Assessment of Serum Vitamin D level in 3rd Trimester Primigravidas and its association with Education, Economic Status and Body Mass Index

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ABSTRACT

Maternal vitamin D deficiency (VDD) during pregnancy has numerous health implications in both the mothers and their newborns. Therefore, it is important to maintain vitamin D (VIT D) levels in pregnant women to prevent VDD. Even in Pakistan, despite abundant sun exposure, VDD is most common during pregnancy.To assess serum VIT D levels in 3rd trimester primigravida females and correlation of VIT D with different risk factors, (education, economic status and body mass index (BMI). It is a Cross sectional study. Duration of study was April 17th to September 17th. Total fifty 3rd trimester primigravida women were included in this study. Based on serum VIT D levels, pregnant women were categorized as: normal (> 30ng/ml), insufficient (20-30 ng/ml) and deficient (< 20ng/ml). Serum VIT D levels were measured by fully-auto Chemiluminescence immunoassay analyzer (CLIA) Maglumi 1000. Questionnaires or performas were used to record data related to BMI, sun exposure and educational level. 50 third trimester primigravida females were included in this study. After analyzing serum VIT D levels by CLIA, we found that 39 (78%) women were vitamin D deficient, 5 (10%) vitamin D insufficient and 6 (12%) had normal VIT D levels. VDD is quite common in 3rd trimester of pregnancy. Different risk factors e.g. BMI, education and economic status also influence VIT D levels. A significant association was observed between VDD and these risk factors i.e. for BMI (chi-square = 27.838; $p < 0.001$); for education (chi-square = 37.180; $p < 0.001$); and for economic status (chi-square = 12.518; $p = 0.002$).