APELIN AS A MARKER OF AN INSULIN RESISTANCE IN PATIENTS WITH ESSENTIAL HYPERTENSION

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Aim of investigation was to estimate a serum level of apelin in patients with essential hypertension (EH) and insulin resistance (IR).

Materials and methods: 94 patients (pts) with EH were examined. Clinical and laboratory methods were used. Diagnosing was done according ESH 2009 guidelines. Apelin-12 plasma levels were detected using ELISA (Phoenix pharmaceuticals).

Results: pts were age sex matched, were divided according fasting insulin into 2 groups (1 - over 12,2 mOD/ml – 57 pts; 2 - less than 12,2 mOD/ml – 37 pts). Apelin level was significantly higher in pts with EH and IR (0,32±0,22 pgr/ml) comparing to 2gr (0,21±0,09 pgr/ml) and control (0,13±0,01 pgr/ml). Apelin correlates with IR Caro index (r=-0,38; <0,05), fasting insulin (r=0,49; <0,05). In pts of 2 gr. apelin correlates with HbA1c(r=0,52<0,05). FINDRISK questionnaire results showed significantly higher data in pts with EH and IR, means increased risk of of type 2 diabetes development.

Summary: insulin resistance was estimated in 54,5%. It was accompanied by overexpression of apelin, increased risk of type 2 diabetes development, pronounced changes in lipids profile and high atherogenic index. It’s possible to use apelin activity as a marker of insulin resistance in patients with essential hypertension.