

25-HYDROXYVITAMIN D (25OH)D IN HOSPITALIZED CHILDREN - A 2.5-YEAR SCREENING STUDY [1]

Hartmann Piotr^{1,2}, Chwiećko Jakub², Jackowska Teresa^{1,2}, Renata Kapuscinska^{2,3}

¹ Department of Pediatrics, Centre of Postgraduate Medical Education, Marymoncka 99/103, 01-813 Warsaw, Poland, e-mail: tjackowska@cmkp.edu.pl

² Department of Pediatrics, Bielański Hospital, Cegłowska 80, 01-809 Warsaw, Poland, e-mail: j.chwiecko@gmail.com

³ Department of Endocrinology, Centre of Postgraduate Medical Education, Warsaw, Poland

[1]Supported by the CPME in Warsaw grant number 501-1-20-19-16

Background: Many reports suggest that a decreased level of vitamin D3 promotes an increased incidence of respiratory diseases. There are also reports suggesting that the infection itself results in a reduction of vitamin D3 concentration.

Aim: To determine the 25-Hydroxyvitamin D (25OH)D, as the major circulating form of vitamin D, in children admitted to the hospital for various reasons.

Material and methods: The study involved 2310 children (1111 females, 1199 males), aged 1 month to 18 years. There were 45.6% (1054/2310) children with Respiratory Tract Infections (RTI), 9.8% (227/2310) with Urinary Tract Infections (UTI), 22.8% (526/2310) with gastrointestinal infections (GI) and 21.8% (503/2310) without infections (WI). 25(OH)D plasma concentrations were determined using the Liaison XL system. The value of 30-50ng/ml was taken as an optimal concentration.

Results: In the whole group the mean plasma concentration 25(OH)D was 28.3ng/ml (3.9ng/ml-93.0ng/ml). For the RTI group it was 30.2ng/ml, the UTI-30.7ng/ml, the GI-28.4ng/ml and the WI-24.3ng/ml, accordingly. The children with GI and WI had a significantly lower vitamin D3 concentration than the RTI and UTI group.

Conclusions: RTI infections do not reduce the concentrations of vitamin D3.