CLINICAL-NEUROLOGICAL CHARACTERISTICS AND QUALITY OF LIFE IN VARIOUS ETIOPATHOGENETIC FORMS OF VERTEBROBASILAR INSUFFICIENCY

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Introduction. *Vertebrobasilar insufficiency (VBI) is a clinically heterogeneous condition in which similar symptoms—such as dizziness, balance disorders, and visual or cognitive complaints—may arise from diverse etiopathogenetic mechanisms. Consequently, distinguishing between forms of the disease based solely on the primary complaint is insufficient. Evaluating clinical symptoms in conjunction with measures of functional limitation and quality of life expands the scope for differential diagnosis.*

Research objective. To determine the specific characteristics of clinical-neurological symptoms, the severity of dizziness, and quality-of-life indicators in atherosclerotic-hypertensive, migraine-associated, and vertebral artery anomaly-associated forms of vertebrobasilar insufficiency (VBI).

Research materials and methods. An open, prospective, comparative study included 160 patients with a confirmed diagnosis of vertebrobasilar insufficiency (VBI) and 30 apparently healthy individuals. Patients were categorized into groups based on the etiology of VBI: atherosclerotic-hypertensive (n=82), migraine-associated (n=46), and vertebral artery anomaly-associated (n=32). Clinical-neurological examinations were supplemented by the use of the Dizziness Handicap Inventory (DHI) and SF-36 questionnaires. Intergroup differences were assessed using parametric and non-parametric tests, with appropriate statistical adjustments applied for multiple comparisons.

Results. The groups differed in clinical and demographic characteristics: the mean age was 61.7 ± 7.5 years in the atherosclerotic-hypertensive group and 39.3 ± 9.6 years in the migraine group; women constituted 76.1% of the migraine group. Dizziness was the primary complaint across all three groups, observed in 87.8–93.8% of patients. In the migraine-associated form, headache was present in 100.0% of cases, nausea or vomiting in 78.3%, and visual disturbances in 54.3%. In the atherosclerotic-hypertensive group, balance and gait disorders were observed in 63.4% of patients, and cognitive complaints in 54.9%. In the vertebral artery anomaly group, symptoms were provoked by head rotation in 71.9% of cases. The highest severity scores were 12.0

[11.0; 14.0] points on the EEV scale in the anomaly group and 56.0 [50.0; 65.5] points on the DHI scale in the migraine group. The physical component of the SF-36 dropped to 49.0 [44.0; 56.2] points in the atherosclerotic-hypertensive form, while the mental component dropped to 46.0 [40.2; 50.8] points in the migraine form. No significant correlation was found between EEV and DHI scores in the migraine group.

Conclusion. Although the three etiopathogenetic forms of vertebrobasilar insufficiency (VBI) share the common symptom of dizziness, their syndromic profiles and impacts on quality of life differ. The migraine-like form is characterized primarily by the patient's subjective sense of disability; the atherosclerotic-hypertensive form by physical limitations; and the anomaly-related form by the severity of vestibular symptoms. The combined use of EEV, DHI, and SF-36 in clinical assessment enhances the ability to differentiate between these etiopathogenetic forms.

References

1. Lima Neto A.C., Bittar R., Gattas G.S. et al. Pathophysiology and diagnosis of vertebrobasilar insufficiency: a review of the literature. Int Arch Otorhinolaryngol. 2017;21(3):302–307.
2. Xaydarov N.K., Abdullaeva M.B., Tilavova X.O., Abdunazarov M.M. Klinicheskie osobennosti ostroy i xronicheskoy vertebrobazilyarnoy nedostatochnosti. Ta'limning zamonaviy transformatsiyasi. Toshkent davlat tibbiyot universiteti. P. 332–334.
3. Schneider J.I., Olshaker J.S. Vertigo, vertebrobasilar disease, and posterior circulation ischemic stroke. Emerg Med Clin North Am. 2012;30(3):681–693.
4. Caplan L.R., Wityk R.J., Glass T.A. et al. New England Medical Center Posterior Circulation Registry. Ann Neurol. 2004;56(3):389–398. DOI: 10.1002/ana.20204.
5. Headache Classification Committee of the International Headache Society. The International Classification of Headache Disorders, 3rd edition. Cephalalgia. 2018;38(1):1–211.
6. Lempert T., Olesen J., Furman J. et al. Vestibular migraine: diagnostic criteria. J Vestib Res. 2012;22(4):167–172. DOI: 10.3233/VES-2012-0453.
7. Mègnigbêto C.A., Sauvage J.P., Launois R. The European Evaluation of Vertigo (EEV) scale: a clinical validation study. Rev Laryngol Otol Rhinol. 2001;122(2):95–102.
8. Jacobson G.P., Newman C.W. The development of the Dizziness Handicap Inventory. Arch Otolaryngol Head Neck Surg. 1990;116(4):424–427. DOI: 10.1001/archotol.1990.01870040046011.

9. Ware J.E., Sherbourne C.D. The MOS 36-item short-form health survey (SF-36). I. Conceptual framework and item selection. Med Care. 1992;30(6):473–483.
10. Rizk H.G., Velozo C., Shah S. et al. Item level psychometrics of the Dizziness Handicap Inventory in vestibular migraine and Meniere's disease. Ear Hear. 2023;45(1):106–114. DOI: 10.1097/AUD.0000000000001405.

