

# Analiza wybranych parametrów reakcji ostrej fazy w przebiegu podgłośniowego zapalenia krtani w zależności od wieku dziecka

Evaluation of chosen parameters of acute-phase reaction in children during pseudocroup according to their age

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## Summary

**Introduction.** Acute subglottic laryngitis (pseudocroup) usually occurs in infants and small children between 1 and 3 years of age. Due to the viral etiology there are autumn-winter and winter-spring peaks of frequency of this disease observed. Acute-phase proteins are a group of proteins whose concentration in the serum changes following variety of injuries such as bacterial, viral or parasitic infection. These changes are one of the features of an early, non-specific and highly complex reaction of the organism called acute-phase response. The purpose of this reaction is to restore home-ostasis. Almost all acute-phase proteins are glycoproteins and changes in their microheterogeneity (glycosylation profile: structure of side sugar chains) were also reported during different inflammatory conditions. **Material and methods.** 51 children admitted to the Pediatric ENT Dept in Poznan because of an incident of pseudocroup were divided into 3 groups according to their age: I (0-3 years of age), II (between 3 and 5 years old) and III (over 5 years old). In all children levels of selected acute-phase proteins such as  $\alpha$ 1-antitrypsin [AT],  $\alpha$ 1-antichymotrypsin [ACT],  $\alpha$ 1-acid glycoprotein [AGP], ceruloplasmin [Cp], transferrin [Tf] and haptoglobin [Hp] were measured in three time points: at the beginning of the disease, after treatment and 3 weeks later during control examination. In all sera samples also glycosylation profile of AGP, ACT and Tf was performed. **Results.** Analysis of AGP glycosylation profile revealed the highest levels of microheterogeneity variants: W2 and W3 in the group of children over 5 years old. Also AGP-RC was significantly increased in this group. The Tf variant T4 reached the highest level in children between 3 and 5 years of age. In all age groups increased level of Hp was observed during treatment and decreased 3 weeks later during control examination. **Conclusions.** Acute-phase reaction is the most intensive in the youngest children. Analysis of glycosylation profile revealed acute inflammatory process during episode of pseudocroup in the oldest children (over 5 years old) and chronic inflammation in group of the youngest children.

