

## VITAMIN D STATUS OF A COHORT OF BREAST FEEDING MOTHERS AND THEIR OFFSPRING IN SRI LANKA- A PRELIMINARY STUDY

Anusha K., Liyanage G.S.H. and Hettiaratchi U.P.K.\*

Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka.  
usha@sjp.ac.lk

Studies conducted in Southeast Asian region have shown that vitamin D deficiency is seen among all age groups. Vitamin D deficiency exists especially among breast feeding mothers due to increased requirement. This is true for even in regions with abundant sunlight. However, to the best of our knowledge there is no evidence showing vitamin D status of breast feeding mothers and their offspring in Sri Lanka. Thus, aim of this study was to assess adequacy of vitamin D among a selected population of breast feeding mothers and their infants. Mothers who are attending well baby clinic of Colombo South Teaching Hospital (CSTH) were recruited. Although they have been prescribed 300 mg of calcium lactate throughout pregnancy and breastfeeding 3% haven't complied. Blood samples were collected from mothers and newborn babies at one month of age for Vitamin 25(OH)D, calcium, phosphate and alkaline phosphatase (ALP). Data were analyzed using SPSS version 15., Majority (98.7%) of infants were exclusively breast fed. Mean $\pm$ SD vitamin D, calcium, phosphate and ALP of mothers were 19.7 $\pm$ 7.0 ng/mL, 2.2 $\pm$ 0.1 mmol/L, 1.3 $\pm$ 0.2 mmol/L and 121.5 $\pm$ 26.9 IU/L respectively. Mean $\pm$ SD vitamin D, calcium, phosphate and ALP of infants were 11.0 $\pm$ 5.3 ng/mL, 2.5 $\pm$ 0.1 mmol/L, 2.1 $\pm$ 0.2 mmol/L and 411.5 $\pm$ 109.8 IU/L respectively. Vitamin D deficiency (<20ng/mL) among mothers and infants were 68% and 89.3% respectively. Only 8% of mothers and none of the infants had sufficient level (>30 ng/mL) of Vitamin D. However, corrected calcium levels were within the normal range in both mothers and babies. Deficient mothers had significantly higher proportion of deficient infants (p=0.019). In conclusion, high levels of vitamin D deficiency were found among breast feeding mothers and infants. Maternal deficiency increases risk of neonatal vitamin D deficiency. This study suggests that supplementation of mothers and infants with vitamin D are important.

**Keywords:** breast feeding, infants, vitamin D deficiency

**Acknowledgement:** financial assistance by university research grant (Grant No: ASP/01/RE/MED/2015/40)