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## Determining the Dynamics of Cortisol Levels in Children with Juvenile Idiopathic Arthritis

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**Relevance.** Juvenile idiopathic arthritis is a chronic inflammatory disease of the joints with unclear etiology and complex, mainly autoimmune pathogenesis, characterized by symmetrical chronic arthritis, systemic damage to internal organs, leading to disability of sick children. In this regard, the problem of increasing the effectiveness of therapy for this disease is extremely relevant, both from the point of view of scientific and practical pediatrics. To improve the treatment of this disease, it is necessary to take into account the functional state of the adrenal cortex.

**Purpose of the work.** Study of the dynamics of cortisol levels in the blood of patients with juvenile idiopathic arthritis to optimize the therapy of this disease. Materials and methods of the study. The study included 26 patients with juvenile rheumatoid arthritis aged 5 to 14 years. The dynamics of the blood cortisol level was studied using the solid-phase enzyme immunoassay method and daily thermometry was performed.

**Study results.** It was found that out of 26 patients, 52.8% had the oligoarthritic variant. In 12 patients observed by us, a persistent variant of oligoarthrititis was noted, which was characterized by the fact that up to 4 joints were affected during the entire period of the disease. Progressive oligoarthrititis occurred in 7 patients examined and was characterized by an increase in the number of affected joints after 6 months of the disease. A study of the dynamics of the blood cortisol level shows that in the morning hours, fluctuations ranged from 148 to 539 nmol / l, in the afternoon, the blood cortisol levels decreased to 36 nmol / l. A close correlation was found between the daily thermometry values and the dynamics of the blood cortisol level. The data obtained allowed us to make adjustments to the chronotherapy of juvenile rheumatoid arthritis.

**Conclusions.** Thus, the study of the dynamics of the blood cortisol level in patients with juvenile idiopathic arthritis allowed us to identify the individual acrophase of the inflammatory process and increase the effectiveness of disease therapy.