CLINICAL AND PHARMACOECONOMIC ASPECTS OF TREATMENT OF PATIENTS WITH MILD COVID-19 AND THE PRESENCE OF RISK FACTORS FOR THE PROGRESSION OF THE DISEASE

O. K. Yakovenko[1], R. E. Sukhin[2], G. B. Kapitain[2], O. Ya. Dzyublik[2], V. A. Yanchik[2], N.V. Surtaeva[3]

[1] Volyn Regional Clinical Hospital, Lutsk, Ukraine

[2] State organization "Yanovsky National institute of phthisiology and pulmonology, National Academy of medical sciences of Ukraine", Kyiv, Ukraine

[3] Shupyk National University of Healthcare of Ukraine, Kyiv, Ukraine

Abstract. COVID-19 treatment issues are still a difficult problem worldwide because of huge economic losses of society as a result of the widespread disease, the peculiarity of its course and the development of complications.

The aim of the work is to study the clinical efficiency, safety and economic feasibility of the use of aminocaproic acid (ACA) in the treatment of patients with mild COVID-19 and the presence of modifying risk factors compared to nirmatrelvir/ritonavir and symptomatic therapy.

Materials and research methods. 96 patients with mild COVID-19 and the presence of factors of increased risk of progression of the disease to a severe form (old age; overweight; pregnancy; chronic kidney disease; diabetes; primary or secondary immunodeficiency; cardiovascular diseases; chronic lung diseases, etc.). Depending on the treatment regimen, all patients were divided into three groups. Patients of group 1 (n = 33) received ACA inhalation through a compressor inhaler (nebulizer), patients of the 2nd (n = 31) — antiviral therapy with combined drug nirmatrelvir /ritonavir, and patients of the 3rd (n = 32) — symptomatic inhalation Ektobris. The study analyzed the clinical condition, manifestations of certain symptoms of the disease, undesirable phenomena and quality of life of patients, as well as indicators of the cost of drug treatment. The effectiveness of treatment was evaluated by the clinical condition of the patient on the 1st, 3rd, 8th and 14th day of observation. The safety of therapy was evaluated by the frequency of unwanted phenomena, their severity and the emergence of clinically significant changes in laboratory testing.

Results. Based on the analysis of the dynamics of individual symptoms, it was found that on the 8th day of treatment in the 1st and 2nd groups of patients was observed faster and reliably ($p < 0.05$) reduction of the main clinical manifestations of the disease in comparison with patients of 3rd group. But at the end of treatment, the effectiveness of treatment in all groups was almost the same ($p > 0.05$) recovery was reached in the 1st, 2nd and 3rd groups in 84.6 %, 83.8 % and 75.0 %. In the rest of the patients, a positive dynamic of symptoms was observed. When assessing the safety of the proposed treatment regimens in patients of the 1st and 3rd study groups no treatment side effects were observed in all cases. At the same time, 19.4 % of patients of group 2 for the 2nd day of treatment were registered with undesirable mild side effects from the gastrointestinal tract, but their intensity and duration did not require termination or correction of further therapy. Given the same clinical efficiency and safety of the proposed treatment schemes of patients with Covid-19, the method of "minimizing value" was applied to carry out pharmacoeconomic research. According to the results of this analysis, it was found that the most optimal in these indicators was the treatment of the 1st group of patients, which was significantly the smallest of all comparison groups ($p < 0.05$).

Conclusions. The results of the study of clinical efficacy, safety and pharmacoeconomic aspects of the treatment of patients with a mild course of Covid-19 and the presence of risk factors for the progression of the disease indicate the unconditional advantages of the use of ACA inhalation in the treatment of this category of patients in comparison with the use of nirmatrelvir. The use of this therapeutic tactics allows you to achieve significantly faster clinical improvement, prevent the development of unwanted phenomena and the progression of the disease, as well as reduce the cost of treatment of this category of patients.

Key words: COVID-19, risk factors for progression, treatment, aminocaproic acid, efficiency, safety, pharmacoeconomics.