

The relationship between the presence of atherosclerotic plaque and vaspin level in patients with type 2 diabetes mellitus and chronic pancreatitis

L. Zhuravlyova, D. Pylov, A. Zhuravlyova

Kharkiv National Medical University, Kharkiv, UKRAINE

Introduction. Type 2 diabetes mellitus (T2DM) is highly atherogenic disease not only due to hyperglycemia and frequent concomitant disease but also due to the presence of a number of adipocytokines that contribute to atherogenesis.

Aims. To determine the relationship between the presence of atherosclerotic plaque and vaspin level in patients with T2DM and chronic pancreatitis (CP).

Materials and methods. 60 patients with T2DM and CP were examined. Patients had no prior cardiovascular events. The levels of fasting plasma glucose (FPG), HbA1C, immunoreactive insulin (IRI), fecal elastase-1 (FE-1) and vaspin were assessed. HOMA-IR index was calculated. An ultrasound scan of the common carotid artery (CCA) was performed.

Results. 68,3% (n = 41) of examined patients had atherosclerotic plaques in the CCA. The mean values of studied indices were the following: FPG ($8,57 \pm 1,2$) mmol/l, HbA1C ($7,49 \pm 0,36$)%, HOMA-IR ($8,38 \pm 2,2$) IU/ml $\times$ mmol/l, FE-1 – ($137,51 \pm 15,2$) mg, vaspin - $1,78 \pm 0,24$ pg/ml. Vaspin had a relationship with: FPG ($r = -0,61$, $p < 0,001$), HbA1C ($r = -0,6$, $p < 0,001$), IRI ($r = -0,67$, $p < 0,001$), HOMA-IR ($r = 0,37$, $p = 0,02$). Vaspin had no significant relationship with the presence of atherosclerotic plaque ($r = -0,02$, $p = 0,08$).

Conclusion. The obtained data suggest the absence of reliable relationships between vaspin levels and the structure of atherosclerotic plaque, in contrast to the parameters of carbohydrate metabolism. We presume that vaspin is involved in the formation of atherosclerotic plaque indirectly, influencing the main atherogenic parameters of carbohydrate metabolism.