JOURNAL OF MULTIDISCIPLINARY SCIENCES AND INNOVATIONS
GERMAN INTERNATIONAL JOURNALS COMPANY
ISSN: 2751-4390
IMPACT FACTOR (RESEARCH BIB) : 9,08. Academic reserach index

COGNITIVE IMPAIRMENT IN MIDDLE-AGED MEN WHO HAVE HAD A CORONAVIRUS INFECTION.

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Annotation: Middle-aged men after suffering a new coronavirus infection are characterized by a moderate decrease in attention function, regulatory function, and visual - spatial function with sufficiently preserved memory and speech function.

Keywords: Cognitive disorders, new coronavirus infection.

Introduction. The clinical picture of neurological diseases and syndromes caused by coronavirus infection corresponds to the usual ideas. Some researchers have proven that SARS-CoV-2 can persist in the central nervous system for a long time in the form of inactive fragments, which means that it can recur in predisposed individuals when suitable conditions appear. This assumption raises concerns about long-term neurological complications in infected and cured patients (1).

In their publication, some authors cite data where 30-40% of COVID-19 patients have neurological changes. More than 30-50% of these changes were cognitive in nature. (2,3).

In this regard, there is an intensive intensification of research related to the development of diagnostic criteria, etiology, pathogenesis and treatment of cognitive disorders against the background of the new coronavirus infection. In recent years, more and more attention has been paid to the problem of pre-modal cognitive disorders.

The use of neuropsychological tests reveals the widespread prevalence and significance of cognitive impairments.

The purpose of the study. To determine the nature of cognitive disorders in middle-aged men who have suffered a new coronavirus infection.

Materials and methods of research. 64 male patients who suffered from a new coronavirus infection, who made up the main group, were examined. All of them underwent routine examination and treatment at the neurological department of the Andijan Medical Institute Clinic. The exclusion criteria were the presence of a history of acute cerebrovascular accident, severe traumatic brain injury or other focal brain changes according to CT scans, mental and somatic diseases in the decompensation stage.

The age of the patients is 45-59 years, which corresponds to the average age group according to WHO criteria. The average age was 52.6 ± 4.8 years.

The control group (n=20) consisted of men who were comparable in age and level of education to the main group.

An objective clinical and laboratory examination was performed according to a generally accepted method.

Assessment of cognitive function disorders (attention, memory, speech function, regulatory, visual - spatial functions) and emotional - volitional disorders was carried out according to the results of neuropsychological testing, which included: a brief study of mental status on the MMSE scale (Mini - mental state examination); assessment by the frontal dysfunction battery (FAB); clock drawing test; assessment of verbal fluency; 5-word test; hospital anxiety and depression scale; Beck depression questionnaire. Testing was conducted during the patients' maximum working capacity (in the morning), and was performed in a separate room to eliminate distractions.

Statistical data processing was carried out using the application software package "Statistica 6.0".

Results. According to the clinical examination, the most common complaints in the patients of the main group were decreased memory, attention, fatigue (78%), headache (70%), and complaints of sleep disorders (55%) also prevailed.

The clinical examination also revealed that in patients of the main group, the dominant neurological syndromes were intellectual-mnestic (100%) astheno-depressive and astheno-neurotic (75%), vestibulo-atactic (62%) and pyramidal (52.5%).

No data for pathological symptoms were obtained in patients from the control group during the study of the neurological status.

According to the results of neuropsychological testing, 24 (38%) patients in the main group had mild cognitive impairment, and 37 (62%) cases were diagnosed with moderate cognitive decline.

Based on the analysis of the MMSE test results, 27 (42.6%) patients in the main group had no disorders; 33 (51.4%) had pre-dementia; 4 (6%) had mild dementia.

According to the FAB scale of patients in the main group, 25 people (39%) had no cognitive impairment; 39 people (61%) had mild cognitive impairment.

According to the results of the "5 words" test, 39 (61%) patients in the main group received normal results, and 25 (39%) patients had cognitive impairments. After the prompts were introduced, 52 (81%) patients completed the task.

According to the results of the assessment of verbal fluency, 30 (46.9%) patients showed normal results, 34 (53.1%) patients showed violations of regulatory functions.

When analyzing the results of the clock drawing test, 28 (43.8%) patients showed normal results, 36 (56.2%) patients did not complete the task accurately.

When comparing the test data of patients in the main group with the normative indicators, memory loss was detected in 24 (38%) patients; impaired speech function in (6%), decreased attention function in 52 (81%); impaired regulatory function in 44 (69%) patients; decreased visual and spatial functions in 47 (63%) of patients.

Based on the results of testing on the Beck scale, depression of varying severity was detected in 49 patients (76.5%) of the main group, among them mild depression in 28 people (43.8%), moderate depression in 13 people (20.3%), severe depression in 8 people (12.5%).

Based on the results of testing on the hospital scale of anxiety and depression, psycho-emotional disorders were not detected in 31 patients (48.4%), subclinically expressed anxiety was diagnosed in 11 people (17.2%), subclinically expressed depression in 20 people (32%),

clinically expressed anxiety in 22 people (34.4%), clinically expressed depression affects 13 people (19.6%). According to the results of neuropsychological testing, no cognitive or psycho-emotional disorders were detected in patients of the control group.

A significant decrease in cognitive functions was revealed in all the tests used in patients of the main group compared with the control ($p<0.001$). Significant differences were recorded based on the results of the MMSE test, a battery of tests of frontal dysfunction.

When assessing emotional status using methods for determining the level of anxiety and depression: the hospital anxiety and Depression Scale (HADS), the Beck depression questionnaire, significant differences were also obtained in the studied groups ($p<0.001$).

Based on the data of the correlation analysis, significant weak correlations ($p<0.05$) were found between the severity of anxiety and depression and indicators of cognitive functions for all tests used, excluding the MMSE scale (anxiety and depression with FAB r= - 0.228; r= - 0.198, respectively; with the clock drawing test r= - 0.234; with with the "5 words" test r= - 0.269; with the verbal fluency test r= - 0.366).

Thus, middle-aged men after suffering from a new coronavirus infection are characterized by a moderate decrease in attention function, regulatory function, and visual-spatial function with sufficiently preserved memory and speech function.

Literature.

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