

Correlation between Maternal Vitamin D and Thyroid Function in Pregnancy with Maternal and Neonatal Outcomes: A Cross-Sectional Study

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Abstract:

Background. The aim of this study was to evaluate the prevalence of vitamin D deficiency in pregnant women to investigate the relationship between vitamin D level and thyroid function. **Methods.** In this cross-sectional descriptive study, a total number of 66 patients during the three trimesters of pregnancy were investigated; 22 pregnant women were studied in each trimester of pregnancy. We evaluated thyroid function tests and thyroid autoantibodies (TPOAb and TGAb), as well as the serum level of 25OHD, to determine the relationship between vitamin D level and autoimmune or non-autoimmune thyroid disease in pregnancy. **Results.** Pearson's correlation in all subjects showed that vitamin D levels did not have a significant relationship with maternal age. Only in the third trimester, there was a significant difference in maternal age based on their vitamin D status. There was no significant difference between the trimesters of pregnancy and vitamin D status (). Also, there were no significant differences between serum levels of vitamin D within three trimesters. Examination of thyroid function tests during pregnancy in relation to vitamin D showed that there was no significant Spearman's correlation between thyroid function status and serum vitamin D level (). There was no significant difference in the mean level of serum 25OH vitamin D in each subgroup of thyroid status (). Regarding the pregnancy outcomes, two newborns were admitted to NICU, meconium aspiration was in one case, and IUFD in another case led to pregnancy termination. These four cases were related to the maternal history of hypothyroidism. **Conclusion.** There was no significant relationship between vitamin D and pregnancy trimester. The serum level of vitamin D had no particular effect on the outcome of pregnancy and the thyroid gland function.