

ABSTRAK

HUBUNGAN ANTARA PENURUNAN KADAR ASAM URAT DENGAN KEPARAHAN KLINIS YANG DIUKUR DENGAN SKALA NIHSS PADA PASIEN STROKE TROMBOTIK AKUT

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Latar belakang

Stroke adalah salah satu penyebab kematian yang utama. Pada stroke iskemik akut terjadi peningkatan stress oksidatif dan penurunan kadar antioksidan, termasuk asam urat. Asam urat adalah salah satu antioksidan yang paling penting dalam serum dan plasma sebagai neuroprotektif. Pada penelitian hewan coba, namun penelitian pada manusia masih kontroversial. Beberapa penelitian telah meneliti hubungan kadar asam urat dengan stroke iskemik akut, namun belum ada kesatuan pendapat.

Tujuan

Penelitian ini bertujuan untuk menganalisis hubungan antara perubahan kadar serum asam urat dengan NIHSS pada penderita stroke trombotik akut.

Metode

Penelitian ini merupakan penelitian observasional analitik dengan rancangan penelitian *prospective cohort*. Subjek penelitian berjumlah lima puluh lima orang yang merupakan penderita stroke trombotik akut. Penderita dirawat di ruang saraf RSUD Dr. Soetomo/FK UNAIR periode Januari – September 2015. Pemeriksaan kadar serum asam urat dengan menggunakan Cobas C-501 dan defisit neurologis diukur dengan NIHSS pada saat 72 jam dan tujuh hari onset. Hasil dan korelasi dianalisis secara statistik dengan menggunakan uji regresi logistik.

Hasil

Rerata usia subjek penelitian ini $55,3 \pm 9,0$ tahun. Subjek penelitian terdiri dari 31 laki-laki dan 24 perempuan. Rerata kadar asam urat saat masuk $4,9 \pm 1,2$ mg/dL dan pada saat 7 hari onset $4,7 \pm 1,2$ mg/dL. Rerata skala NIHSS saat masuk $6,6 \pm 2,6$ dan pada saat 7 hari onset $3,8 \pm 2,8$. Didapatkan 18 subjek (32,7%) yang mengalami penurunan kadar asam urat $> 0,6$ mg/dL, dimana 15 orang (83,3%) mengalami perbaikan klinis dengan nilai $p < 0,0001$. Terdapat hubungan yang bermakna antara penurunan kadar asam urat dengan perbaikan klinis (NIHSS), RR 13,5 dengan nilai 95% IK (3,2 – 56,8).

Kesimpulan

Penurunan kadar asam urat serum pada hari ke 7 setelah awitan dapat dipakai sebagai prediktor keparahan klinis penderita stroke trombotik akut.

Kata kunci: asam urat, NIHSS, stroke trombotik akut.

ABSTRACT

ASSOSIASION BETWEEN THE DECREASED OF URIC ACID LEVEL AND CLINICAL OUTCOME MEASURED WITH NIHSS SCALE IN ACUTE THROMBOTIC STROKE PATIENTS

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Background

Stroke is the one of the important causes of death. Acute ischemic stroke leads to increased levels of oxidative stress and decreased levels of antioxidants, including uric acid. Although uric acid is one of the most important antioxidants in plasma and appears to be neuroprotective in animal models, results from human studies are controversial. Some studies have explored this relationship in acute ischemic stroke but remained debatable.

Objective

This study aims to analyze the association between of serum uric acid level and NIHSS in patients with acute thrombotic stroke.

Method

This is an analytical observational study using prospective cohort design. Fifty five patients with acute thrombotic stroke treated in Neurology ward Dr. Soetomo General Hospital/Medical Faculty Airlangga University during January – September 2015. Serum uric acid levels were measured by Cobas C-501 and the neurological deficits were measured by NIHSS during onset first 72 hours and seventh days. Logistic Regression was used to analyze the correlations.

Result

The mean age of the study subjects is 55.3 ± 9.0 years. Subject of the study consisted of 31 men and 24 women. The mean levels of uric acid when admission 4.9 ± 1.2 mg / dL and at 7 days of onset of 4.7 ± 1.2 mg / dL. The mean NIHSS scale is 6.6 ± 2.6 when admission and at 7 days of onset is 3.8 ± 2.8 . Obtained 18 subjects (32.7%) experienced a decrease uric acid levels > 0.6 mg / dL, of which 15 (83.3%) experienced clinical improvement with $p < 0.0001$. There is a significant association between a decrease in uric acid levels with clinical improvement (NIHSS) with RR 13.5, and 95% CI (3.2 to 56.8).

Conclusion

Decreased serum uric level 7 days after onset could be used as a predictor of clinical severity in patients with acute thrombotic stroke.

Keywords: uric acid, NIHSS, acute thrombotic stroke.