



## MORPHOLOGICAL ASPECTS OF STATIC-LOCOMOTOR FUNCTION DISORDERS IN CHRONIC CEREBRAL ISCHEMIA

Journal Website:  
<https://theusajournals.com/index.php/ijmscr>

Copyright: Original content from this work may be used under the terms of the creative commons attributes 4.0 licence.

Submission Date: December 01, 2023, Accepted Date: December 05, 2023,

Published Date: December 10, 2023

Crossref doi: <https://doi.org/10.37547/ijmscr/Volume03Issue12-02>

Yo'ldosheva Naima Qudratovna

Assistant Of The Department Of Osta In Bukhara State Medical Institute, Uzbekistan

### ABSTRACT

In our studies, the predominance of the proportion of chronic vertebral-basilar insufficiency in women was found. Men were significantly more likely to have acute brain disorder in the vertebral-basilar sistem. In persons younger than 50 years, no ischemic strokes were detected in 87% of cases, this indicator decreased by half at the age of 50 to 60 years and remained in persons older than 60 years. Thus, the most vulnerable age period in relation to the development of stroke is the age over 52.6 years. According to WHO statistics, more than 15 million cases of stroke are registered annually in the world, of which more than 30% die within a year, more than 80% become disabled.

### KEYWORDS

Chronic cerebral ischemia, vertebrobasilar insufficiency, violations of static-locomotor functions, morphological aspects.

### INTRODUCTION

Vascular diseases of the brain are an urgent medical and social problem. They occupy a leading place in the structure of morbidity and mortality in economically developed countries. Mortality from cerebrovascular diseases in economically developed countries is 11-12%

and is second only to mortality from heart diseases and tumors of all localizations. Today, 9 million people in the world suffer from cerebrovascular diseases. [2]. The problem of chronic cerebral ischemia would not receive so much attention if this disease were not one

of the most common causes leading to stroke, dementia and disability. The epidemiology of chronic forms of cerebrovascular diseases has not been sufficiently studied, while the trend towards an aging population leads to an increase in their prevalence, especially in primary health care. To some extent, it is possible to judge the frequency of epidemiological forms of cerebrovascular disease (CVD) based on epidemiological indicators, the prevalence of stroke, since acute cerebrovascular accident, as a rule, develops on the prepared chronic ischemia and this process continues to increase in the post-stroke period. When the initial symptoms of cerebral circulatory insufficiency appear, the patient usually turns to a local therapist (general practitioner, family doctor) and only with pronounced signs to a neurologist. The rate of development of the disease, prevention of stroke and dementia largely depends on the development of a unified approach and algorithm for the diagnosis and treatment of the initial forms of chronic cerebrovascular disease. Early detection and treatment of chronic forms of cerebrovascular diseases is important to prevent their progression and take measures to prevent stroke.

The purpose of the study is to study clinical and instrumental criteria diagnosis of chronic cerebral ischemia.

## MATERIALS AND METHODS

The material of this study was patients with vertebral basilar insufficiency (186 people) aged 45-75 years (on average 59.7+12.6 years), of whom 71 were men and 115 women. The criteria for inclusion in the study were the presence of documented vascular disease, a combination of subjective and objective manifestations of vascular brain damage, progressive course of chronic vascular brain damage or episodes of acute cerebral ischemia in the form of TIA or strokes with complete regression of neurological deficit. The comparison group consisted of 73 patients comparable to the main group in age, gender, and severity of concomitant somatic diseases who had suffered an ischemic stroke in the vertebral-basilar system (0.5 to 2 years old). The control group consisted of 60 volunteers of comparable age without signs of vascular lesion. Most often, circulatory insufficiency of the brain is combined with an increase in blood pressure. This fact is observed in both compared groups (140-155 / 90-105,  $p < 0.05$ ).

Based on the leading clinical syndrome and the results of an instrumental examination, two groups of patients were identified. The first group included 58 patients who had a progressive course of the disease, a predominance of subjective disorders was observed, and there were no episodes of acute cerebral ischemia.

The second group consisted of 55 patients whose clinical picture was characterized by the presence of small-focal neurological symptoms, previous TIA or minor strokes. Clinical manifestations at the time of the study consisted in a combination of a conductive motor or sensory neurological deficit and damage to cranial nerves of a predominantly alternating nature.

