CONDITION OF COMMON CAROTID ARTERY AND LEVELS OF VISFATIN AND INTERLEUKINS HYPERTENSIVE PATIENT'S

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Purpose: To determine the changes in levels of visfatin features and interleukin-4, 6 (IL-4, 6) in the serum of patients with essential hypertension (EH) with and without abdominal obesity (AO) depending on the state of the thickness of common carotid artery (CCA).

Materials and methods: The survey of 93 patients was conducted randomly. A study group comprised 64 patients with EH in conjunction with AO, which were - 31 men (48.4%) and 33 women (51.6%). The comparison group consisted of 29 patients who had only EH: 14 men (48.3%) and 15 women (51.7%), respectively. The average age of hypertensive patients was (58 ± 3,3) years. The levels of visfatin and IL-4, 6 were determined by immunoassay method and the levels of triglycerides – by enzyme-photometric method. Definition of intima-media thickness (IMT) CCA was conducted using doppler ultrasound. Statistical processing of the results of research was conducted with the help of MS® Excel®2013 ™ software version 6.1 and STATISTICA.

Results: Comparing the level of visfatin with normal IMT CCA there was a significant increase of the first one's level founded only in group with hypertensive patients with AO. Analyzing the level of visfatin with different IMT CCA, a significant increase of this adipocytokine was founded only with pathological thickening of the vessel wall – (39,49 ± 1,51) ng / ml in EH-group with AO and (24,46 ± 1,48) ng / ml in EH-group without AO ($p < 0.05$). Also, there was a positive correlation between the level of visfatin and body mass index founded in EH-group with AO ($r = 0,49$, $p < 0.05$) and without AO ($r = 0,41$, $p < 0.05$). Comparing the level of IL-6 with a IMT CCA there was a positive correlation between the latter in EH-group with AO established ($r = 0,42$, $p < 0.05$). In addition, there was a negative correlation between the levels of IL-4 and visfatin founded ($r = -0,41$, $p < 0.05$). One of the atherogenic indices causing a significant increase of the visfatin's level in blood is hypertriglyceridemia. This fact is confirmed by a positive correlation between the levels of visfatin and triglycerides in EH-group with AO with increasing IMT CCA ($r = 0,43$, $p < 0, 05$).

Conclusions: There was founded, that all of the hypertensive patients regardless of the presence of AO have the damage of CCA, in which levels of visfatin and IL-6 are significantly increased. The results indicate the need for medicines reducing the levels of IL-6 and visfatin to decrease inflammation in the vascular wall. The detected imbalance between IL-4 and visfatin suggests a possible protective effect of this cytokine in the development of vascular remodeling.