CLINICAL AND DIAGNOSTIC ASPECTS OF VERTEBROBASILAR INSUFFICIENCY IN THE ELDERLY AGE

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ABSTRACT

The great attention of specialists to the problem of vertebrobasilar insufficiency is dictated by the high prevalence, complexity of pathogenesis and the difficulty of stabilizing the therapeutic approach (2,4,13). To date, the cause of acute disorders of cerebral circulation, and in some cases with a fatal outcome, is a violation of blood flow in the basin of the vertebrobasilar system, according to various authors, about 30-40% of all cases of cerebral accidents (5,8,11). Accordingly, the issue of early diagnosis, optimization of the last therapy and preventive measures of vertebrobasilar insufficiency is a priority and urgent one. The vertebrobasilar system is quite complex in its mechanism, the manifestation of clinical signs is quite diverse, it can be disguised as various diseases of ENT pathology (Miniere's disease), cervical sciatica, cervical myelitis sirito, volumetric formation of the posterior cranial fossa, etc. On May 21, 2021, on the basis of the Samarkand Medical Institute, the International Forum "Interdisciplinary Approach to Head and Neck Issues" was held, with the participation of more than 14 foreign countries, neurologists, ophthalmologists, oncologists, maxillofacial surgeons, otorhinolaryngologists. Taking into account the issues raised, the issue of vertebrobasilar disorders was in the first place (6, 10, 12). Despite the significant interest and sufficient volume of publications, research in this direction, it remains not completely clear in the diagnostic aspect and approaches to treatment, vertebrobasilar disorders in the elderly. This category of patients has a number of somatic diseases, which in themselves can complicate the neurological clinic. The factors that negatively affect the treatment of vertebrobasilar dysfunctions in old age include cognitive and psycho-emotional changes inherent in this category of patients, reducing the motivation for rehabilitation treatment (1,3,9).

Purpose. To study the features of vertebrobasilar insufficiency, to compare clinical and instrumental data in old age.

Material and research methods. Patients aged 60 to 80 years old were examined in the Department of Neurology and Neurosurgery of the 1st clinic of SamMI in the amount of 43 people. The control group of relatively healthy volunteers consisted of 18 people, for comparative studies, identical in age. The diagnosis of vertebrobasilar insufficiency (VBI) was put in accordance with the symptom complex characteristic of this pathology (the presence of vestibular and coordination disorders, oculomotor disorders). An additional research method was neuroimaging analysis of MRI of the brain, ultrasound duplex scanning of bronchocephalic vessels, X-ray of the cervical spine, in some cases replaced by MRI of the cervical spine. Several patients underwent an examination by an ophthalmologist. To clarify neurological disorders, in a qualitative ratio, patients underwent separate testing on scales, assessments of motor activity, cognitive changes, depression. Standard examination of blood biochemistry, ECG, daily monitoring of blood pressure, consultation with a therapist, in some cases, if necessary, EEG. Statistical data processing was carried out according to the standard Student's criteria on an individual computer.

Research results. Taking into account the age contingent of patients, in addition to neurological examination, it was necessary to consult a therapist. In the main group of 43 people, women prevailed, so there were 26 women,

