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RASIO NEUTROFIL LIMFOSIT SEBAGAI PREDIKTOR PERBURUKAN NEUROLOGIS STROKE PERDARAHAN

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Intisari

Stroke perdarahan menyebabkan disabilitas dan kematian yang tinggi dan prevalensinya semakin meningkat. Terdapat bukti keterlibatan proses inflamasi pada stroke perdarahan. Rasio neutrofil limfosit merupakan penanda inflamasi yang kuat dan mudah dinilai. Penelitian ini bertujuan untuk mengetahui rasio neutrofil limfosit saat masuk rumah sakit sebagai prediktor perburukan neurologis stroke perdarahan akut.

Penelitian ini merupakan penelitian kohort prospektif, subjek adalah pasien stroke perdarahan akut yang dirawat di Unit Stroke RSUP Dr. Sardjito dan memenuhi kriteria inklusi dan eksklusi. Subjek dilakukan pengukuran NIHSS saat masuk rumah sakit dan pada saat hari ke empat belas.

Didapatkan 65 subjek, laki-laki lebih banyak dari perempuan yaitu 70,8% sedangkan perempuan 29,2%, rerata usia $62,37 \pm 13,72$ dengan rentang 29-92 tahun. Terdapat 21 subjek mengalami perburukan neurologis dan 44 subjek tidak mengalami perburukan neurologis. Didapatkan hubungan signifikan antara hiperglikemia dengan perburukan neurologis (RR =3,073; 95%CI =1,772-5,329; p =0,011). Begitu pula dengan GCS >8 dan ≤ 8 saat masuk RS berhubungan signifikan dengan perburukan neurologis (RR =2,732; 95%CI =1,455-5,131; p =0,006). Terdapat hubungan signifikan antara peningkatan rasio neutrofil limfosit dengan perburukan neurologis (RR =3,750; 95%CI =1,229-11,441; p= 0,005). Hasil analisis multivariat regresi logistik menunjukkan bahwa variabel yang secara independen mempengaruhi perburukan neurologis adalah rasio neutrofil limfosit RR =4,424 (95%CI =1,196-16,369; p =0,026) dan GCS RR =7,461 (95%CI =1,711-32,526; p =0,007).

Kesimpulan: rasio neutrofil limfosit yang tinggi setelah GCS dapat menjadi prediktor perburukan pada stroke perdarahan akut.

Kata kunci: Stroke perdarahan, rasio neutrofil limfosit, perburukan neurologis

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NEUTROPHIL LYMPHOCYTE RATIO AS PREDICTOR OUTCOME HEMORRHAGE STROKE

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Abstract

Hemorrhage stroke causes high disability and death, moreover the prevalence is increasing. There is evidence of involvement of the inflammatory process in hemorrhage strokes. The neutrophil lymphocyte ratio is a strong and easily assessed marker of inflammation. This study aims to determine the ratio of neutrophil lymphocytes during hospital admission as a predictor of neurological deterioration in acute hemorrhage strokes.

This study was a prospective cohort study, the subjects were acute hemorrhagic stroke patients treated at the Stroke Unit of the RSUP Dr. Sardjito and fulfill the inclusion and exclusion criteria. The subjects were taken NIHSS measurements when they were admitted to the hospital and on the fourteenth day.

There were 65 subjects, more males than females (70.8%:29.2%), mean age 62.37 ± 13.72 with a range of 29-92 years. There were 21 subjects experiencing neurological deterioration and 44 subjects did not. There was a significant relationship between hyperglycemia and neurological deterioration (RR = 3.073; 95% CI =1.772-5.329; p =0.011). GCS >8 and ≤ 8 at admission were significantly associated with neurological deterioration (RR =2.732; 95% CI =1.455-5.131; p =0.006). There is a significant relationship between the increase in neutrophil lymphocyte ratio and neurological deterioration (RR =3.750; 95% CI =1.229-9.4441; p =0.005). The results of multivariate logistic regression showed that the variables that independently influenced neurological deterioration were neutrophil lymphocyte ratio RR= 4,424 (95%CI =1,196-16,369; p =0,026) and GCS RR =]7,461 (95%CI =1,711-32,526; p = 0.007).

Conclusion: High neutrophil lymphocyte ratio after GCS can be a predictor of deterioration in acute hemorrhage stroke.

Keyword: Hemorrhage Stroke, Neutrophil Lymphocytes Ratio, Neurological Deterioration

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