

# THE CONTENT OF PRO- AND ANTI-INFLAMMATORY CYTOKINES IN BLOOD SERUM OF CHILDREN WITH RECURRENT EPISODES OF ACUTE OBSTRUCTIVE BRONCHITIS

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## Abstract

*The aim of the study:* to determine the content of IL-1 $\beta$ , IL-4, IFN- $\gamma$  in the blood serum of children with recurrent episodes of acute obstructive bronchitis to evaluate the cytokine profile.

*Materials and methods:* 50 children in the main group with repeated episodes of acute obstructive bronchitis (I-AOB) and 40 children with acute bronchitis (AB) as control group (II-AB) were examined. The results of laboratory tests were compared with data from 30 healthy children (III-HC). Patients underwent general clinical, laboratory and instrumental examinations. Oxygen saturation level was taken. The levels of IL-1 $\beta$ , IL-4, IFN- $\gamma$  were measured using immune enzyme analysis according to test manufacturer's manual.

*Results:* in children with repeated episodes of AOB, the concentration of serum of IL-1 $\beta$  was significantly higher than in children with AB and significantly differed from that of children in the control group. IL-4 was significantly lower in children with repeated episodes of AOB, than in children with AB and healthy children. It has been shown that IFN- $\gamma$  was significantly lower in children with repeated episodes of AOB and AB compared with healthy children. There were significant difference of this index between I-AOB and II-AB groups. It has been established that in children with repeated episodes of AOB, the imbalance of the cytokine profile was more pronounced than in children with AB, indicating a more significant violation of the regulatory function of the immune system in AOB.

**Key words:** children, repeated episodes of acute obstructive bronchitis, acute bronchitis, cytokines, IL-1 $\beta$ , IL-4, IFN- $\gamma$ .

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