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**THE ROLE OF 25-OH-VITAMIN D IN BONE MINERALIZATION IN CHILDREN WITH JUVENILE
IDIOPATHIC ARTHRITIS**
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INTRODUCTION

25-OH-vitamin D is considered a pleiotropic steroid hormone with multiple biological effects with a major role in regulating calcium homeostasis and bone turnover, with antiproliferative, differentiation, antibacterial, immunomodulatory and anti-inflammatory properties in the body.

SCOPE

Analysis of the status of bone metabolism through the perspective of assessing the serum level of total 25-OH-vitamin D in children with juvenile idiopathic arthritis (JIA).

METHODS

Total 25-OH-vitamin D was assessed in blood serum, quantitative test, morning, a-fasting, being analyzed by the immunoenzymatic method, using the 56 Abbott Architect c8000 equipment, the measurement unit being ng/mL. The study involved 30 children with JIA, who received treatment with GCS depending on sex, clinical form of the disease and duration of the disease.

CONCLUSION

The multilateral analysis of the obtained material determined low values of 25-OH-vitamin D in children with JIA, regardless of the clinical form and cortisone treatment, a fact that requires the assessment of the serum level of total vitamin D from the onset of the disease, with the evaluation dynamics, and supplementing with vitamin D3 corresponding to the deficiency, in order to obtain an immunomodulatory effect and epigenetic benefit, minimizing bone fragility and alleviating the immune hyperactivation process.

RESULTS

The group of girls showed values of total 25-OH-vitamin D equal to 14.53±5.87 ng/ml and in the group of boys – 14.62±5.61 ng/ml, with variation intervals 1, 03-28.50. Depending on the clinical form of the disease, the average values varied between 12.44 and 17.45 ng/ml, figures that denote a deficiency of vitamin D in the body. Children with the polyarticular form of JIA presented lower values of the 25-OH-vit titer. Total D – 13.47±4.51 ng/ml, compared to those with JIA oligoarticular form – 15.34±6.31 ng/ml, a higher titer presenting children with JIA systemic form – 17.45±6, 52 ng/ml, p>0.05. 25% of children with polyarticular JIA and 12.5% of children with systemic JIA had vit. D totals suggestive of a severe deficit. At the same time, 55% of the children in the general study group (n=30) presented total vitamin D values suggestive of a moderate deficiency: 75% children with polyarticular JIA, 80% children with oligoarticular JIA and 37.5% with systemic JIA (p>0.05). Only 20.7% of the children in the general study group (n=30) showed an optimal level of total vitamin D, of which 50% were children with the systemic form and 20% were children with the oligoarticular form of the disease.

Loturile de studiu	Deficit sever: <10 ng/ml (nr. copii, %)	Deficit moderat: 10-19 ng/ml (nr. copii, %)	Nivel optim: 20-50 ng/ml (nr. copii, %)
AJI sistemică	1 (12,5%)	3 (37,5%)	4 (50%)
AJI poliarticulară	2 (25%)	6 (75%)	0 (0%)
AJI oligoarticulară	0 (0%)	4 (80%)	1 (20%)
Lotul general	7 (24,1%)	16 (55,2%)	6 (20,7%)