17 men. In 69%, patients were found to have some degree of arterial hypertension. As expected, for this diagnosis of VBI, complaints of dizziness, instability when changing location, or walking were considered the fundamental point, 97% of all patients experienced this symptom. The frequency of dizziness depended on the weather, on the rise in blood pressure, on the time of day, and on a sharp turn of the head. At the same time, the strength of dizziness is also different from a sharp (powerful dizziness) in which the patient could not budge, or insignificantly, in which the patient feels dizzy, but performs his functions. Headaches of moderate intensity were not a frequent symptom, mainly heaviness in the head during the rise in blood pressure, in 72% of cases. From the side of craniocerebral changes, microsymptomatics, in the form of abnormalities in 3 patients, flattening of the nasolabial fold in 20 patients, nystagmus in 3 patients, impaired convergence in 17 patients, tongue deviation in 5 cases, slight dysatrophy in the same 5 patients. The motor sphere, and taking into account the age of the patients, revealed some changes confirming a chronic disorder on the part of the central nervous system. The difference in tendon reflexes of the sides, left and right, in 33% of cases. Pathological signs (non-permanent) in 16% of cases. Sensitivity, in contrast to motor signs, was revealed in a greater percentage of violations, 77% of all examined. Assessment of motor activity on the scales showed a reduced overall score to 29 ± 3, where in patients in the control group, where the total score was slightly higher than 31 ± 3, but also did not correspond to the high standard values. According to the standard MMSE scale, cognitive dysfunction reached 19 ± 2, in the main group and in the control group 22 ± 2.5, which also indicated a low indicator from the norm. Depressive disorders were found in almost half of all examined patients (49.2%), in the form of anxiety disorders, insomnia against this background, tearfulness. Thus, the factors predisposing to change and problems to balance in elderly patients were a combination of clinical and neurological disorders, psycho-emotional decrease in activity. Further research, in accordance with the set goal, included instrumental, neurophysiological and neuroimaging analysis of indicators. Recently, X-ray examination, with the advent of MRI studies, has lost its relevance. But taking into account the age of the surveyed patients' contingent, it was difficult for many to carry out neuroimaging (dentures, one patient underwent surgery on the shoulder joint, in 2 patients on the knee joints, with the replacement of the joint itself, fear of the procedure). Radiography of the cervical spine was performed in 17 patients. The evaluation of the images made it possible to see the deformation of the intervertebral joints, the proliferation of osteophytes, and severe osteochondrosis of the intervertebral discs. More gross violations were noted in women. Thus, osteochondrosis was noted in 96%, instability of the motor segment in 78%, cykovertebral arthrosis in 96% of cases. The data obtained confirm gross changes in the cervical spine, which must be taken into account in the course of treatment, observing vigilance (7, 10).

Duplex ultrasound scanning of brachycephalic vessels revealed a decrease in cerebrovascular reactivity by 63%, atherosclerosis of vessels by 75%, to varying degrees. Combined deformity with a decrease in blood flow in 16% of patients, the highest percentage of vertebrogenic effects on the vertebral artery was found, taking into account the deformation of the vertebrae themselves, about 74%

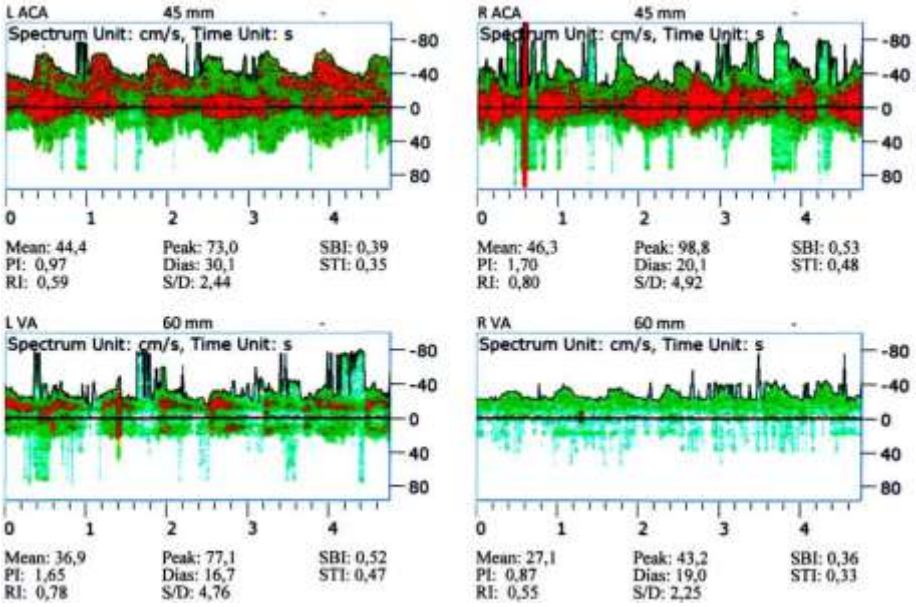

Fig. 1. Patient 77 years old. It was not possible to locate intracranial arteries from the carotid basin because of the closed temporal window. Increase in speed parameters for the ICA and PA on the left. Unstable hemodynamics in the left VA.

