

## **Association of maternal and neonatal serum vitamin D levels with late onset neonatal sepsis in neonates**

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**Background:** The role of vitamin D in neonatal late onset sepsis, especially in preterm gestation, remains to be confirmed.

**Objective:** To study the association of maternal and neonatal serum vitamin D levels with late onset neonatal sepsis in neonates.

**Methods:** This prospective observational study was conducted in out-born unit of department of pediatrics of Safdarjung Hospital, a tertiary care teaching hospital, from November 2018 to March 2020. 160 neonates with clinical sepsis or and culture proven sepsis were included in study group and 160 neonates without sepsis were enrolled as matched control (for gender & postnatal age), after informed consent. Vitamin D level (25 OH D) was assessed in neonates and their mothers in both groups.

**Results:** Neonatal 25 OH vitamin D level in study group ( $20.95 \pm 18.37$  ng/ml) was significantly lower than in control group ( $25.09 \pm 16.21$  ng/ml) ( $p < 0.001$ ). Mothers of septic neonates had significantly lower 25 OH vitamin D level ( $25 \pm 16.21$  ng/ml) than mothers of control group ( $29.86 \pm 14.13$  ng/ml) ( $p = 0.001$ ). A Markedly lower neonatal vitamin D level was detected in winters in both study group (13.57 ng/ml) and controls (20.81 ng/ml). 38 (23.8%) cases died due to sepsis. Mean vitamin D level of cases was 13.93 ng/ml which was significantly lower than discharged septic neonates (23.31 ng/ml).

**Conclusion:** Neonates with vitamin D deficiency/insufficiency are at higher risk for developing late onset sepsis. Lower vitamin D levels in mothers is also associated with increased risk of late onset sepsis in neonates.

### **Biography**

Anju Yadav is working at Safdarjung Hospital, India