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The Role of auditory Neuropathy in the hearing impairment in patients with arterial Hypertension

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Introduction: Pure tone audiometry is an insensible method for hearing examination in patients with arterial hypertension. What necessitates the search for the diagnostic of the level of hearing disorders.

Objective: 35 patients with low-risk primary hypertension with normal hearing threshold and 35 healthy patients studied at audiology department of the “The Republican Center for Research and Practice in Otolaryngology”, from 2018 to 2020 year.

The aim: To determine the topographic and functional level of damage of the hearing organ in patients with arterial hypertension.

The methodology: mathematical statistics, student t-test, Fisher test. All patients underwent DPOAE, TEOAE, tympanometry, acoustic reflexometry, auditory brainstem response, high-frequency audiometry, speech intelligibility tests.

The results: The study involved 70 individuals an equal men (N=38) and women (N=32) in the middle age at $35,31 \pm 10$ years (95% CI 18-55 years). All patients (N=70) were divided into 2 groups: 1 group (experience) – patients with hypertension, 2 group (control) –patients without hypertension. The experience group patients showed lower results by passing DPOAE. It was significantly revealed an elongation of the interval I-V with an increase in the amplitude and the latency of the wave I in the first group. Monosyllabic speech intelligibility test, Rapidly alternating speech perception test were $65 \pm 5\%$ ($\geq 0,95$) with an extremely low percentage of passing digital dichotic tests- $25 \pm 5\%$ ($\geq 0,95$) in patients of the first group.

Conclusion: Arterial hypertension causes damage to the hearing organ at the central and peripheral levels. Auditory synaptopathy leads in the hearing impairment in patients with primary arterial hypertension. Speech intelligibility tests and dichotic digits test should be used for diagnosing hearing impairment in addition to the standard battery tests.

Biography

Lisotskaya V has expertised in evaluation and rehabilitation patients with hearing impairment, her concept of a personified approach in the diagnosis, treatment and rehabilitation of patients with hidden hearing loss, tinnitus is a new direction in the healthcare. she has built this model after years of experience in research, evaluation, teaching and administration both in hospital and education institutions. this approach is responsive to all stakeholders and has a different way of focusing.

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