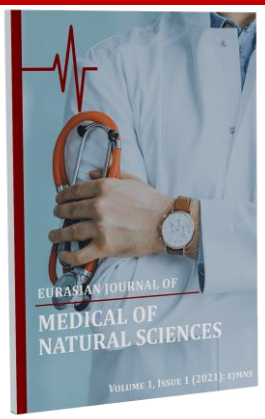
EURASIAN JOURNAL OF MEDICAL AND NATURAL SCIENCES
Innovative Academy Research Support Center
UIF = 8.3 | SJIF = 5.995 www.in-academy.uz



DYNAMICS OF COGNITIVE IMPAIRMENT IN PATIENTS WITH LACUNAR STROKE

Majidova Yokuthon Nabievna
Professor. Doctor of Medical Sciences. Head of the Department of Neurology, Pediatric Neurology and Honey. genetics of the Tashkent Pediatric Medical Institute.
Mirzaeva Nilufarkhon Bakhtiyor Kizi
Neuropathologist of RSCEMC. Republican Medical Emergency Science Center.
Tashkent. Uzbekistan.
https://www.doi.org/10.5281/zenodo.10099070

ARTICLE INFO

Received: 03rd November 2023
Accepted: 09th November 2023
Online: 10th November 2023

KEY WORDS

Cognitive impairment, arterial hypertension, atherosclerosis, extra and intracranial arteries, hypertension, lipogialinosis, hypoperfusion, cognitive disorders, lacunar stroke, smooth antihypertensive therapy.

ABSTRACT

The article focuses on particular specificity of the topic of cognitive impairment. There are several approaches to analyse and discuss the issues related to the chosen subject. Moreover, types and symptoms will be thoroughly explained and expanded.

Cognitive impairment is one of the most common manifestations of organic brain diseases. The mechanism of formation of cognitive insufficiency is primarily associated with arterial hypertension and atherosclerosis of the extra- and intracranial arteries. Uncontrolled hypertension leads to secondary changes in the vascular wall of lipogialinosis, which develops mainly in the vessels of the microvasculature in the pool of penetrating arteries. Arteriolosclerosis that develops as a result leads to hypoperfusion in the zones of terminal circulation, that is, in deep cerebral structures with the development of focal neurological symptoms, as well as cognitive disorders. The purpose of the study: To study cognitive impairment in patients with lacunar stroke and their dynamics against the background of treatment and correction of arterial hypertension. Study materials and methods: 60 patients with acute lacunar stroke and after 10 days of therapy were examined. Cognitive function was investigated with a mini mental status study (MMSE), a 10-word memorization test, and a Schulte test. In order to study the state of cerebral vessels, ultrasound Doppler imaging was used. Results and discussion: When examining patients with acute hypertensive encephalopathy, cognitive disorders in the form of memory and attention disorders were detected. The results of the Mini Mental Status Study (MMSE) decreased to 21-23 points, with an average of 22,6±2,6 points. Short-term memory in the 10-word recall test was insufficient at 3-6 words, an average of 5,6±1,2 words, but long-term memory was relatively preserved at 4-6 words, an average of 5,9±0,9 words. To determine the attention function, a Schulte sample

was used, the execution of which was extended to 40-60 seconds, an average of 53,3±9,1 seconds. When examining cerebral vessels using ultrasonic dopplerography, a decrease in the linear speed of blood flow was detected against the background of an increase in overall peripheral resistance. In 15 (25%) patients, hemodynamically significant stenoses of the common or internal carotid arteries were detected from 50% to 75%. During the treatment of lacunar stroke, there was an improvement in cognitive functions. So, with a mini-study of mental status (MMSE), the indicators improved to 27-29 points, the average score was 28,3±0,9 points. Short-term memory improved to 5-7 words, an average of 6,1±1,1 words, which correlated with an increase in linear blood flow rate and a decrease in overall peripheral resistance. But in patients with stenoses of the common or internal carotid arteries, this figure was only 5-6 words, on average 5,3±1,2 words, which indicates the torpidity of restoring short-term memory in the presence of atherosclerotic changes in the walls of cerebral vessels. Long-term memory improved in all patients up to 7-8 words, on average 7,3±1,5 words. The performance of the Schulte test was 25-30 seconds, an average of 27,5±4,7 seconds, which indicated the restoration of attention function in all patients.

The results of the study showed that the dynamics of cognitive impairment in lacunar stroke was dependent on the rate of recovery of target blood pressure values. So, with a rapid recovery of blood pressure, that is, during the first day, the dynamics of cognitive functions was less than with gradual, that is, during the second - third days, which indicates the value of smooth hypotensive therapy in the treatment of acute hypertensive encephalopathy. Thus, patients with lacunar stroke have a slowdown in mental activity, they need more than normal, time and attempts to solve urgent and intellectual problems. There is an insufficiency of short-term memory with relative preservation of long-term memory. The dynamics of the restoration of short-term memory largely depends on an increase in the linear speed of blood flow and a decrease in the overall peripheral resistance. The presence of atherosclerotic changes makes the restoration of short-term memory more torpid. The dynamics of cognitive impairment generally depended on smooth antihypertensive therapy.

References:

1. Maksimova M.Yu. Small deep (lacunar) cerebral infarcts in arterial hypertension and atherosclerosis: Autoref. dis.... Dr. honey. sciences. - M., 2002. - 50 s.
2. Bezerra DC, Sharrett AR, Matsushita K, et al. Risk factors for lacune subtypes in the Atherosclerosis risk in communities (ARIC) study. Neurology 2012;78:102–8.
3. Caplan LR. Intracranial branch atheromatous disease: a neglected, understudied, and underused concept. Neurology 1989;39:1246–50.
4. Fisher CM. Lacunes: small, deep cerebral infarcts. Neurology. 1965;15: 774–784.
5. Inzitari D, Eliasziw M, Sharpe BL, et al. Risk factors and outcome of patients with carotid artery stenosis presenting with lacunar stroke. North American symptomatic carotid endarterectomy trial ground.