

# **CYTOKINE PROFILE IN PATIENTS WITH ACUTE EXACERBATION OF COPD IN DIFFERENT STAGES OF DISEASE**

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## *Summary*

Sixty four patients with acute exacerbation of I-IV stages COPD were examined to determine the cytokine profile. The content of tumor necrosis factor alpha (TNF $\alpha$ ), interleukin-8 (IL-8) and interleukin-4 (IL-4) in serum have been measured. The levels of TNF $\alpha$ , IL-8 and neutrophils in bronchoalveolar lavage fluid (BALF) were determined in 20 patients. The content of cytokines was examined using enzyme immunoassay, neutrophils count — using the method of BALF smear microscopy. The level of cytokine production correlated with the stage of the disease. The elevated TNF $\alpha$  and IL-8 levels were detected only in BALF in first stage of COPD. Increased production of cytokines was associated with the progression of the disease (II–III stage). In stage IV there was a significant decrease of serum TNF $\alpha$  and IL-8 levels. An increase of neutrophil count and IL-8 concentration in BALF confirmed a correlation between the degree of inflammation in lungs and the severity of disease.