INTISARI

Latar Belakang: Kanker ovarium merupakan jenis kanker ketiga terbanyak dan peringkat kedua penyebab kematian di dunia. Di Indonesia, berdasarkan data dari *Global Burden of Cancer* (GLOBOCAN) 2020, insiden kanker ovarium adalah 12,4 per 100.000 penduduk usia dewasa dengan mortalitas 6,7% dari seluruh kasus kanker. Kanker ovarium merupakan kanker ginekologis yang paling sering ditemukan dengan manifestasi hipoalbuminemia. *Neutrophil to Lymphocyte Ratio* (NLR) merupakan salah satu penanda yang berkorelasi positif dengan adanya inflamasi sistemik termasuk pada kanker ovarium. Peran albumin serum sebagai *acute phase reactan* yang akan menurun pada kondisi inflamasi khususnya pada pasien kanker ovarium belum diketahui apakah berhubungan dengan marker inflamasi yang lain.
Tujuan: Mengevaluasi korelasi antara NLR dengan albumin serum pada pasien dengan kanker ovarium
Metode: Penelitian ini menggunakan desain potong lintang dengan subjek penelitian adalah pasien terdiagnosis kanker ovarium pada berbagai stadium yang melakukan pemeriksaan darah lengkap dan albumin serum di Pusat Kanker Terpadu RSUP Dr. Sardjito Yogyakarta. Analisis korelasi untuk menilai hubungan NLR dan albumin serum menggunakan uji Spearman. Selanjutnya dilakukan analisa korelasi parsial untuk mengendalikan faktor perancu. Data dianalisis menggunakan software SPSS versi 25 dengan batas kemaknaan menggunakan $p<0,05$.
Hasil: Sebanyak 209 pasien kanker ovarium dianalisis dengan median usia 51 tahun dan median IMT 21,36 kg/m². Median kadar albumin serum adalah 3,56 g/dL dan median NLR 3,97. Terdapat korelasi negatif bermakna antara NLR dan albumin serum ($\rho = -0,549$; $p < 0,001$), yang tetap konsisten setelah pengontrolan seluruh variabel perancu (ρ parsial $= -0,551$; $p < 0,001$).
Kesimpulan: Nilai NLR berkorelasi negatif sedang dengan kadar albumin serum pada pasien kanker ovarium ($\sigma = -0,551$; IK95%; -0,639 - -0,449; $p < 0,001$) dan tidak dipengaruhi oleh usia, IMT, stadium, tipe histopatologis, klasifikasi TNM maupun adanya komorbid penyakit kardiovaskuler dan diabetes melitus.

Kata Kunci: *kanker ovarium, albumin,* NLR

ABSTRACT

Background: Ovarian cancer is the third most common cancer and the second leading cause of cancer-related mortality worldwide. In Indonesia, based on data from the Global Burden of Cancer (GLOBOCAN) 2020, the incidence of ovarian cancer is 12.4 per 100,000 adult population, with a mortality rate accounting for 6.7% of all cancer cases. Ovarian cancer is the gynecological malignancy most frequently associated with hypoalbuminemia. The neutrophil-to-lymphocyte ratio (NLR) is a widely used biomarker that positively correlates with systemic inflammation, including in ovarian cancer. However, the relationship between serum albumin, as a negative acute-phase reactant that decreases under inflammatory conditions, and other inflammatory markers such as NLR in patients with ovarian cancer remains unclear and has not been well established.
Objective: To evaluate the correlation between NLR and serum albumin in ovary cancer patients
Methods: This study employed a cross-sectional design, with study subjects consisting of patients diagnosed with ovarian cancer at various stages who underwent complete blood count and serum albumin examinations at the Integrated Cancer Center of Dr. Sardjito General Hospital, Yogyakarta. Correlation analysis to assess the relationship between NLR and serum albumin was performed using Spearman's rank correlation test. Subsequently, partial correlation analysis was conducted to control for potential confounding factors. Data were analyzed using SPSS software version 25, with statistical significance set at $p < 0.05$.
Results: A total of 209 ovarian cancer patients were analyzed, with a median age of 51 years and a median BMI of 21.36 kg/m². The median serum albumin level was 3.56 g/dL and the median NLR was 3.97. A significant negative correlation was observed between NLR and serum albumin ($\rho = -0.549$; $p < 0.001$), which remained consistent after adjustment for all confounding variables (partial $\rho = -0.551$; $p < 0.001$).
Conclusion: NLR showed a moderate negative correlation with serum albumin levels in patients with ovarian cancer ($\rho = -0.551$; 95% CI −0.639 to −0.449; $p < 0.001$) and was not influenced by age, BMI, stage, histopathological type, TNM classification, or the presence of cardiovascular disease and diabetes mellitus as comorbidities.

Keywords: ovarian cancer, albumin, NLR