VITAMIN D LEVELS AND ITS ASSOCIATION WITH OXIDATIVE STRESS MARKERS AND INFLAMMATORY PROCESS IN PATIENTS WITH CYSTIC FIBROSIS

Dayanna Queiroz¹, Alexandre Silva ², Celso C S Junior Junior ², Darlene Persuh², Alcides Diniz ³, Rafaela Lima ², Maria Paula Paiva ², Constantino Cartaxo ², Patricia Bezerra ³, Maria da Conceição Goncalves ¹, and Mateus Ribeiro ²

¹Universidade Federal da Paraíba

²Universidade Federal da Paraíba

³Universidade Federal de Pernambuco

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Abstract

Introduction: Cystic Fibrosis is a disease that causes inflammation, oxidative stress and metabolic changes that lead to nutrient deficiency, such as vitamin D. On the other hand, it is suggested that vitamin D has anti-inflammatory and antioxidant action. **Objective:** To evaluate the prevalence of hypovitaminosis D and the association between serum 25 hydroxyvitamin D levels with markers of oxidative stress and inflammation in patients with cystic fibrosis. **Method:** Cross-sectional study carried out with 48 patients with Cystic Fibrosis in children, adolescents and adults in the Northeast region/Brazil. Blood collection was performed for analysis of 25-hydroxyvitamin D, calcium, parathyroid hormone, inflammatory process (C-reactive protein -PCR and alpha-1-acid glycoprotein-A1-A1GPA) and oxidative stress (malondialdehyde-MDA and total antioxidant capacity-CAOT). Statistical analysis was performed using the “Statistical Package for the Social Sciences”, adopting a significance level of $p < 0.05$. **Results:** Insufficiency/deficiency of D was found in 64.6% of patients. After multiple linear regression analysis, MDA showed an inverse association with blood values of 25-Hydroxyvitamin D ($p < 0.05$) **Results:** Insufficiency/deficiency of D was found in 64.6% of patients. After multiple linear regression analysis, MDA showed an inverse association with blood values of 25-Hydroxyvitamin D ($p < 0.05$) conditioned on the presence of inflammatory process markers. When only oxidative stress is evaluated, this association disappears. **Conclusion:** In conclusion, there was a high prevalence of hypovitaminosis D, with 25 (OHD) levels associated with greater oxidative stress when combined with inflammatory markers. Improved vitamin D levels may be an alternative to reduce the damage caused by excess oxidative stress and inflammation in CF patients.

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