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Hubungan Hemoglobin, Albumin, Lymphocyte, Platelet (HALP) Score terhadap Early Neurological Deterioration (END) pada Pasien Stroke Iskemik Akut di RSUP Dr. Sardjito Yogyakarta
Diajeng Gayatri Kusumaningtyas, Dr. dr. Abdul Gofir, M.Sc, Sp.N., Subsp.NIOO(K); dr. Mawaddah Ar Rochmah, Ph.D
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HUBUNGAN *HEMOGLOBIN, ALBUMIN, LYMPHOCYTE, PLATELET* (HALP) *SCORE* TERHADAP *EARLY NEUROLOGICAL DETERIORATION* (END) PADA PASIEN STROKE ISKEMIK AKUT DI RSUP DR SARDJITO YOGYAKARTA

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ABSTRAK

Latar Belakang: *Early Neurological Deterioration* (END) merupakan komplikasi stroke iskemik akut yang meningkatkan morbiditas dan mortalitas. Skor *Hemoglobin, Albumin, Lymphocyte, Platelet* (HALP) menggambarkan status nutrisi dan inflamasi sistemik, tetapi hubungannya dengan END belum jelas.
Tujuan: Mengetahui hubungan skor HALP dengan kejadian END pada pasien stroke iskemik akut.
Metode: Penelitian kohort retrospektif menggunakan data registri stroke RSUP Dr. Sardjito Yogyakarta periode Januari 2021-Desember 2024. Skor HALP dihitung dari parameter laboratorium dalam 24 jam pertama dan dikategorikan rendah (<27,69) atau tinggi (≥27,69). END didefinisikan sebagai peningkatan NIHSS ≥2 poin dalam 7 hari. Analisis menggunakan *chi-square* dan regresi logistik multivariat.
Hasil: Sebanyak 336 subjek dianalisis dengan median usia 60,5 tahun dan 60,1% laki-laki. END terjadi pada 51 subjek (15,2%). Proporsi END pada kelompok HALP rendah dan tinggi masing-masing 17,0% dan 14,4% (p=0,545). Analisis multivariat menunjukkan skor HALP tidak berhubungan bermakna dengan END (OR=1,346; IK95% 0,657-2,760; p=0,417), sedangkan hipertensi berhubungan secara independen (OR=3,648; IK95% 1,347-9,883; p=0,011).
Kesimpulan: Skor HALP bukan prediktor independen END pada stroke iskemik akut, sedangkan hipertensi berhubungan secara independen dengan END.
Kata Kunci: skor HALP; *Early Neurological Deterioration*; stroke iskemik akut; hipertensi.

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ASSOCIATION BETWEEN HEMOGLOBIN, ALBUMIN, LYMPHOCYTE, AND PLATELET (HALP) SCORE AND EARLY NEUROLOGICAL DETERIORATION (END) IN PATIENTS WITH ACUTE ISCHEMIC STROKE AT DR. SARDJITO GENERAL HOSPITAL, YOGYAKARTA

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ABSTRACT

Background: Early Neurological Deterioration (END) is a complication of acute ischemic stroke associated with increased morbidity and mortality. The Hemoglobin, Albumin, Lymphocyte, Platelet (HALP) score reflects nutritional status and systemic inflammation, but its association with END remains unclear.
Objective: To determine the association between the HALP score and END in patients with acute ischemic stroke.
Methods: This retrospective cohort study used stroke registry data from Dr. Sardjito General Hospital, Yogyakarta, from January 2021 to December 2024. HALP scores were calculated from laboratory parameters within 24 hours of admission and categorized as low (<27.69) or high (⩾27.69). END was defined as an NIHSS increase of ⩾2 points within 7 days. Data were analyzed using chi-square tests and multivariable logistic regression.
Results: Among 336 patients, the median age was 60.5 years, and 60.1% were male. END occurred in 51 patients (15.2%). END rates were 17.0% and 14.4% in the low and high HALP groups, respectively (p=0.545). Multivariable analysis showed no significant association between HALP and END (OR=1.346; 95% CI 0.657–2.760; p=0.417), while hypertension was independently associated with END (OR=3.648; 95% CI 1.347–9.883; p=0.011).
Conclusion: The HALP score was not an independent predictor of END, whereas hypertension was independently associated with END.
Keywords: HALP score; early neurological deterioration; acute ischemic stroke; hypertension.

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