NERVOUS TISSUE DAMAGE IN PATIENTS INFECTED SARS-COV-19

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Background. The Covid-19 pandemic has become a global disaster with many dire consequences for the entire population. SARS-CoV-2 had a negative impact on the functionality of organ systems and homeostasis, while the new viral infection also affected nervous tissue. The incidence of central nervous system involvement is 25% of all reported cases of COVID-19. Pathogenetic pathways underlying damage to nervous tissue can be direct, through the olfactory bulb, hematogenous, lymphogenous, as well as indirect, suggesting the occurrence of some functional disorders of the central nervous system through a cytokine storm or an enhanced immunological response induced by the virus.
Materials and methods. Was analyzed retrospectively the clinical and neuropathological findings of the patients who were admitted in CMH „Arhanghel Mihail" between January 2022 and the end of December 2022. Neurological syndromes developing after the disease, which were likely to be associated with COVID-19, were included in the group of interest. The age, gender, neurological syndromes, post-COVID-19 period of persistence of neurological complications were determined.
Results. In a case series of 483 patients infected with COVID-19, the female gender predominates (67.2%) and the average age being of 66,56±2,3 years. The most common neurological consequence was post-COVID fatigue syndrome (362 patients), with the incidence of peripheral nervous system involvement being 65%. In most patients, a period of 3 to 6 months passed after acquiring the infection (302 patients). Other neurological manifestations associated with COVID-19 and persisting up to 1 year after infection were insomnia (56 patients), encephalopathy (96 patients), anxiety (76 patients), sensory disturbances of the lower extremities (14 patients).
Conclusions. Infection with SARS-CoV-2 can affect nerve tissue, and the consequences can last for a long time. Changes can occur at all levels: in the case of our study, the PNS was most affected (65%), followed by the VNS (21%) and the CNS with 14%.
Keywords: SARS-CoV-2, nervous tissue, neurological syndromes, neurological complications.