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Maternal Serum Vitamin D Levels in the Third Trimester of Pregnancy

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Abstract: Aim: To measure serum vitamin D levels of pregnant women in the last trimester and to determine factors affecting serum levels. Methods: Seventy-eight pregnant women, 19-39 years old and having their third trimester between March and May 2000, were enrolled. Serum Ca, P and alkaline phosphatase and 25-hydroxyvitamin D₃ levels were measured in venous blood samples during the third trimester. Maternal age, education, socioeconomic status, number of gravida, nutrition, dressing habits and daily exposure time to sunlight were determined and their correlation with serum vitamin D levels were analyzed statistically. Results: The mean age of mothers was 26.1 ± 5.1 years. The mean serum 25-hydroxyvitamin D₃ level of the mothers was 17.5 ± 10.3 nmol/L and 94.8% of the mothers had a 25-hydroxyvitamin D₃ level below 40 nmol/L (below 25 nmol/L in 79.5%). The risk factors associated with low maternal 25(OH)D were low educational level, insufficient intake of vitamin D from the diet and 'covered' dressing habits. No statistical significance was found between serum 25-hydroxyvitamin D₃ levels and maternal age, socioeconomic status, daily exposure time to sunlight and parity. Conclusions: Severe maternal vitamin D deficiency remains a commonly seen problem in Turkey. Pregnant women should be encouraged to expose themselves to sunlight and take vitamin D supplements. Fortification of certain foods with vitamin D will be a practical way of preventing maternal vitamin D deficiency and rickets in infants.

Key Words: Vitamin D supplementation, infancy, pregnancy

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