The results of the study. When analyzing the gender characteristics of cerebrovascular pathology in the examined patients, it turned out that there were 65 women in the main clinical group. In the comparison group, ONMC in IBS developed in 16 women, and in 10 women - ONMC in the carotid system. There were 48 men with vertebral-basilar insufficiency, while there were 41 male patients with stroke in the IBS, and 6 men with ONMC in the carotid system. Thus, in our studies, ONMC was less common in women, respectively, the proportion of chronic vascular insufficiency of the brain was observed more often in them. In men, the proportion of cancer was higher, with predominant localization in the IBS ( $p < 0.05$ )

In order to analyze the clinical material, the main criteria for the formation of clinical groups were determined - the presence of a history of ONMC in the vertebral-basilar system was encoded by the first digit (0 - no, 1 - is), the presence of focal neurological deficit - by the second digit (0 - no, 1 - is). Pyramidal insufficiency syndrome, which is characterized by certain neurophysiological correlates in the study of

SBS reflex activity, was considered as an important objective criterion for ischemic damage to cerebral structures. Thus, the subgroup (0;0) was characterized by the absence of ONMC in the anamnesis, the absence of focal neurological deficit. The leading clinical manifestation is vestibular atactic syndrome with a predominance of dizziness, ataxia and instability when walking. The subgroup (0;1) was characterized by the absence of ONMC in the anamnesis and the presence of a focal neurological deficit (within the framework of a chronic vascular process) - DE N-Sh degree. For patients of subgroup (1;0), the presence of a history of ONMC and the absence of focal neurological deficiency, in particular, pyramidal insufficiency, was typical, and subgroup (1;1) - a combination of ONMC and pyramidal insufficiency.

When analyzing the results of an MRI study in clinical groups, it turned out that in the subgroup (0;0), foci of ischemia in the trunk were detected in 27% of cases, hemispheric localization of the lesion was present in 7% of cases, foci were absent in 67% of cases. In the subgroup (0;1), in 29% of cases, the lesion had a stem localization, in 10% the lesion was localized in the carotid system, the absence of the lesion was observed in 61% of cases. In the subgroup (1;0) - in 1 patient (100%), the lesion was localized in the trunk. In the subgroup (1;1), in 43% of cases the lesion was localized in the trunk, in 9% of cases the lesion was determined outside the trunk, the absence of pathological changes

on MRI was observed in 48% of cases. The absence of ONMC in the anamnesis was associated with the absence of ischemic foci during neuroimaging in 63% of studies, in 29% the focus was located in the brain stem, in 9% the focus was localized in carotid structures. In patients with a clinical picture of ONMC in the brain stem, during MRI, the lesion was not detected in 47% of cases, whereas it was detected in the brain stem in 44% or in the carotid artery system in 9%. With a history of ONMC in the carotid system, an ischemic focus was not detected only in 19%, while a focus of stem localization was detected in 50% of cases, carotid localization in 31% of cases.

Thus, the detection of an ischemic lesion in the brain stem in the absence of indications of a history of stroke occurs in 1/3 of cases. In ischemic stroke of stem localization, focal changes were absent in half of the cases during MRI of the brain. In case of ONMC, there were no additional foci of carotid localization in the IBS, and ischemic stroke of carotid localization in half of the cases was associated with identified foci in the trunk. Vascular studies have also been standardized in the established clinical groups. In the subgroup (0;0) - the absence of vascular lesions of IBS according to the USDG was observed in 20% of cases, pathological right-sided changes in IBS were observed in 47%, left-sided in 33%. In the subgroup (0;1), the absence of pathological signals of vascular changes in IBS was noted in 42% of cases, 29% of the changes were noted on the right and

left. In the subgroup (1;0), the absence of vascular changes was noted in 50% of cases, and left-sided vascular lesion of the air force was also noted in one patient. In the subgroup (1;1), the absence of vascular changes in the air force was in 36% of cases, right-sided vascular damage in this basin was noted in 42% of cases and in 21% of cases vascular changes were left-sided.

