

Perbandingan Nilai Viskositas Darah dan Modified Rankin Scale (mRS) pada Pasien Stroke Iskemik Subakut dan Kronis dengan dan tanpa Komorbid Gagal Jantung = Comparison of Blood viscosity and modified rankin scale (mRS) in subacute and chronic ischemic stroke with and without heart failure

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Abstrak

Latar Belakang. Stroke iskemik dan gagal jantung merupakan masalah kesehatan utama di dunia. Keduanya memiliki faktor risiko yang sama sehingga sering muncul bersamaan sebagai komorbid. Keduanya juga dikaitkan dengan gangguan viskositas darah dan luaran fungsional yang lebih buruk. Penelitian ini bertujuan untuk menilai perbandingan nilai viskositas darah dan luaran fungsional pasien stroke iskemik subakut dan kronis dengan dan tanpa komorbid gagal jantung.

Metode. Penelitian ini menggunakan desain case control yang dilakukan di klinik rawat jalan Neurologi RSUPN dr. Cipto Mangunkusumo pada bulan Maret dan April 2023. Analisis univariat, bivariat dan multivariat dilakukan sesuai kebutuhan.

Hasil. Penelitian ini melibatkan 24 pasien stroke iskemik subakut dan kronis dengan komorbid gagal jantung dan 24 pasien stroke iskemik subakut dan kronis tanpa komorbid gagal jantung. Tidak didapatkan perbedaan rerata pada semua variabel penelitian yang terdiri dari nilai viskositas darah ($5,45 \pm 0,77$ poise vs $5,50 \pm 0,77$ poise, $p = 0,85$); nilai viskositas plasma ($1,78 \pm 0,31$ poise vs $1,80 \pm 0,32$ poise, $p = 0,87$); kadar hematokrit ($38,42 \pm 4,78\%$ vs $40,43 \pm 4,25\%$, $p = 0,13$); kadar fibrinogen ($401,03 \pm 121,18$ mg/dL vs $346,49 \pm 70,07$ mg/dL); dan nilai mRS ($2(0-4)$ vs $1(0-3)$, $p = 0,37$).

Kesimpulan. Tidak ada perbedaan rerata nilai viskositas darah, viskositas plasma, kadar hematokrit, kadar fibrinogen, dan nilai mRS yang bermakna secara statistik pada stroke iskemik subakut dan kronis dengan dan tanpa komorbid gagal jantung. Perlu penelitian lebih lanjut dengan jumlah sampel yang lebih besar.

.....**Background.** Ischemic stroke and heart failure are major health problems in the world. Both have the same risk factors so they often appear together as comorbidities. Both are also associated with impaired blood viscosity and worse functional outcomes. This study aims to assess the comparison of blood viscosity values and functional outcomes of subacute and chronic ischemic stroke patients with and without heart failure.

Methods. This study used a case-control design which was conducted at the Neurology outpatient clinic at RSUPN dr. Cipto Mangunkusumo in March and April 2023. Univariate, bivariate, and multivariate analyzes were carried out as needed.

Result. In this study, there were 24 subacute and chronic ischemic stroke patients with concomitant heart failure and 24 such patients without such a condition. There are no means differences in all of the study variables, which included blood viscosity values (5.45 ± 0.77 poise vs. 5.50 ± 0.77 poise, $p = 0.85$; plasma viscosity values (1.78 ± 0.31 poise vs. 1.80 ± 0.32 poise, $p = 0.87$); hematocrit levels ($38.42 \pm 4.78\%$ vs. $40.43 \pm 4.25\%$, $p = 0.13$); fibrinogen levels (401.03 ± 121.18 mg/dL vs 346.49 ± 70.07 mg/dL); and mRS value ($2(0-4)$ vs $1(0-3)$, $p = 0.37$).

Conclusion. There were no statistically significant differences in mean blood viscosity, plasma viscosity,

hematocrit levels, fibrinogen levels, and mRS values in subacute and chronic ischemic stroke with and without comorbid heart failure. Further research is needed with a larger sample.