

CYTOKINE PROFILE IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE AND ASTHMA PATIENTS, RECOVERED FROM TUBERCULOSIS OR PNEUMONIA

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Abstract

Objective: to study cytokine profile in chronic obstructive pulmonary disease (COPD) and asthma (A) patients, recovered from tuberculosis or pneumonia.

Materials and methods. 62 patients with COPD and 32 patients with A were enrolled. An uncomplicated forms of pulmonary tuberculosis, without destructive lesions in the lungs (first or third clinical category of registered patients) and community acquired pneumonia associated with obstructive ventilation disturbances were confirmed in all of them. Determination of levels of pro-inflammatory interleukins IL-1 β , IL-6, TNF- α and anti-inflammatory IL-4 was performed using the "Vector-Best" test kits. The level of IL-2 was determined using "ELISA-Diaklon" test kits by ELISA. Evaluation of pro-inflammatory and anti-inflammatory interleukins was performed in serum and bronchoalveolar lavage fluid at the level of subsegmental bronchi.

Results. An interleukins imbalance was revealed in patients with COPD: decreased level of IL-1 β and IL-2, increased level of IL-6 and TNF- α , which was 4.5 times higher than in healthy volunteers. A significant reduction in IL-4 was also registered. In contrast, in A patients the level of IL-1 β and IL-2 exceeded those in healthy individuals. IL-6 was higher and TNF- α was lower than in COPD patients. The level of IL-4 in A patients was higher than in healthy donors and COPD patients.

Conclusion. These disturbances in the initial phase of inflammation were compensational. Whereas an increased IL-1 β level in COPD patients was an unfavorable sign of the disease progression.

Key words: chronic obstructive pulmonary disease, asthma, cytokines.

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