

[2012][P1826] The relationship between additional markers of cardiovascular risk and the complex metabolic and haemodynamic parameters in hypertensive patients with obesity

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Objective: The objective is to evaluate the relationship between indicators carbohydrate metabolism, serum apolipoprotein B (apo B) and apolipoprotein A1 (apo A1) level and blood pressure in hypertensive patients with obesity.

Materials and methods: 102 patients on average age 54.9 ± 9.94 with hypertension and obesity were examined. They were matched in age and sex. Control group consisted of 21 healthy men aged on average 53.40 ± 11.80 years. All patients underwent clinical examination that included anthropometric examination, assessment of carbohydrate metabolism (fasting glucose, insulin, glyciated hemoglobin (Hb A1c) levels) and determine the level of apolipoproteins (apo B and apo A1) immunoturbidimetric method. According to the criteria of the IDF, 2005 was diagnosed abdominal obesity and to definition the glucometabolic profiles. Oral glucose tolerant test and glaciated hemoglobin was used to exclude patients with 2 type DM.

Results: In hypertensive patients with obesity revealed a positive significant association between rate of waist circumference and insulinaemia ($R=0.24$; $p < 0.01$), apo B ($R=0.21$; $p < 0.02$), and negative significant association with level apo A1 ($R=-0.29$; $p < 0.002$). For 57.84% of them identified insulin resistance (IR). In individuals with IR glycaemia was associated with DBP ($R=0.41$; $p < 0.05$), but not with SBP. In hypertensive patients without IR reliable relationship between metabolic and haemodynamic parameters haven't been identified. In hypertensive patients with obesity and IR revealed an association between levels of apo B and total cholesterol (TC) ($R=0.29$; $p < 0.05$), high density lipoproteins cholesterol (HDL-C) ($R=-0.28$; $p < 0.05$), low-density lipoprotein cholesterol (LDL-C) ($R=0.31$; $p < 0.05$), and triglycerides ($R=0.46$; $p < 0.05$), but no relationship with levels of apo A1. On the other hand, hypertensive patients with obesity and without IR revealed the relationship between levels of apo B and TC ($R=0.53$; $p < 0.05$), LDL-C ($R=0.49$; $p < 0.05$). At the same time antiatherogenic marker (apo A) is negative associated with TC ($R=-0.46$; $p < 0.05$), and LDL-C ($R=-0.48$; $p < 0.05$).

Conclusion: This study showed that in hypertensive patients with obesity the relationship between the levels of additional atherogenic markers in the presence of higher insulin resistance. Probably haemodynamic factors, together with insulin resistance contribute to the formation of atherogenic potential, especially if they have abdominal obesity.

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