

## **P22. Heart rate variability in patients with vibration disease complicated with hypertension**

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Objective: to study heart rate variability (HRV) in patients with vibration disease (VD) complicated with hypertension (HT). Materials-Methods: Study involved 60 persons, main group – 25 patients with VD stage II and HT stage II, 2nd degree. Comparison group consisted of 20 patients with VD stage II without HT. Control group included 15 almost healthy individuals. During the study patients received antihypertensive therapy: Amlodipine 5 mg and Lisinopril 5 mg 1 time per day per os during 14 days. HRV was carried out before and after treatment. Results: Low frequency/High frequency index (LF/HF) was significantly higher in the study group before treatment compared with both comparison group and control group, while the comparison group and control group were not reliably distinguished among themselves (LF/HF in the study group before treatment - 5.64 [4.87 - 7.56]  $p < 0,05$ , comparison group - 3.88 [3.61 - 4.58], control group 2.85 [2.22 - 3.08];  $p > 0,05$ ). Patients of main group had decrease in LF after treatment (LF in the study group before treatment - 1507 [1105 - 1861], after treatment - 1014 [887 - 1956];  $p < 0,05$ ). Also patients of main group after treatment had no significant differences from control group (LF in main group after treatment 1014 [718 - 1084, control group - 1051 [478 - 1385];  $p > 0,05$ ). Patients of main group had reduction of LF/HF index (before treatment - 5.64 [4.87 - 7.56] after treatment - 3.95 [3.94 - 4.64];  $p < 0,05$ ). Conclusions: The presence of HT in patients with VD provides additional negative effect on the HRV, which may cause increasing the risk of mortality. Antihypertensive therapy which include Lisinopril 5 mg and Amlodipine 5 mg in patients with VD and HT lead to a decrease in the influence of the sympathetic system and risk of mortality.

**Keywords:** heart rate variability, vibration disease, hypertension