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The relationship between arterial blood pressure and glucose level in blood in patients with type 2 diabetes mellitus and arterial hypertension

Over 20-30% patients with arterial hypertension (AH) have disorders of carbohydrate metabolism and near 50-80% patients with type 2 diabetes mellitus (DM-2) have high arterial blood pressure (ABP). Presence of insulin resistance [1, 2; p. 74-80, p. 229-233], which associated with disorder of the biological action of insulin, and high concentration of glucose in blood as well often is accompanied by AH. Research of the correlations between ABP and blood sugar level (BSL) has scientific and practical interest.

Purpose. The study was designed to establish the correlation of ABP and BSL in patients with DM-2 and in combination with AH.

Materials and methods. The study was performed on 62 middle-aged patients with DM-2, which entered in the department of endocrinology of the Regional Clinical Hospital for correction of insulin therapy. All patients were divided into 2 groups: 1 group (n=29) patients with isolated DM-2, 2 group (n=23) – patients with comorbid pathology (DM-2 in combination with AH). Measurement of ABP and BSL was performed on an empty stomach upon admission and at discharge. The statistical processing of data was executed in the program STATISTICA 6.1.

Results. The direct correlation was established between systolic blood pressure (SBP), diastolic blood pressure (DBP) and BSL in 1 group ($r=0,74$; $p<0,05$) and in 2 group ($r=0,69$; $p<0,05$) of patients.

Conclusions. The presence of direct correlation between SBP, DBP and BSL in groups of patients with DM-2 and AH confirms, that mechanisms of interrelations of the vascular and metabolic disturbances are activated and amplified in patients with DM-2, especially in combination with AH.

Література:

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