

# SPECTRUM AND ROLE OF INFECTIOUS AGENTS IN ACUTE ASTHMA EXACERBATION

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*Abstract*

Complications of bronchial asthma (BA) and the development of its exacerbation are caused by exposure to environmental factors. Respiratory infection as the leading trigger of asthma exacerbations lately attracts more attention. Bronchial obstruction and exacerbation of asthma are caused by variety of viral pathogens, and depend on the region of residence and time of year. Therefore, the determination of the spectrum of infectious agents during exacerbation of asthma in Ukraine (Kiev) is a topical issue of domestic pulmonology, which allows to choose adequate etiotropic treatment.

In the course of study modern virological techniques were used: simple / rapid tests based immunochromatographic assay (IHA), multiplex real time polymerase chain reaction (realtime-PCR) and bacteriological examination.

The results of our virological and microbiological studies have clearly demonstrated that in vast majority of patients with asthma the infectious exacerbation was triggered by viruses. In 60 (51.7%) of 116 patients an infectious exacerbation of asthma was caused by viruses in 21 (18.1%) — bacteria and in 10 (8.6%) patients — both viral and bacterial pathogens.

Bacteriological tests allowed to determine in etiologically significant titer: *H. influenzae* — in  $(38,1 \pm 10,6)$  % of cases, *S. pneumoniae* — in  $(38,1 \pm 10,6)$  %, *M. catarrhalis* — in  $(14,3 \pm 7,6)$  %, *E. coli* and *S. aureus* — in  $(0,9 \pm 0,9)$  % each.

The findings of the study are very important, both for the evaluation of the role of infectious agents in exacerbation of asthma, and for optimization of the diagnosis of infectious exacerbation of the disease, as well as for the choice of effective therapy.

**Key words:** bronchial asthma, infectious exacerbation, viruses, bacteria, spectrum.

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