The role of comorbidity in the development of Long-COVID

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Conflict of interest: none

BACKGROUND. Post-COVID syndrome is a set of conditions that occur in patients after a coronavirus infection. To date, there remains great interest in identifying the relationships between the influence of concomitant diseases on the course of SARS-CoV-2 infection and the selection of a justified treatment regimen from the point of view of the pathogenesis of the formation of long-term consequences of the disease.

OBJECTIVE. To investigate the role of comorbidity in the development of Long-COVID, to study and analyze the results of treatment with a combination of Xavron, Tivorel and Xylate in patients with asthenic manifestations of Long-COVID.

MATERIALS AND METHODS. A clinical and neurological examination of 50 patients aged 47 to 76 years with a diagnosis of chronic cerebral ischemia and an asthenic syndrome that persisted for more than 3 months after a confirmed SARS-CoV-2 infection was carried out. All patients were treated according to a clinical protocol approved by the MOH of Ukraine. In addition to the main treatment, 20 patients received a 10-day course of infusions of a combination of the drugs Xavron in a dose of 30 mg No. 10, Tivorel 100.0 No. 5 and Xylate 200.0 No. 5 every other day. Efficacy was assessed before treatment, on the 5th and 10th day of treatment using the MMSE, DASS-21, FAS and MOND scales.

RESULTS AND DISCUSSION. A stable positive relationship was found between the number of CIRS-G comorbidity scores and the MOND score. A positive correlation coefficient between comorbidity and asthenic syndrome, assessed on the FAS scale, was also expressed – 0.699 ($p < 0.001$). A somewhat weaker negative relationship was found between anxiety and the number of points on the CIRS-G scale – -0.474 ($p = 0.035$). Assessment of depression and stress on the DASS-21 scale did not show a reliably significant correlation effect. After treatment, the severity of neurological symptoms, assessed by the MOND scale, decreased from 5.6 ± 1.6 to 2.8 ± 1 ($p < 0.01$). Depression and anxiety scores on the DASS-21 scale decreased moderately from 4.9 ± 3.6 to 2.8 ± 1.5 ($p < 0.01$) and from 6.3 ± 2.3 to 4.3 ± 1.5 ($p < 0.01$), respectively. A more significant regression was observed on the stress scale – from 10.3 ± 3.1 to 7.5 ± 1.9 ($p < 0.01$). The difference in the severity of fatigue from 28.8 ± 4.1 to 20 ± 1.2 was especially noticeable ($p < 0.01$).

CONCLUSIONS. Asthenic syndrome, which is prevalent in the Long-COVID, directly depends on the background of chronic diseases. The combination of Xavron, Tivorel and Xylate is pathogenetically justified and safe in the treatment of patients with Long-COVID. The use of this combination leads to a reduction of asthenic syndrome, which, in turn, has a positive effect on the reduction of cognitive manifestations of Long-COVID in the form of "brain fog".

KEY WORDS: Long-COVID, comorbidity, neuropsychological study, chronic brain ischemia.