

# Hubungan luaran ibu dan bayi dengan kadar asam urat darah ibu pada kehamilan dengan gangguan hipertensi di Rumah Sakit Umum Pusat Persahabatan Jakarta = Relationship between maternal and perinatal outcomes with maternal blood uric acid level of hypertensive disorders in pregnancy at Persahabatan General Hospital Jakarta

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## Abstrak

Latar Belakang: Hipertensi pada kehamilan diketahui menyebabkan morbiditas dan mortalitas ibu dan bayi. Banyak faktor yang memengaruhi, diantaranya asam urat, walau masih banyak perdebatan diantara para ahli. Peneliti ingin mengetahui hubungan luaran ibu dan bayi dengan kadar asam urat darah ibu pada kehamilan dengan gangguan hipertensi.

Metode: Studi analitik observasional dengan desain potong lintang. Subjek adalah ibu hamil dengan gangguan hipertensi di Rumah Sakit Umum Pusat Persahabatan, periode Januari 2014 sampai Desember 2018. Luaran ibu adalah tingkat keparahan gangguan hipertensi pada kehamilan dan derajat hipertensi. Luaran bayi adalah usia gestasi saat kelahiran, berat badan lahir bayi berdasarkan kurva Lubchenco dan skor APGAR menit pertama. Hubungan luaran ibu dan bayi dengan kadar asam urat darah ibu diketahui dengan uji Kruskal Willis dan Mann Whitney.

Hasil: Sebanyak 704 subjek memenuhi kriteria penelitian dari 880 pasien ibu hamil dengan gangguan hipertensi. Didapatkan perbedaan bermakna kadar asam urat darah ibu ( $p < 0,001$ ) antarkelompok keparahan gangguan hipertensi pada kehamilan (preeklamsia gejala berat 5,7 (2,2–16,0) mg/dL, preeklamsia tanpa gejala berat 5,18 + 1,54 mg/dL, dan hipertensi kronik/hipertensi dalam kehamilan 4,8 (2,2–8,0) mg/dL). Didapatkan perbedaan bermakna kadar asam urat darah ibu antarkelompok derajat hipertensi (hipertensi derajat I 4,8 (2,2–8,0) mg/dL, hipertensi derajat II 5,7 (2,2–16,0) mg/dL, dan krisis hipertensi 5,4 (2,6–9,8) mg/dL). Kelompok usia gestasi aterm saat kelahiran menunjukkan kadar asam urat darah ibu 5,0 (2,2–9,8) mg/dL, lebih rendah bermakna ( $p < 0,001$ ) dibandingkan usia gestasi preterm saat kelahiran 6,3 (2,7–16) mg/dL. Tidak didapatkan perbedaan bermakna antarkelompok berat lahir bayi maupun skor APGAR menit pertama.

Simpulan: Didapatkan hubungan bermakna antara luaran ibu yaitu tingkat keparahan gangguan hipertensi dan derajat hipertensi, dan luaran bayi yaitu usia gestasi saat kelahiran, dengan kadar asam urat darah ibu. Tidak didapatkan hubungan bermakna antara berat badan lahir bayi dan skor APGAR menit pertama, dengan kadar asam urat darah ibu.

.....Background: Hypertensive disorders in pregnancy is known to cause maternal and perinatal morbidity and mortality. Many factors influence, including uric acid, although there is still a lot of debate among experts. This study aims to find out the relationship between mother and baby outcomes with mother's uric acid level, in pregnancy with hypertensive disorders.

Method: Observational analytic study with cross sectional design. Subjects were pregnant women with hypertensive disorders at Persahabatan General Hospital, from January 2014 to December 2018. Maternal outcomes were the severity of hypertensive disorders in pregnancy and the degree of hypertension. The perinatal outcomes were the gestational age at birth, the baby's birth weight based on the Lubchenco curve,

and the first minute APGAR score. The relationship between maternal and perinatal outcome and maternal blood uric acid levels was questioned by the Kruskal Willis and Mann Whitney test.

Result: A total of 704 subjects met the criteria of the study of 880 pregnant women with hypertensive disorders. There were significant differences of maternal blood uric acid level ( $p < 0.001$ ) between groups of severity of hypertension (preeclampsia with severe features 5.7 (2.2–16.0) mg/dL, preeclampsia without severe features 5.18 + 1.54 mg/dL, and chronic hypertension / gestational hypertension 4.8 (2.2-8.0 mg/dL). There was a significant difference in maternal blood uric acid level between groups of hypertension stage (hypertension stage I 4.8 (2.2–8.0) mg/dL, hypertension stage II 5.7 (2.2–16.0) mg/dL, and a hypertensive crisis 5.4 (2.6–9.8) mg / dL). The group of term gestational age at birth showed maternal blood uric acid level 5.0 (2.2–9.8) mg/dL, significantly lower ( $p < 0.001$ ) than preterm gestational age at birth 6.3 (2.7–7.16) mg/dL. There were no significant differences between groups of birth weight and first minute APGAR scores.

Conclusion: There is a relationship between maternal outcomes (the severity of hypertensive disorders and the degree of hypertension) and perinatal outcomes (gestational age at birth) with maternal blood uric acid level. There is no relationship between birth weight and first minute APGAR score with maternal blood uric acid level.