APOPTOSIS OF NEUTROPHILIC LEUKOCYTES AND IT'S ROLE IN PATHOGENESIS OF TUBERCULOSIS AND NON-SPECIFIC PULMONARY INFLAMMATION

I. F. Ilyinskaya, O. M. Rekalova, L. V. Arefyeva, O. V. Grytsenko, O. N. Zubriychuk

Summary

The issues of the pathogenesis role of neutrophilic leukocytes apoptosis, induced by extra- and intracellular pathogens, in pathogenesis of tuberculosis of tuberculosis and non-specific pulmonary inflammation were reviewed. Its protective character, directed on pathogen elimination and recovery of macroorganism's homeostasis, was demonstrated in COPD (chronic obstructive pulmonary disease) patients with lung inflammation caused by extracellular agents. But in lung inflammation, caused by intracellular agents, such as MBT, the induction of programmed death of infected neutrophils can be used as "Trojan horse" in order to hide from host immune mechanisms, which contributes to the further development of the pathological process. It was shown, that in COPD patients the neutrophilia took place in each third case, that was 2,5 times higher, than in TB patients. And to the contrary, the neutropenia occurred 3 times more often in patients with tuberculosis inflammation in lungs.

The pulmonary inflammation was accompanied by the valid increase of spontaneous neutrophils apoptosis intensity and MBT induced apoptosis intensity, more expressed in tuberculosis process. It was confirmed by more expressive apoptogenic influence of auto-serum of these patients. Thus, in pulmonary tuberculosis the changes in neutrophil programmed death have a greater pathological direction, than in COPD. This should be considered during complex immunological observation and therapeutic approach to these patients.