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AN IMMUNOCHEMICAL APPROACH TO THE EARLY DIAGNOSIS OF VISCERAL DISORDERS IN PATIENTS AFTER COVID-19

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Relevance

The new coronavirus infection COVID-19 is characterized by a multisystem lesion and a high risk of post-infectious complications from internal organs, including the cardiovascular and urinary systems. In a significant proportion of patients, pathological changes are subclinical in nature and are not detected at early stages using standard clinical and laboratory research methods.

In this regard, the development and implementation of methods for early preclinical diagnosis of organ disorders is of particular importance. Immunochemical technologies based on the detection of specific autoantibodies to organ-specific antigens make it possible to register initial pathological shifts at the molecular level before the appearance of clinical symptoms and laboratory abnormalities. One of these methods is the ELI-Viscero Test, which provides a comprehensive assessment of autoimmune reactivity to tissue antigens of various organs.

The purpose of the study. To study the possibilities of early preclinical diagnosis of organ disorders in patients after COVID-19 infection.

Research materials and methods. We examined 55 patients aged 28 to 80 years who had suffered from COVID-19 and were undergoing inpatient treatment at the Zangiata -2 covid center.

The results of the study. All patients were divided into two groups. The control (A) group included 25 patients who underwent traditional clinical and laboratory research methods, the main (B) group included 30 patients who underwent an ELI-Viscero Test-24. 10 patients in the main group had COVID-19 and concomitant kidney pathology (chronic pyelonephritis) in In 40% of cases, there was a significant increase in AAT to the KiM-05-300 antigen; KiS, in 60% there was a significant increase in AAT to the dsDNA antigen; a relative increase in AAT to the KiM-05-300 antigen. In 10 patients of the control group, according to clinical and laboratory blood and urine tests, deviations from the norm were observed only in 15% of cases. In 20 patients with concomitant pathology of the cardiovascular system (coronary heart disease, angina pectoris), 75% had a relative increase in AAT to the CoM-0 antigen.2 and b1-Adrenoreceptor. In 15 patients of the control group, deviations from the norm were observed only in 31% of cases.

Thus, shifts in the production of specific autoantibodies should be considered as one of the earliest markers of incipient pathological processes. This is due to the fact that the functional reserve of most internal organs is provided by a significant excess of specialized cellular elements. Even with the development of the pathological process, a part of the cell population compensates for lost functions for a long time, as a result of which traditional biochemical and clinical parameters may remain within the normal range. At the same time, pathological changes accompanied by increased apoptosis and an excess of the rate of cellular damage over regenerative processes initially manifest themselves at the molecular immunological level - in the form of changes in the production of autoantibodies to tissue antigens. It is only months or years later that such processes reach a stage at which biochemical abnormalities become detectable, and only then do clinical signs of organ failure form.

Conclusions

The results obtained indicate the high informative value of the immunochemical ELI-Viscero Test in the early detection of disorders of internal organs in patients who have suffered from COVID-19. It has been established that changes in the profile of specific autoantibodies to organ-specific antigens are detected significantly more often and at earlier stages compared with standard clinical and laboratory research methods.

Thus, the use of the immunochemical ELI-Viscero Test makes it possible to identify preclinical stages of organ disorders, form high-risk groups, and timely carry out preventive and curative corrective measures in patients after COVID-19 infection.