# FEATURES OF UNCONTROLLED COURSE AND EXACERBATIONS OF THE BRONCHIAL ASTHMA IN THE POST-PANDEMIC COVID-19 PERIOD IN THE WARTIME CONDITIONS

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***Abstract.*** Currently, there is no data on the development of post-acute consequences of SARS-CoV-2 infection (PASC) on the background of post-traumatic stress disorder (PTSD) during the war and the features of its course in patients with bronchial asthma (BA) after the official declaration of the end of the COVID-19 pandemic in the conditions of wartime.

***The aim:*** to investigate the features of uncontrolled course and exacerbations of asthma in the post-COVID period among patients hospitalized in a pulmonology hospital after the official delaration of the end of the COVID-19 pandemic during wartime.

***Materials and methods.*** Clinical and functional indicators, laboratory results and data of the chest computed tomography (chest CT) in dynamics in 182 patients with post-COVID syndrome were analyzed. Group I consisted of 20 patients with exacerbation of asthma (4 of them (20 %) were military personnel), who were identified among 130 patients with post-COVID syndrome during the pandemic. Group II consisted of 20 patients with exacerbation of asthma (5 of them (25 %) were military personnel), who were identified among 52 patients after the official cancellation of the COVID-19 pandemic. All patients underwent a questionnaire, general clinical, functional, laboratory and radiological methods of investigation.

***Results.*** It was found that after the official declaration of the end of the COVID-19 pandemic, the proportion of patients with asthma exacerbations among patients hospitalized in a pulmonology hospital with post-COVID syndrome in the conditions of wartime increased two-hold. In patients with asthma who were on maintenance therapy with inhaled corticosteroids (ICS) in the acute period of the disease, a mild course of COVID-19 was observed, but in the post-COVID period an uncontrolled course of asthma occurred, which was mainly due to secondary infection, in particular reactivation of chronic Epstein-Barr virus (EBV) infection. This occurred both during the pandemic and after the official declaration of the end of the COVID-19 pandemic. Patients in group II had a significantly higher ($p < 0.05$) percentage of granulocytes in the blood and a significantly lower ($p < 0.05$) percentage of lymphocytes and eosinophils compared to patients in group I and indicating the development of immunosuppression. The percentage of monocytes in both groups was within normal limits and did not differ between groups. Patients in group II had a higher level of total IgE — in group I ($657.10 \pm 216.32$) IU/ml and in group II ($1260.81 \pm 206.92$) IU/ml, $p < 0.05$.

***Conclusions***. It has been established that the features of asthma exacerbations in the post-COVID period after the official declaration of the end of the COVID-19 pandemic in the conditions of wartime are: reactivation of chronic EBV infection with high virus replication in asthma patients in the upper and lower respiratory tract against the background of high levels of IgE in the blood without an increase in the level of eosinophils, lymphocytes and monocytes, more pronounced signs of fixed bronchial obstruction and obstruction of small bronchi compared to these indicators in patients with asthma exacerbation during the pandemic. It is necessary to conduct thorough laboratory and immunological studies in patients with uncontrolled course and exacerbation of asthma in the post-COVID period in the conditions of wartime and, if indicated, to recommend a consultation with an infectious disease specialist and immunologist.

***Key words:*** COVID-19, SARS-CoV-2, bronchial asthma, Epstein-Barr virus infection, immunosuppression, wartime.