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

Zhuravlyova L., Ilchenko I., Yankevich A.
Kharkov National Medical University

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 forth 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.