

# Perbandingan kadar vitamin d pada serum darah, darah tali pusat dan jaringan plasenta pada kehamilan normal dan preeklamsia = Comparison of 25-oh-vitamin d3 level in maternal blood, cord blood and placental tissue in patients with pre-eclampsia and normal pregnancy

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## Abstrak

Tujuan: Penelitian ini membandingkan kadar 25- OH -vitamin D3 pada serum maternal, darah tali pusat dan jaringan plasenta pada ibu hamil normal dan preeklamsia. Metode: Penelitian ini merupakan studi potong lintang dengan jumlah sampel 86 pasien yang melakukan persalinan di RS Cipto Mangunkusumo dan RSUD Tangerang. Setelah itu data disajikan dalam tabel dan dianalisis dengan uji parametrik, yaitu uji-t berpasangan bila sebaran data normal atau uji non parametrik, yaitu uji Mann-Whitney bila sebaran data tidak normal Hasil: Didapatkan kadar 25- OH -vitamin D3 serum maternal kelompok preeklamsia sebesar 16.30 6.20-49.00 ng/mL sedangkan pada sampel kelompok tidak preeklamsia, sebesar 13.50 4.80 ndash; 29.20 ng/mL di mana didapatkan nilai  $p = 0,459$ , dengan tidak ada perbedaan bermakna secara statistik. Didapatkan kadar 25- OH -vitamin D3 tali pusat kelompok preeklamsia sebesar 11.80 3.50 ndash; 38.60 ng/mL sedangkan kelompok tidak preeklamsia sebesar 11.70 1.00 ndash; 28.80 ng/m, di mana didapatkan nilai  $p = 0.964$ , dengan tidak ada perbedaan bermakna secara statistik. Didapatkan kadar 25- OH -vitamin D3 jaringan plasenta kelompok preeklamsia sebesar 49.00 22.00 ndash; 411.00 ng/mL. sedangkan kelompok tidak preeklamsia, sebesar 43.40 11.80 ndash; 153.00 ng/mL, di mana didapatkan nilai  $p = 0.354$  dengan tidak ada perbedaan bermakna secara statistik Didapatkan hasil kadar 25- OH -vitamin D3 serum kelompok preeklamsia awitan dini sebesar 10.80 6.20 ndash; 41.90 ng/mL sedangkan kelompok preeklamsia awitan lanjut sebesar 18.00 7.00 ndash; 49.00 ng/mL dengan nilai  $p = 0,133$ , di mana tidak didapatkan perbedaan bermakna secara statistik. Didapatkan hasil kadar 25- OH -vitamin D3 tali pusat kelompok preeklamsia awitan dini sebesar 10.65 3.50 ndash; 38.60 ng/mL. sedangkan pada kelompok preeklamsia awitan lanjut, sebesar 12.65 6.40 ndash; 33.20 ng/mL. di mana didapatkan nilai  $p = 0.377$  dengan tidak didapatkan perbedaan bermakna secara statistik. Didapatkan kadar 25- OH -vitamin D3 pada jaringan plasenta kelompok preeklamsia sebesar 79.00 36.00 ndash; 411.00 ng/g. sedangkan pada kelompok tidak preeklamsia sebesar 40.00 22.00 ndash; 171.00 ng/g. di mana didapatkan nilai  $p = 0.006$ , dengan didapatkan perbedaan bermakna secara statistik pada rerata kadar 25- OH -vitamin D3 jaringan plasenta Kesimpulan: Tidak terdapat perbedaan bermakna secara statistik pada rerata kadar 25- OH -vitamin D3 pada darah serum, tali pusat dan jaringan maternal pada wanita preeklamsia dan tidak preeklamsia. Tidak terdapat perbedaan bermakna secara statistik pada rerata kadar 25- OH -vitamin D3 pada darah serum dan tali pusat pada wanita preeklamsia dan tidak preeklamsia Terdapat perbedaan bermakna secara statistik pada rerata kadar 25- OH -vitamin D3 pada plasenta wanita preeklamsia dan tidak preeklamsia Kata kunci: 25- OH -vitamin D3, preeklamsia, serum, tali pusat, jaringan plasenta

.....Abstract Objective: This study is designed for comparing 25- OH -vitamin D3 levels in maternal serum, cord blood and placental tissue in non preeclampsia and preeclampsia pregnant women. Methods: This study is a cross sectional study with the number of samples of 86 patients who deliver in Cipto Mangunkusumo

Hospital and Tangerang District Hospital. After that the data is presented in the table and analyzed by parametric test, ie paired t-test when the distribution of normal data or non parametric test, ie Mann-Whitney test when the data distribution is not normal..Results: The serum maternal 25- OH -vitamin D3 levels of preeclampsia group were 16.30 6.20-49.00 ng / mL while in the non-preeclamptic sample group, 13.50 4.80 - 29.20 ng / mL were obtained  $p = 0.459$ , with no statistically significant difference . The umbilical cord 25- OH -vitamin D3 levels of preeclampsia group were 11.80 3.50 - 38.60 ng / mL while the preeclampsia group was 11.70 1.00 - 28.80 ng / m, where  $p = 0.964$  was obtained, with no statistically significant difference. Obtained 25- OH -vitamin D3 levels of placental tissue in the preeclampsia group by 49.00 22.00 - 411.00 ng / mL. while the group did not preeclampsia, amounting to 43.40 11.80 - 153.00 ng / mL, where p value of 0.354 was obtained with no statistically significant difference Earning serum 25- OH -vitamin D3 serum pre-eclampsia group onset was 10.80 6.20 - 41.90 ng / mL whereas the onset of pre-eclampsia group was 18.00 7.00 - 49.00 ng / mL with  $p$  value = 0.133, where no statistically significant difference was obtained. The results of the umbilical cord 25- OH -vitamin D3 levels of early onset preeclampsia group were 10.65 3.50 - 38.60 ng / mL. whereas in the onset of pre-eclampsia group, it was 12.65 6.40 - 33.20 ng / mL. where obtained  $p$  value = 0.377 with no statistically significant difference. Obtained 25- OH -vitamin D3 levels in placental tissue preeclampsia group of 79.00 36.00 - 411.00 ng / g. while in the pre-eclampsia group was 40.00 22.00 - 171.00 ng / g. where obtained  $p$  value of 0.006, with statistically significant difference in mean 25- OH -vitamin D3 levels of placental tissueConclusion: There was no statistically significant difference in mean serum 25- OH -vitamin D3 levels in serum, cord blood and maternal tissue in women with preeclampsia and not preeclampsia. There was no statistically significant difference in mean 25- OH -vitamin D3 levels in serum and umbilical blood in pre-eclampsia and non-preeclampsia women. There were statistically significant differences in mean 25- OH -vitamin D3 levels in female placenta preeclampsia and not preeclampsia Keywords: 25- OH -vitamin D3, preeclampsia, serum, umbilical cord, placental tissue