

Perbandingan kadar 25-hidroksivitamin D darah tali pusat dan ibu antara kelahiran cukup bulan dan preterm = Comparison of maternal and umbilical serum 25-hydroxyvitamin D between term and preterm deliveries

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Abstrak

Latar Belakang: Defisiensi vitamin D berhubungan dengan berbagai luaran kehamilan yang tidak baik seperti pre-eklamsia, diabetes melitus gestasional, bayi berat lahir rendah, dan kelahiran preterm. Vitamin D diduga berperan dalam patofisiologi terjadinya kelahiran preterm melalui mekanisme penekanan mediator inflamasi.

Tujuan: Penelitian ini bertujuan membandingkan kadar 25 (OH) D serum ibu dan tali pusat pada kelahiran preterm dan cukup bulan. Selain itu juga dicarikorelasi antara kadar 25 (OH) D serum ibu dengan tali pusat.

Metode: Pada penelitian ini digunakan desain potong-lintang. Penelitian dilakukan di RSUPN Cipto Mangunkusumo dan RS Budi Kemuliaan Jakarta, mulai dari Januari 2017 sampai dengan Februari 2018. Kadar 25 (OH) D ibu dan tali pusat dibandingkan antara kelompok cukup bulan dan preterm.

Hasil: Didapatkan 81 subjek yang dapat dilakukan analisis, yaitu 36 subjek (44,4%) melahirkan cukup bulan dan 45 (55,6%) preterm. Median 25 (OH) D maternal pada kelompok preterm dan cukup bulan berturut-turut 15 ng/mL dan 13,95ng/mL, sedangkan tali pusat 13 ng/ml dan 11,85 ng/ml. Tidak terdapat perbedaan kadar 25 (OH) D serum maternal ($p=0,96$) dan tali pusat ($p=0,80$) antara kedua kelompok. Terdapat korelasi positif antara kadar 25(OH) ibu dengan tali pusat ($r=0,59$, $p<0,001$ untuk kelompok cukup bulan dan $r=0,44$, $p<0,002$ untuk kelompok preterm).

Kesimpulan: Kadar 25 (OH) D serum ibu dan tali pusat tidak berbeda bermakna antara kelompok kelahiran preterm dan cukup bulan. Terdapat korelasi antara kadar 25 (OH) D ibu dengan tali pusat.

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Background: Vitamin D deficiency is associated with poor outcomes of pregnancy such as pre-eclampsia, gestational diabetes mellitus, low birth weight infants, and preterm birth. Vitamin D is thought to play a role in the pathophysiology of preterm deliveries through the mechanism of inflammatory mediator suppression.

Objective: To compare maternal and umbilical serum 25 (OH) D levels between preterm and term deliveries group. In addition, the correlation between maternal and umbilical cord serum of 25 (OH) D were analyzed.

Method: This cross-sectional study was conducted at Cipto Mangunkusumo Hospital and Budi Kemuliaan Hospital Jakarta from January 2017 to February 2018. Pre-delivery maternal venous blood and umbilical cord vitamin D serum levels were measured for both of term and preterm deliveries group.

Result: Eighty one subjects were eligible for analysis, 36 subjects (44.4%) delivered term babies and 45 (55.6%) delivered preterm babies. Median level of maternal serum 25 (OH) D were respectively 15 ng/mL and 13.95 ng/mL for preterm and term group. Umbilical cord serum 25 (OH) D levels were respectively 13 ng/ml and 11.85 ng/ml for preterm and term group. There was no statistically difference between pereterm and term group of both maternal and umbilical serum 25 (OH) D levels (respectively $p = 0.96$, $p = 0.80$). There was a positive correlation between the maternal and umbilical 25 (OH) D levels in both groups ($r = 0.59$, $p < 0.001$ for term group and $r = 0.44$, $p < 0.002$ for preterm group).

Conclusions: Maternal and umbilical serum 25 (OH) D levels were not significantly different between term and preterm groups. There was a correlation between maternal and umbilical serum levels of 25 (OH) D.