

POOR VITAMIN D STATUS IN HEALTHY MOTHERS AND INFANTS: RESOLUTION IN NEONATES ON 200 IU DAILY

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Background and object: According to Institute of Medicine, serum 25-hydroxyvitamin D (S-25-OHD) < 30 nmol/L indicates high risk for rickets. Vitamin D status, as assessed by S-25-OHD, is often poor in normal healthy mothers and their infants in Northern latitudes. Routine supplementation (200 IU/d) of all newborns has recently commenced in Ireland. The object of this study was to assess S-25OHD status in maternal and term umbilical cord samples and at follow-up in those neonates with S-25OHD < 30 nmol/L.

Methods: S-25-OHD levels were evaluated from maternal (n=44) and umbilical cord samples (n=56) from term normal pregnancies in a consecutive sample of cases. Parents of infants with S-25-OHD < 30nmol/l (n=15) were invited to attend for repeat sampling.

Results: 115 samples included 44 maternal and 56 cord samples and 15 follow-up neonatal samples for infants with cord samples < 30nmol/l. The mean of cord blood 25OHD levels were significantly decreased compared with maternal levels. However the neonatal follow-up samples were significantly increased compared to maternal and cord levels in each subgroup (Table1).

Conclusions: We demonstrated a high prevalence of poor vitamin D status at the time birth in mothers and their infants that was rectified by low dose (200 IU/d) supplementation.

Groups	Maternal (n=44)	Cord (n=56)	Infant (n=15)	p value
Serum 25OHD				
All (n=115)	42.8+/-21.0	30.7+/-16.8	61.8+/-13.8	<0.001
No Follow-up (n=100)	47.3+/-22.4	33.0+/-16.1	NA	<0.001
Follow-up (n=15)	30.3+/-9.2	19.9+/-4.7	63.3+/-14.5	<0.001

[Table 1]