The structure of patient complaints at all stages of the disease was dominated by headaches CCI I-32 (63%), CCI II-44 (95%), CCI III-15 (88%); control - 10 (33%), fatigue CCI I-18 (36%), CHIM II- 44 (95%), CHIM III - 15 (88%); control - 5 (16%), sleep disorders CHIM I - 19 (38%), CHIM II-35 (68%), CHIM III - 11 (66%); control - 4 (13%); There were also very characteristic complaints of memory and attention loss CHIMI-18 (36%), CHIMII-40 (85%), CHIM III- 14 (83%); control - 3 (10%). Complaints of dizziness, a feeling of noise in the head, and "shakiness of the ground underfoot" were recorded somewhat less frequently, while it should be noted that these subjective manifestations practically did not occur in the control group. The intensity of headache, according to VAS, was most pronounced at stages I and II of CCI, respectively  $7.4 \pm 0.2$  and  $7.1 \pm 0.4$ ; at the same time, the severity of cephalgic syndrome in patients with stages II and III of CCI was combined with a high level of depression. Depending on the etiology of CCI, the greater severity of cephalgia was characteristic of CCI of mixed etiology -  $6.3 \pm 0.3$  compared with CCI-G -  $3.8 \pm 0.2$ , CCI-A -  $2.4 \pm 0.5$ . The

nature of cephalgia more often corresponded to the criteria of tension headache.

Disseminated microorganic symptoms were noted in the neurological status of patients with stage I CRF. In stage II CRF, two or more distinct neurological syndromes were identified in the clinical picture: pyramidal -42 (93%), vestibulo-atactic -32 (25%), amyostatic -17 (38%), pseudobulbar in combination with moderate cognitive symptoms - 42 (93%). Several neurological syndromes were also identified in patients with stage III CRF: pyramidal - 17 (100%), vestibulo-atactic - 13 (77%), amyostatic - 14 (88%), pseudobulbar with pronounced cognitive symptoms of pre-dementia and dementia type - 8 (55%).

Thus, hemodynamic changes according to the USDG data were observed in a group of patients with initial manifestations of vertebral-basilar insufficiency in the absence of objective neurological symptoms. The number of hemodynamically significant changes in the main arteries was significantly higher in the second clinical group.

### CONCLUSION

In our studies, a predominance of the proportion of chronic vertebral-basilar insufficiency in women was found. Men were significantly more likely to have ONMC in the vertebral-basilar basin. In persons under 50 years of age, no ischemic strokes were detected in 87% of cases, this indicator halved between the ages of

50 and 60 years and persisted in persons over 60 years of age. Thus, the most vulnerable age period in relation to the development of stroke is the age over 52.6 years.

Chronic cerebral ischemia may be asymptomatic for a long period of time. Clinical and instrumental examination provides an opportunity for early diagnosis of chronic cerebral ischemia. The clinical picture of brain stem damage is observed in more than half of patients with chronic cerebral ischemia.

### REFERENCES

1. Т.ф.д. Ходжиева Д.Т., Йўлдошева Н.Қ. “Specificity of cognitive impairment in chronic cerebral ischemia”. International scientific and practical Conference: Modern views and research – 2021, July, 2021: Egham, London. Independent Publishing Network Ltd – 52 p. (page 23-24)
2. PhD, доцент Ахророва Ш.Б., Йўлдошева Н.Қ. “Особенности когнитивных и эмоциональных расстройств при хронической ишемии мозга”. Journal of neurology and neurosurgery research volume 2, issue 3 – 2021 (стр. 50-53)
3. 5. Йўлдошева Н.Қ. “Cognitive disorders in patients with chronic brain ischemia”

4. Amaliy va Tibbiyot fanlari ilmiy jurnali  
“Ekologiya va ekologik ta’lim muammolari”  
maxsus son – 2022. (323-326 bet)
5. Камчатнов П.П. Дисциркуляторная  
энцефалопатия – некоторые вопросы киники  
и терапии. Русский медицинский журнал–  
2004.–Т.12.–№24.–С.1414–1417
6. Манвелов Л. С., Кадыков А.С.  
Дисциркуляторная энцефалопатия.  
Клиническая геронтология.–2000.–Т.6.–№9–  
10.–С.21–27.
7. Robertson CS, Contant CF, Gokaslan ZL, et al:  
Cerebral blood flow, arteriovenous oxygen  
difference, and outcome in head injured  
patients. J Neurol Neurosurg Psychiatry 55:  
594-603, 2002,26.
8. Sheinberg M, Kanter MJ, Robertson CS, et al:  
Continuous monitoring of jugular venous  
oxygen saturation in head-injured patients. J  
Neurosurg 76: 212-217, 2002. 11.
9. Яхно Н.Н., Захаров В. В., Локшина А. Б.  
Нарушения памяти и внимания в пожилом  
возрасте. // Журнал неврологии и  
психиатрии – 2006.–Т.106.–№2.– С.58–62.