

EFFECT OF MATERNAL VITAMIN D LEVELS ON ANTHROPOMETRIC MEASURES IN INFANTS

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ABSTRACT

Many studies from the Asian region have shown the existence of vitamin D deficiency among pregnant and lactating mothers despite having abundant sunlight. There are no data available in Sri Lanka on maternal vitamin D deficiency and vitamin D supplementation is not provided in state run antenatal clinics. Thus, it is important to investigate maternal vitamin D status and its impact on anthropometric parameters of the offspring. Sixty one mothers who did not receive vitamin D supplementation were recruited. Vitamin D levels were measured using mini VIDAS vitamin D total kits. Birth weight, length and head circumference (HC) of the babies were measured using a non-stretchable tape at birth and at 4-6 weeks of age. Eleven babies did not come for 4-6 week review. Data were analysed using SPSS software. The mean weight, length and HC of babies at birth were 3.03 ± 0.49 kg 51.9 ± 8.0 cm and 32.6 ± 4.9 cm and at 4-6 weeks 4.1 ± 0.79 kg, 55.6 ± 5.0 cm and 36.6 ± 1.3 cm respectively. Mean vitamin D level during 3rd trimester of pregnancy was 17.3 ± 6.5 ng/mL. Vitamin D deficiency (<20 ng/mL) was found in 70% of mothers. There was no correlation between maternal vitamin D levels and length, weight or HC of both at birth and 4-6 weeks of age. A high rate of vitamin D deficiency was observed among women who did not receive supplementation. However, deficiency did not show an impact on the HC, length and weight. Therefore findings do not support use of vitamin D supplementation to improve anthropometry of the offspring.

Keywords: Vitamin D, Infant Anthropometric Measures