

Immune system in the newborn and why supplement with vitamin D3

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Abstract

In recent years there has been an increase in the survival of critically ill newborns thanks to advances in the area of Neonatology, bringing with it the development of multiple pathologies, with the consequent increase in the risk of presenting perinatal infections, especially in the group corresponding to prematurity, the incidence and severity of infections in the newborn being well documented, which is largely due to immaturity in both the cellular and humoral response. Reporting a limited functional capacity of all components, in addition to observing quantitative and qualitative deficiencies of the cellular components of the immune system, so it is important to develop safe strategies such as supplementation with nutrients, which allow improving the immune response in the body, of these children.

Two decades ago, it was documented that Vitamin D3 in addition to having a regulatory function in the homeostasis of calcium and phosphorus has a relevant role in the modulation of the immune response, Its action is exerted through the union with its nuclear receptor and intervenes activating transcription factors The Receptor is present in cells of different tissues and of the immune system, such as dendritic cells, macrophages and T lymphocytes.

It is known that: the immune system can be divided into two defense mechanisms or responses: the innate response and the acquired one. The innate response is made up of cellular and humoral components and does not improve after exposure to a specific antigen. Innate immunity includes skin and external defense mechanisms, mucous membranes, ciliated epithelia, cellular elements (eosinophils, basophils, neutrophils, platelets, and monocytes), complement, defensins, cytokines, clotting factors, and acute phase proteins, such as C-reactive protein and fibronectin. The objective of this review being: to describe how Vitamine D3 can positively influence the newborn's immune system, its behavior in the systemic inflammatory response (literature review), in addition to recommended doses and initiation stage.

Biography:

Dr. Maria Bertha Romo Almanza, completed her postgraduate degree in Neonatology at the National Institute of Perinatology, in Mexico City, completing this specialty at 30 years edge (2009), previously she has a specialty in Pediatrics at the Children's Hospital in Saltillo Coahuila, currently she is Chief

in charge in Neonatology Intensive Care Unit at the Guadalupe Victoria Maternity and Child Hospital of Atizapan de Zaragoza since 5 years ago . Previously she was Chief in charge in NICU at Star Médica Luna Parc Cuautitlan Izcalli , where she continues his private practice. Instructor Neonatal CPR, member from ANEM, APROLAM She has published articles in international Journals.

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