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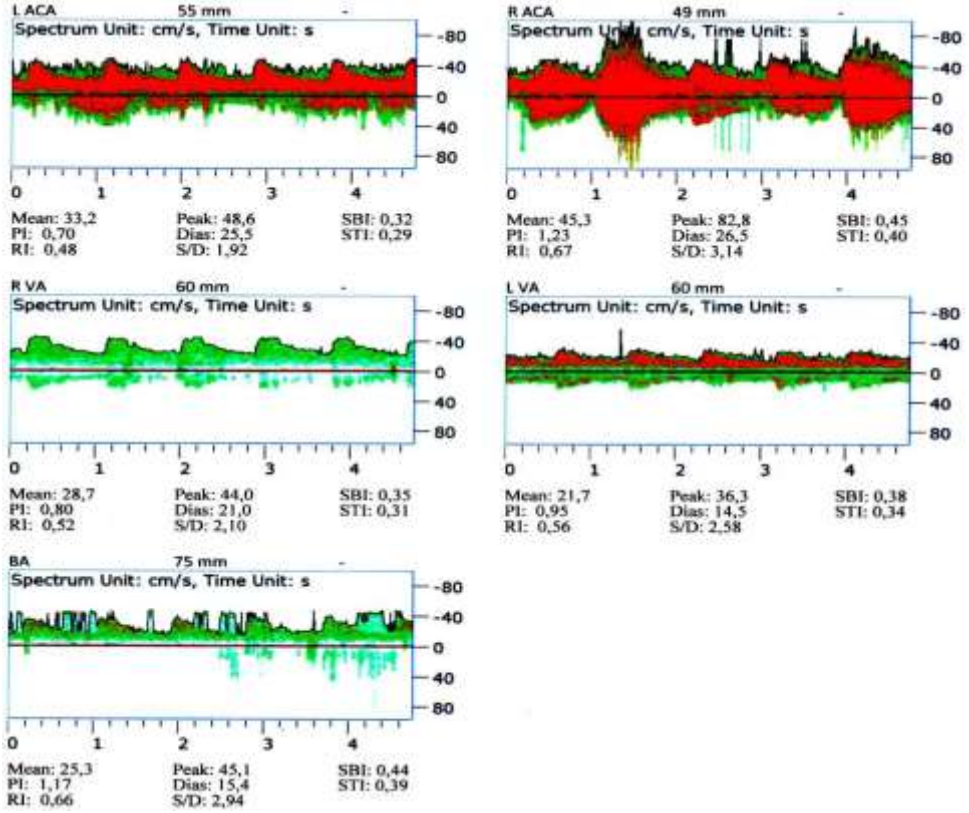

Fig. 2. Patient 76 years old. It was not possible to locate intracranial arteries from the carotid basin because of the closed temporal window. Hypertonicity of the arterial bed. Increase in speed parameters for the right side ICA and BA.

The pathological mechanism of the influence of deformation of the cervical vertebrae, a change in the vascular bed, affects the chronicity of the ischemic type, in the brain, which is confirmed by MRI of the brain. leukoriasis was detected in 50% of cases, postischemic foci in the periventricular area up to 60% of cases, expansion of the ventricles, or the so-called normotensive hydrocephalus in almost all patients, subatrophy of the cortex in 100% of cases. Standard electroencephalogram examination, also in 100% of cases. Revealed moderate diffuse changes in the brain, with a decrease in the amplitude of potential fluctuations.

Thus, as can be seen from the data obtained, the predisposing factors in the elderly to impairment of the vertebrobasilar basin are a combination of clinical and neurological symptoms, gross deformity in the cervical spine, impairment in the vascular bed, as a result of chronic ischemic cerebrovascular accident, with focal signs.

CONCLUSIONS

1. The features of vertebrobasilar disorders in the elderly are not only dizziness and instability in an upright posture, but also signs of clinical and neurological symptoms associated with chronic cerebrovascular accidents, motor-sensory changes, decreased cognition, psycho-emotional lability, complicated by a comorbid cardiac background. pulmonary failure, diabetic encephalopathy

2. Evaluation of the diagnostic results revealed the predominance of deformity of the cervical vertebrae, atherosclerotic lesions of the great vessels, decreased blood flow, neuroimaging data as a result, confirm cerebral ischemia, with signs of small foci, lekoresis and brain subatrophies

3. All this, in due time, makes it possible to predict the course of VBI and optimize treatment tactics

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