INDEKS PLATELET SEBAGAI PREDIKTOR MORTALITAS PASIEN ENSEFALOPATI SEPSIS DI RSUP DR. SARDJITO YOGYAKARTA

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ABSTRAK

Latar belakang: Ensefalopati sepsis (Sepsis-Associated Encephalopathy/SAE) merupakan komplikasi neurologis yang paling sering terjadi pada pasien sepsis dan berhubungan erat dengan peningkatan morbiditas dan mortalitas. Indeks platelet seperti *mean platelet volume* (MPV), *platelet distribution width* (PDW), dan plateletkrit merupakan parameter hematologi rutin yang murah dan mudah diakses.
Tujuan: Penelitian ini bertujuan untuk membuktikan bahwa indeks platelet dapat digunakan sebagai prediktor mortalitas pasien ensefalopati sepsis di RSUP Dr. Sardjito
Metode: Penelitian analitik observasional dengan desain kasus kontrol dilakukan terhadap pasien SAE di RSUP Dr. Sardjito periode Januari 2019–Juni 2024. Data indeks platelet (MPV, PDW, plateletkrit) diambil saat admisi. Mortalitas dinilai dari status hidup atau meninggal saat pasien keluar dari rumah sakit. Analisis data mencakup uji ROC, Chi-square, dan regresi logistik multivariat.
Hasil: Sebanyak 113 pasien SAE diikutkan dalam penelitian dengan rerata usia 61,6 ± 15,4 tahun. Nilai AUC MPV, PDW, dan plateletkrit masing-masing adalah 0,711 (p=0,000), 0,708 (p=0,000), dan 0,333 (p=0,002). MPV ≥10,7 fL (OR 3,330; 95% CI 1,536–7,235; p=0,002; sensitivitas 64,5%; spesifisitas 64,7%), PDW ≥11,5 fL (OR 2,110; 95% CI 0,995–4,494; p=0,050; sensitivitas 59,7%; spesifisitas 58,8%), dan plateletkrit ≤0,2% (OR 2,360; 95% CI 0,192-0,935; p=0,032; sensitivitas 25,8%; spesifisitas 54,9%) berhubungan dengan mortalitas. Pada analisis multivariat, MPV secara signifikan sebagai prediktor independen mortalitas (OR 4,100; 95% CI 1,010–16,730; p=0,049).
Kesimpulan: Indeks platelet dapat memprediksi peningkatan mortalitas pasien ensefalopati sepsis. MPV tinggi, PDW tinggi, dan plateletkrit rendah berhubungan dengan luaran mortalitas yang lebih tinggi.
Kata Kunci: ensefalopati sepsis, MPV, PDW, plateletkrit, indeks platelet, mortalitas

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PLATELET INDICES AS PREDICTORS OF MORTALITY IN PATIENTS WITH SEPSIS-ASSOCIATED ENCEPHALOPATHY AT DR. SARDJITO GENERAL HOSPITAL, YOGYAKARTA

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ABSTRACT

Background: Sepsis-associated encephalopathy (SAE) is the most common neurological complication in septic patients and strongly associated with increased morbidity and mortality. Platelet indices such as mean platelet volume (MPV), platelet distribution width (PDW), and plateletcrit are inexpensive and accessible hematological parameters.
Objective: This study aimed to prove that platelet indices can predict mortality in patients with sepsis-associated encephalopathy.
Methods: An observational analytic study with a case-control design was conducted on SAE patients at Dr. Sardjito General Hospital from January 2019 to June 2024. Platelet indices (MPV, PDW, and plateletcrit) were collected at hospital admission. Mortality was assessed based on discharge status (survived or deceased). Data analysis included ROC curves, Chi-square tests, and multivariate logistic regression.
Results: A total of 113 SAE patients were included in the study, with a mean age of 61.6 ± 15.4 years. The AUC values for MPV, PDW, and plateletcrit were 0.711 (p=0.000), 0.708 (p=0.000), and 0.333 (p=0.002), respectively. MPV ≥10.7 fL (OR 3.330; 95% CI 1.536–7.235; p=0.002; sensitivity 64.5%; specificity 64.7%), PDW ≥11.5 fL (OR 2.110; 95% CI 0.995–4.494; p=0.050; sensitivity 59.7%; specificity 58.8%), and plateletcrit ≤0.2% (OR 2.360; 95% CI 0,192-0,935; p=0.032; sensitivity 25.8%; specificity 54.9%) were associated with mortality. In multivariate analysis, MPV was found to be an independent predictor of mortality (OR 4.100; 95% CI 1.010–16.730; p=0.049).
Conclusions: Platelet indices can predict increased mortality in patients with sepsis-associated encephalopathy. Elevated MPV, elevated PDW, and low plateletcrit are associated with higher mortality outcomes.
Keywords: sepsis-associated encephalopathy, MPV, PDW, plateletcrit, platelet indices, mortality

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