

عنوان مقاله:

Cut off Value for Parathormone Level in Children with Vitamin D Deficiency

محل انتشار:

مجله بین المللی کودکان, دوره 10, شماره 11 (سال: 1401)

تعداد صفحات اصل مقاله: 9

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خلاصه مقاله:

Background: When serum level of  $25$ -hydroxy vitamin D [ $25(\text{OH}) \text{D}$ ] decreases, intact Parathormone (iPTH) level increases compensatory. This study aimed to determine the cut off value for iPTH level in  $2$ - $14$ -year-old children with vitamin D (VD) deficiency. Methods: This cross-sectional study was performed on  $153$  children aged  $2$ - $14$  years old who referred to the endocrinology clinic of Amirkola Children's Hospital for growth assessment. Census sampling was conducted from January  $2016$  to June  $2017$  according to the eligibility criteria including height and weight above the percentile of  $3\%$  of growth charts and normal serum of calcium level ( $>10.5 \text{ mg/dl}$ ). Laboratory parameters such as serum calcium,  $25(\text{OH}) \text{D}$  and iPTH levels were assessed. The children were divided into three groups based on serum levels of  $25(\text{OH}) \text{D}$  as mild, moderate and severe VD deficiency. The Receiver Operating Characteristic (ROC) curve was used to analyze the cut-off point of iPTH and  $25(\text{OH}) \text{D}$ .  $P\text{-Value} < 0.05$  was considered significant. Results: The mean VD and iPTH levels in children were  $11.8 \pm 4.59 \text{ ng/ml}$  and  $28.3 \pm 13.3 \text{ pg/ml}$ , respectively. At the iPTH serum level of  $23.5 \text{ pg/ml}$ , with a sensitivity of  $66.1\%$ , there was a possibility of moderate to severe VD deficiency. In the severe deficiency group, at the iPTH serum level of  $23.5 \text{ pg/ml}$  and above, with a sensitivity of  $78.9\%$ , there was a possibility of severe VD deficiency. The cut-off point of  $25(\text{OH}) \text{D}$  and iPTH, at the serum VD level  $\leq 10 \text{ ng/ml}$  were determined. Conclusions: The results of the present study showed that the cut-off value for iPTH in children with VD deficiency is serum level of  $25\text{OHD} \leq 10 \text{ ng/ml}$ .

کلمات کلیدی:

Children, Parathormone, Vitamin D deficiency

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