

# THE ROLE OF NON-SPECIFIC RESISTANCE DISTURBANCES IN THE COURSE OF COMMUNITY-ACQUIRED PNEUMONIA

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## Abstract

*Aim.* To study the processes of neutrophil and monocyte phagocytosis in patients with non-severe community-acquired pneumonia in the acute period of disease and after completion of the antibiotic therapy (early convalescence period).

*Materials and methods.* Immunological examination was performed in 81 patients with community-acquired pneumonia aged 21-68 years in acute period of illness (2nd day after hospitalization) and upon completion of antibiotic therapy. The following tests were performed: evaluation of neutrophils and monocytes (percentage of cells) phagocytic activity (latex absorbtion), the phagocytic number (average number of latex absorbed by the cell), spontaneous and stimulated nitroblue tetrazolium test (NBT-test), estimation of cytochemical coefficient (CCC) for lysosomal cationic proteins (LCP) and for myeloperoxidase (MPO) of neutrophils.

*Results.* In the acute period of disease the decrease of neutrophils phagocytic activity was detected which was combined with a reduction of NBT-test, especially induced, and neutrophil functional reserve, and with a decrease of CCC LCP and CCC MPO. Inhibition of monocytes phagocytic activity was more expressed than of neutrophils and reached  $30,6 \pm 0,87 \%$  (normal value —  $42,8 \pm 1,06 \%$ ).

After completion of treatment a significant improvement of studied parameters was not detected. On the contrary, in early convalescence period compared with the acute phase, the further significant reduction of neutrophils absorbtion properties was found, suggesting the risk of diseases recurrence.

*Conclusions.* The non-severe community-acquired pneumonia course is associated with a decrease of neutrophil and monocyte absorbing capacity, the inhibition of neutrophils bactericidal properties, especially oxygen-dependent mechanisms of bacteria elimination, which is more evident in cases with bronchial obstruction. The antibiotic therapy does not normalize these disturbances. This fact should be considered regarding possible risks of the relapse. The immunity correction therapy is recommended in recovery period.

**Key words:** community-acquired pneumonia, nonspecific resistance.

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