

Cardiovascular risk in patients with arterial hypertension and type 2 diabetes mellitus

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Objectives. The aim of this study was to estimate the relation of cardiovascular risk (CVR) to daily profile of BP and degree of type 2 diabetes mellitus (T2-DM) compensation in hypertensive patients.

Material and methods. 70 patients (34 males and 36 females, average age 57.5±2.3 years) with arterial hypertension (AH) and T2-DM were investigated. Average duration of AH was 9.4±1.2 years and average duration of T2-DM was 8.4±1.3 years. All patients underwent 24-hours ambulatory blood pressure monitoring (ABPM), 24-hours ambulatory electrocardiography monitoring (AECGM) and assessment of HbA1c. 12 healthy persons were included into control group. CVR was estimated by standard deviation of normal-to-normal R-R (SDNN) from AECGM.

Results. There were 4 groups of patients depending on the profile of ABPM and efficacy of glycemic control of T2-DM (the level HbA1c was 5.4±0.2% in healthy persons): 1 group (N=19) - "dipper" with subcompensated T2-DM (HbA1c 7.8±0.5%); 2 group (N=17) - "dipper" and decompensated T2-DM (HbA1c 9.4±0.6%); 3 group (N=18) - "non-dipper" and subcompensated T2-DM (HbA1c 7.9±0.5%); 4 group (N=16) - "non-dipper" and decompensated T2-DM (HbA1c 9.9±0.6%). The SDNN in first group was 120.5±9.5 mc and wasn't discriminated ($p>0.05$) from healthy persons (134.4±9.4 mc). In the second group the SDNN was decreased - 86.6±5.4 mc ($p<0.05$). In the third group it was moderately decreased - 98.6±6.8 mc ($p<0.05$). In the fourth group SDNN was significantly decreased compare to healthy persons - 78.5±5.2 mc ($p<0.05$).

Conclusions. The CVR was more significant in patients with "non-dipper" ABPM profile and poor control of the glycemia. Among patients with AH and T2-DM the CVR was more dependent from degree of T2-DM compensation, than from profile of ABPM.