

Vitamin D deficiency in preterm babies tied to bronchopulmonary dysplasia risk: Study

Medical Dialogues Editorial Team.

Vitamin D insufficiency at 1 month of age is connected with bronchopulmonary dysplasia (BPD) in preterm newborns, according to an article published in the journal *Medicine*. This study was conducted by a team of researchers led by Shin Yun Byun on 3rd December 2021.

Vitamin D insufficiency is frequent in preterm newborns and raises the risk of neonatal morbidity. The purpose of this study was to examine the relationship between vitamin D levels and newborn morbidities at 1 month of age following 4 weeks of vitamin D supplementation.

This retrospective analysis included preterm children delivered in our hospital between January 2018 and December 2019 with a birth weight of 1500 g or a gestational age of 32 weeks. According to our protocol, they received 400 IU of oral vitamin D supplementation after delivery. The newborns were subsequently separated into two groups based on their blood vitamin D levels at one month of age: adequate (20 ng/mL) and insufficient (20 ng/mL).

The key findings of this study are as follow:

1. There were 49 and 41 patients in the vitamin D deficient and adequate groups, respectively.
2. The average gestational age and weight at birth. GHT levels in the vitamin D deficiency group were 29.1 2.1 weeks and 1216.1 308.1 g, respectively, compared to 30.0 1.7 weeks and 1387.6 350.8 g in the adequate group.
3. Except for bronchopulmonary dysplasia (BPD), which occurred substantially more frequently in the vitamin D-deficient group (odds ratio 2.21), no significant changes in demographic or clinical outcomes were identified between the two groups.

4. Vitamin D insufficiency during pregnancy is linked to decreased placental growth and weight, raising the possibility of premature delivery, which can lead to RDS and BPD.

In conclusion, according to the findings of this study, vitamin D insufficiency at 1 month of age is connected with a greater prevalence of BPD. As a result, detecting vitamin D deficiency and supplementing with vitamin D before 1 month of age is critical for preventing BPD in preterm newborns. To clarify the role of vitamin D insufficiency in BPD, more well-designed prospective trials with bigger case numbers are needed, as are guidelines for vitamin D supplementation for BPD prevention.

Reference:

Byun, Shin Yun MD, PhDa; Bae, Mi Hye MD^b; Lee, Na Rae MD^a; Han, YoungMi MD, PhD^a; Park, KyungHee MD, PhD^{b,c,*} Association between vitamin D deficiency at one month of age and bronchopulmonary dysplasia, *Medicine*: December 03, 2021 - Volume 100 - Issue 48 - p e27966 [doi:10.1097/MD.00000000000027966](https://doi.org/10.1097/MD.00000000000027966)