Serological tests such as anti-desmoglein ELISA are useful but limited by cost and availability, highlighting the need for simpler alternative biomarkers. Hematological indices, including neutrophil-to-lymphocyte ratio (NLR), platelet-to-lymphocyte ratio (PLR), platelet-to-neutrophil ratio (PNR), and systemic immune-inflammation index (SII), may reflect disease severity in pemphigus, although studies in the Indonesian population remain limited.

Objective: To evaluate the correlation between NLR, PLR, PNR, and SII with disease severity in pemphigus patients, as measured by the Pemphigus Disease Area Index (PDAI).

Methods: This cross-sectional analytic observational study utilized medical record data from pemphigus patients treated at Dr. Sardjito General Hospital, Yogyakarta. Subjects were selected according to inclusion and exclusion criteria. Independent variables included NLR, PLR, PNR, and SII, while the dependent variable was disease severity based on the PDAI score. Statistical analysis was performed using Spearman's correlation test.

Results: A total of 60 subjects met the inclusion criteria, predominantly female (68.3%) with a mean age of 50.17 ± 14.75 years. Pemphigus vulgaris (60%) and foliaceus (35%) were the most common subtypes. The median PDAI score was 37 (range 12–89), indicating severe disease. Positive correlations were found between NLR ($r = 0.467$), SII ($r = 0.430$), and PLR ($r = 0.275$), and a negative correlation for PNR ($r = -0.371$) with PDAI ($p < 0.05$). Subtype analysis revealed significant correlations of NLR, PNR, and SII with PDAI in pemphigus foliaceus. ROC analysis showed NLR had the highest AUC, suggesting its superior predictive potential.

Conclusion: Simple hematological indices such as NLR, PLR, PNR, and SII show promise as non-invasive markers for assessing pemphigus severity, supporting their potential role in clinical evaluation and therapeutic planning.

Keywords: *pemphigus, neutrophil-to-lymphocyte ratio, platelet-to-lymphocyte ratio, platelet-to-neutrophil ratio, systemic immune-inflammation index, PDAI*