عنوان مقاله:

Comparison of 25- Hydroxy Vitamin D Levels in Premature Infants with and without Respiratory Distress

محل انتشار:

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خلاصه مقاله:

Background: The 25-hydroxyvitamin D3(25-OH D3)deficiency is a common problem worldwide, and it is aprevalent incidence in neonates. Different studies investigated the relationship of vitamin D deficiency with neonatal mortality and morbidity. This study aimed to evaluate the relationship between vitamin D deficiency and respiratory distress in preterm neonates.Methods: A prospective cohort study was conducted in Alzahra Hospital affiliated to Isfahan University of Medical Sciences, Isfahan, Iran. In total, 160 preterm neonates with> 1000 g birth weight were evaluated for the manifestation of respiratory distress during the first 6 h of life. The neonates were divided into two groups of A (n=80) with respiratory symptoms and B (n=80) without respiratory symptoms. The level of 25-OH D3 was measured in the first h of the neonate s life. All neonates were followed to reach 36 weeks of gestational age or 28th day of life. Subsequently, the two groups were compared in terms of vitamin D levels. There was a relationship between vitamin D deficiency and respiratory morbidities in group A.Results: The mean vitamin D level was obtained at 27.42±11.25 ng/mL, and it was categorized into adequate level (n=53, 33.1%), inadequate level (n=62,38.8%), and vitamin D deficiency (n=45, 28.1%).According to the results, vitamin D level correlated significantly with birth weight and gestational age (P<0.05). Moreover, respiratory distress correlated with birth weight, gestational age, and the use of corticosteroids during pregnancy (P<0.001). The mean vitamin D level in group A (with respiratory distress syndrome [RDS]) was significantly lower than that in group B (without RDS, P<0.001).Furthermore, vitamin Dcorrelated with RDS, a need for intubation surfactant extubation, and duration of continuous positive airway pressure (P<0.05).Conclusion: Neonates with a low level of vitamin D are prone to manifest respiratory distress, and vitamin D deficiency is a risk factor for presenting RDS.

کلمات کلیدی:

preterm neonate, respiratory distress, respiratory distress syndrome