

## SERUM COPPER IN JUVENILE RHEUMATOID ARTHRITIS

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Juvenile Rheumatoid Arthritis (JRA) is a chronic inflammatory disease, which may result in an increase of serum copper. There are a few studies referring to children and adolescents with JRA. The objective of this work is to evaluate serum copper in JRA patients and relate this to the characteristics of the disease and to the use of corticosteroids. 46 patients with JRA were assessed. They were diagnosed according to the American College of Rheumatology; 23 boys, with a mean of age of 10 years and 2 months; 26 of these had active disease, 9 with pauciarticular evolutive type (PAA); 13 with polyarticular (POA) and 4 with systemic one (SIA). Of the patients in remission, 11 made up the pauciarticular group (PAR) and 9 polyarticular (POR). These patients were regrouped for analysis of the following variables: disease activity and remission, age at onset < and >5 years old, period of evolution < and >3 years, POA < and >6 inflamed joints and JRA with and without actual use of corticosteroids. 24 healthy children and adolescents were assessed; 14 girls, with mean age of age 9 years and 6 months which constituted the control group. The biochemical determinations were carried out by atomic absorption spectrophotometry. For statistical analysis we used the Kruskal-Wallis and Mann-Whitney tests and differences were considered significant if  $\alpha$  values were found to be less than or equal to 5% ( $\alpha < 0.05$ ). The results showed that serum copper increased in POA group, mainly when more than 6 joints were involved, during active periods, in JRA < 3 years of evolution and in JRA with actual use of corticosteroids. We wish to emphasize that the majority of patients with JRA < 3 years of evolution show active disease, as do all patients using corticosteroids, so that, it is not possible to attribute the increase of serum copper to these variables. We concluded that disease activity and the number of inflamed joints are directly related to the increase of serum copper.