

PERBEDAAN KADAR KALSIMUM MATERNAL PADA PASIEN PREEKLAMPSIA *ONSET* DINI DAN *ONSET* LAMBAT

ABSTRAK

Latar belakang: Preeklampsia merupakan penyebab utama tingginya Angka Kematian Ibu (AKI) di Indonesia, khususnya di Jawa Tengah. Preeklampsia diklasifikasikan menjadi *onset* dini dan *onset* lambat yang memiliki perbedaan manifestasi klinis dan tingkat keparahan. Defisiensi kalsium diketahui berperan dalam patofisiologi preeklampsia melalui mekanisme vasokonstriksi. Namun, penelitian yang membandingkan kadar kalsium maternal pada kedua tipe *onset* preeklampsia masih terbatas dan menunjukkan hasil yang belum konklusif.

Tujuan: Mengetahui perbedaan kadar kalsium maternal pada pasien preeklampsia *onset* dini dan *onset* lambat.

Metodologi: Penelitian *retrospective cross-sectional* dengan teknik *consecutive sampling* ini menggunakan data rekam medis pasien preeklampsia yang dirawat inap di RSUD Prof. Dr. Margono Soekardjo periode Januari–Desember 2024. Penelitian ini melibatkan 172 pasien yang terbagi menjadi 86 pasien *onset* dini dan 86 pasien *onset* lambat. Data yang dikumpulkan meliputi usia, paritas, riwayat obesitas, *onset* preeklampsia, dan kadar kalsium maternal. Analisis statistik dilakukan menggunakan uji *Chi-Square* ($p < 0,05$) dan dilanjutkan dengan uji regresi logistik.

Hasil: Dari 172 pasien, terdapat perbedaan yang signifikan pada kadar kalsium maternal antara pasien preeklampsia *onset* dini dan *onset* lambat ($p = 0,002$). Kadar kalsium yang rendah lebih sering ditemukan pada pasien preeklampsia *onset* dini, sedangkan sebagian besar pasien preeklampsia *onset* lambat memiliki kadar kalsium dalam rentang normal. Analisis multivariat menunjukkan bahwa ibu hamil dengan kadar kalsium rendah memiliki *peluang* lebih tinggi untuk mengalami preeklampsia *onset* dini (OR=3,655; 95% CI=1,716–7,785; $p < 0,001$).

Kesimpulan: Terdapat perbedaan yang signifikan antara kadar kalsium maternal pada pasien preeklampsia *onset* dini dan *onset* lambat, yang menunjukkan potensi peran kalsium pada mekanisme terjadinya preeklampsia *onset* dini.

Kata kunci: *Kadar kalsium, preeklampsia onset dini, preeklampsia onset lambat, kesehatan maternal.*

DIFFERENCE IN MATERNAL CALCIUM LEVELS BETWEEN EARLY-ONSET AND LATE-ONSET PREECLAMPSIA PATIENTS

ABSTRACT

Background: Preeclampsia remains a major contributor to the high maternal mortality rate (MMR) in Indonesia, particularly in Central Java. It is classified into early-onset and late-onset preeclampsia, which differ in clinical manifestations and severity. Calcium deficiency has been implicated in the pathophysiology of preeclampsia through vasoconstrictive mechanisms. However, studies comparing maternal calcium levels between these two types remain limited and inconclusive.

Objective: To determine the difference in maternal calcium levels between patients with early-onset and late-onset preeclampsia.

Methods: This retrospective cross-sectional study analyzed medical records of preeclampsia inpatients using consecutive sampling at RSUD Prof. Dr. Margono Soekardjo from January to December 2024. A total of 172 patients were included, comprising 86 early-onset and 86 late-onset preeclampsia cases. Data collected included age, parity, history of obesity, onset of preeclampsia, and maternal calcium levels. Statistical analysis was performed using the Chi-Square test ($p < 0.05$) followed by logistic regression.

Results: Among 172 patients, there was a significant difference in maternal calcium levels between early-onset and late-onset preeclampsia ($p = 0.002$). Low calcium levels were more frequently observed in early-onset preeclampsia, while most late-onset cases had calcium levels within the normal range. Multivariate analysis showed that low maternal calcium levels were associated with a higher odds of early-onset preeclampsia ($OR = 3.655$; $95\% CI = 1.716-7.785$; $p < 0.001$).

Conclusion: There is a significant difference in maternal calcium levels between early-onset and late-onset preeclampsia patients, suggesting a potential role of calcium in the mechanism of early-onset preeclampsia.

Keywords: Calcium levels, early-onset preeclampsia, late-onset preeclampsia, maternal health.