

ASSESSMENT OF MATERNAL VITAMIN D STATUS IN GESTATIONAL DIABETES MELLITUS

ABSTRACT

Background : Gestational Diabetes Mellitus (GDM) is defined as carbohydrate intolerance of variable severity with onset or first recognition during pregnancy. GDM is considered to be a major public health concern as women diagnosed having GDM are at higher risk of developing diabetes mellitus in future. Recently it has been discovered that vitamin D plays a major role in glucose homeostasis. Studies have also reported that vitamin D deficiency may increase the risk of GDM. **Aim** :To assess the maternal vitamin D status in women with GDM and to compare the levels of vitamin D in women with GDM and normal pregnancy and also to find correlation between blood sugar levels and vitamin D levels in GDM. **Materials & Methods** :A total of 100 pregnant women during 24 to 28 weeks of pregnancy between the age group of 20 to 35 years and BMI of 18.5 to 29.99 kg/m² were selected. Fifty women diagnosed having GDM by 75 gm OGTT with the blood sugar levels of ≥ 140 mg/dl after 2 hours of oral glucose according to WHO criteria were taken as GDM group and 50 women with normal OGTT values as control group . After recording the history, clinical examination was done to confirm the weeks of pregnancy . Blood sample was collected under strict aseptic precaution to estimate total serum 25(OH)D levels. Serum 25(OH)D levels were estimated by fully automated chemi luminescence immunoassay (CLIA). The results were analyzed by Fischer's chi square test and Student's 't' test. A p value of <0.05 is considered significant. **Results**: The mean serum vitamin D level was significantly decreased in women with GDM (11.78 ± 7.86 ng/ml) compared to normal pregnancy (31.48 ± 5.01 ng/ml) with p value <0.0001 and is found to be significant. Vitamin D levels were also negatively correlated with the age and blood sugar levels in the GDM group. **Conclusion**: Vitamin D levels were found to be lower in women with GDM as compared to women with normal pregnancy. As the vitamin D level decreases, the blood sugar level increases in women with GDM. So, vitamin D deficiency may be one of the modifiable risk factor for GDM and so necessary steps should be taken for prevention of vitamin D deficiency.

Keywords: Gestational Diabetes Mellitus, Vitamin D, Oral Glucose Tolerance Test, Chemi luminescence Immunoassay