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## ASSESSMENT OF NEUROLOGICAL CONDITIONS IN ADULTS WITH ARTERIAL HYPERTENSION

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Relevance of topic: Arterial hypertension is a major risk factor for neurological disorders, significantly impacting cognitive function, cerebrovascular health, and overall quality of life. The assessment of neurological conditions in adults with hypertension is essential for early detection and intervention to mitigate complications such as stroke, cognitive decline, and autonomic dysfunction.

Materials and Methods: This study retrospectively examined 100 adult patients diagnosed with arterial hypertension over a three-year period. The evaluation of neurological conditions included the following diagnostic methods:

1. Clinical Neurological Examination: Assessment of motor, sensory, and reflex functions.
2. Neuroimaging Studies: MRI and CT scans to identify cerebrovascular changes and structural brain abnormalities.
3. Cognitive Assessments: Standardized tests such as the Montreal Cognitive Assessment (MoCA) to evaluate memory, attention, and executive functions.
4. Autonomic Function Tests: Heart rate variability (HRV) and blood pressure monitoring during positional changes.
5. Laboratory Analysis: Monitoring lipid profiles, blood glucose levels, and inflammatory markers.

Patient outcomes were analyzed based on neurological symptom progression, imaging findings, and cognitive performance.

Results: The mean age of patients was  $54.6 \pm 9.2$  years, with a male-to-female ratio of 60:40. Chronic hypertension duration averaged  $12.3 \pm 7.1$  years. Neuroimaging revealed white matter hyperintensities in 68% of patients and microinfarcts in 35%. Cognitive impairment was observed in 62%, with memory and attention deficits being the most common issues. Autonomic dysfunction manifested as orthostatic hypotension in 40% and reduced heart rate variability in 52%. Comprehensive treatment, including antihypertensive therapy and lifestyle interventions, showed improvements in cognitive function for 48% and stabilization of autonomic symptoms in 60% of patients. Early detection and consistent management were critical in preventing severe neurological outcomes.

Discussion: The findings underscore the complex interplay between arterial hypertension and neurological health. Neurovascular damage due to



prolonged hypertension contributes to cognitive decline, autonomic dysfunction, and an elevated risk of cerebrovascular events. The results highlight the importance of regular neurological assessments and tailored treatment strategies for hypertensive patients. Pharmacological management, combined with cognitive training and lifestyle modifications, proved effective in mitigating neurological complications.

**Conclusion:** This study emphasizes the need for a multidisciplinary approach in assessing and managing neurological conditions in adults with arterial hypertension. Early intervention, comprehensive care, and consistent monitoring are essential for improving patient outcomes and preserving neurological function. Further research is required to explore advanced therapeutic strategies and long-term neurological outcomes in hypertensive populations.

### References:

1. Abdurakhmonov, N. (2024). THE IMPORTANCE OF DIFFERENTIAL DIAGNOSING IN TREATMENT OF MARGINAL BLEPHARITIS WITH DEMODEX ETIOLOGY. *Science and innovation*, 3(D5), 188-192.
2. Jurayev S.B. (2024). CURRENT TREATMENT OPTIONS OF ADHESIVE SMALL BOWEL OBSTRUCTION (LITERATURE REVIEW).  
<https://doi.org/10.5281/zenodo.14506496>
3. Khamdamov , R. (2025). ANALYSIS OF RISK FACTORS AND PREVENTIVE APPROACHES FOR MORPHOFUNCTIONAL ALTERATIONS IN NASAL ALAE DUE TO FURUNCLES. *Universal International Scientific Journal*, 2(1), 100–109. Retrieved from  
<https://universaljurnal.uz/index.php/jurnal/article/view/1412>
4. Khamdamov , R. (2025). ANALYSIS OF RISK FACTORS AND PREVENTIVE APPROACHES FOR MORPHOFUNCTIONAL ALTERATIONS IN NASAL ALAE DUE TO FURUNCLES. *Universal International Scientific Journal*, 2(1), 100–109. Retrieved from  
<https://universaljurnal.uz/index.php/jurnal/article/view/1412>
5. Niyozbek Abdurakhmonov Khamdamjon Ogli, & Gulomov Qahhorali (2024). IMPROVEMENT OF SURGICAL TACTICS AND TREATMENT OF COMBINED INJURIES IN CHILDREN. *Eurasian Journal of Medical and Natural Sciences*, 4 (5-2), 17-21. doi: 10.5281/zenodo.11367251
6. O'Gli P. S. S. KATTA YOSHLI BEMORLARDA FOKAL EPILEPSIYANI TURLI XILLIGINI EEG XUSUSIYATLARI //Ta'lim fidoyilari. – 2022. – T. 5. – №. 9. – C. 621-624.
7. PREVENTION OF TROPHIC ULCERS IN PATIENTS WITH ATHEROSCLEROSIS OF THE FOOT ARTERIES. (2025). INTERNATIONAL CONFERENCE ON MULTIDISCIPLINARY STUDIES AND EDUCATION, 2(1), 4-6. <https://eoconf.com/index.php/icmse/article/view/35>



8. Shuxrat o'g'li P. S. EEG CHARACTERISTICS OF DIFFERENT TYPES OF FOCAL EPILEPSY IN ADULT PATIENTS //Web of Medicine: Journal of Medicine, Practice and Nursing. – 2023. – Т. 1. – №. 9. – С. 1-3.
9. UROGENITAL DIABETIC NEUROPATHY: CLINICAL FEATURES AND TREATMENT. (2025). *INTERNATIONAL CONFERENCE ON MULTIDISCIPLINARY STUDIES AND EDUCATION*, 2(1), 7-9. <https://eoconf.com/index.php/icmse/article/view/36>
10. Жураев, С. Б. ОПТИМИЗАЦИЯ ТАКТИКИ ХИРУРГИЧЕСКОГО ЛЕЧЕНИЯ ПОВРЕЖДЕНИЙ АРТЕРИЙ КОНЕЧНОСТЕЙ ПРИ СОЧЕТАННЫХ ТРАВМАХ. «YOSH OLIMLAR TIBBIYOT JURNALI» TASHKENT MEDICAL ACADEMY «MEDICAL JOURNAL OF YOUNG SCIENTISTS» ТАШКЕНТСКАЯ МЕДИЦИНСКАЯ АКАДЕМИЯ, 82.

