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### CORRELATION OF CYTOKINE LEVELS IN CHILDREN WITH JUVENILE RHEUMATOID ARTHRITIS (JRA) AGED 7 TO 14 YEARS

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#### Relevance:

Juvenile rheumatoid arthritis (JRA) is one of the most common chronic inflammatory joint diseases in children, leading to significant immune system changes. Cytokines play a key role in the pathogenesis of JRA, and their levels may serve as prognostic markers for disease activity.

#### Objective:

To assess the levels of IL-8, IL-17A, and interferon- $\gamma$  (IFN $\gamma$ ) in children with JRA aged 7 to 14 years, with both seropositive and seronegative forms of the disease.

#### Materials and Methods:

Ninety-three children with JRA were divided into two age groups. Cytokine levels were quantitatively assessed using enzyme-linked immunosorbent assay (ELISA).

#### Results and Discussion:

IL-8 levels were significantly elevated in children with the seropositive form of JRA ( $20,9\pm 3,12$  pg/mL), which is 1,85 times higher than in the control group. IL-17A was also significantly elevated in the seropositive group ( $30,25\pm 4,61$  pg/mL), 2,88 times higher than in the control group. Both groups exhibited a significant reduction in IFN $\gamma$  production, particularly in the seropositive group, suggesting impaired antiviral defense and activation of inflammatory pathways.

#### Conclusion:

The elevated levels of pro-inflammatory cytokines IL-8 and IL-17A, coupled with reduced IFN $\gamma$  levels, suggest that children with JRA, especially those with the seropositive form, experience heightened inflammatory responses. These findings highlight the importance of cytokine profiling for understanding disease severity and guiding therapeutic interventions.



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