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SECTION 20.
MEDICAL SCIENCES AND PUBLIC HEALTH

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CORRELATION OF THE DEGREE OF COGNITIVE IMPAIRMENT IN DIFFERENT FORMS OF EPILEPSY WITH BLOOD CORTISOL LEVELS

Summary. *The occurrence of epileptic seizures and epilepsy after stroke is an example of their close association with cerebrovascular pathology. According to different investigators, epileptic seizures in stroke patients occur at an incidence ranging from 3-6 to 12%. Poststroke seizures may occur in the acute period of stroke or at a later time. Epilepsy in patients with stroke significantly worsens their quality of life, slows down domestic, social and professional adaptation. The article deals with terminological, epidemiological, pathophysiological aspects, risk factors and predictors of epileptic seizures and epilepsy in patients with stroke.*
Keywords: *epileptic seizures and post-stroke epilepsy.*

Purpose of the study. Epilepsy remains one of the serious diseases of the nervous system. The increase in the number of young people in the general population and the difficulties they have due to cognitive impairment is becoming a global problem for all of humanity, namely for medical and social services. It is the state of higher mental functions that ultimately determines the quality of life of patients with epilepsy and is a criterion for the effectiveness of therapy. The purpose of this study was to evaluate the level of the hormone cortisol in the blood and the development of cognitive impairment in various forms of epilepsy.

Materials and methods of research. This study was conducted in departments 1, 2, 3 of neurology at the Andijan State Medical Institute clinic. 32 patients aged from 18 to 44 years were examined. The patients were divided into 3 groups. The first group included 12 patients with a generalized form of epilepsy; the second group consisted of 10 patients with focal epilepsy; the third group as a control consisted of 10 patients without eilepsy and cognitive impairment. Patients from all groups underwent a clinical neurological examination and assessment of cognitive functions using the following scales: MMSE scale, FAB test and MoCA test. All patients underwent a blood test to determine the level of the hormone cortisol.

Results and discussion. The study showed that in the first group the average score on the MMSE scale was 15.9 points, the data on the FAB tests was 7.9 points, and the average score on the MoCA test was 11.6 points. In the second group, research data on the MMSE scale showed an average of 25.1 points, data on FAB tests - 13 points, and an average score on the MoCA test - 17.25 points. In the third control group, the average score on all scales showed the absence of cognitive impairment. In particular: on the MMSE scale the average score was 29 points, on the FAB scale - 17.1 points, the average score on the MoCA test - 26.6 points, Cortisol - also known as hydrocortisone, or 17-hydroxycorticosterone, or compound F - hormone, produced by the adrenal cortex. These paired endocrine glands, adjacent to the kidneys and projecting at the level of the sixth–seventh thoracic vertebrae, produce cortisol with the assistance of adrenocorticotropic hormone. The morning cortisol norm is in the range of 101.2–535.7 nmol/l,

evening – 79.0–477.8 nmol/l. Cortisol levels are practically independent of gender and age. Data from a study of the level of the hormone cortisol showed the following results: in the first group with generalized epilepsy, the average level was 630 nmol/l, in the second group - 580 nmol/l, in the third group -420 nmol/l.

Conclusion.

The studies revealed the highest level of the hormone cortisol in the blood of patients with a generalized form of epilepsy; in the second group, the result was slightly lower and the lowest level of the hormone was found in the blood of healthy patients without cognitive impairment. This study allows us to conclude that there is some correlation between the level of the hormone cortisol and the development of cognitive impairment. Increased levels of the hormone cortisol contribute to a decrease in short-term and long-term memory, attention, reduction in calculation abilities and other cognitive functions. Thus, knowing that patients with high levels of the hormone cortisol are more susceptible to developing cognitive impairment, we can help the patient prevent or delay the development of cognitive deficits by using drug therapy, as well as various non-drug techniques for training memory, attention, intelligence and other higher mental functions.

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