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THE RELATIONSHIP OF SERUM INFLAMMATORY FACTORS, ADIPONECTIN AND EARLY ATHEROSCLEROTIC IN TYPE 2 DIABETES

Chen Yanming¹, Xiong Zhaojun², Yin Qiongli³, Zhang Hui⁴, Wang Manman¹, Zeng Longyi¹, Qian Xiaoxian² ¹Department of Endocrinology, The Third Affiliated Hospital of Sun Yat-Sen University, Guangdong, China; ²Department of Cardiology, The Third Affiliated Hospital of Sun Yat-Sen University, Guangdong, China; ³Department of Advanced Medical Center, The Third Affiliated Hospital of Sun Yat-Sen University, Guangdong, China; ⁴Department of Ultrasound, The Third Affiliated Hospital of Sun Yat-Sen University, Guangdong, China

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Objective To investigate the relationship of serum inflammatory factors, adiponectin and early atherosclerotic in type 2 diabetic patients (T2DM).

Methods All 125 type 2 diabetic patients were divided into two groups according to the carotid intima-media thickness (CIMT) as follows: 65 cases of non-atherosclerotic diabetic patients with CIMT ≤ 0.9 mm and another 60 cases of atherosclerotic diabetic patients with CIMT > 0.9 mm or with plaque rupture being found. Thirty non-diabetic subjects were recruited as normal control. The clinical characteristics were collected for each patient. Serum fasting plasma glucose (FPG), glycation haemoglobin A1c (GHbA1c), fasting insulin (FINS), 2 h postprandic plasma glucose (2hPG), lipid profiles were measured. Serum levels of adiponectin, intercellular adhesion molecule-1 (ICAM-1), tumour necrosis factor- α (TNF α) and high sensitive C-reactive protein (hs-CRP) were also detected. Insulin resistance index (HOMA-IR) was calculated.

Results (1) The serum levels of TNF α and hs-CRP, HOMA-IR were significantly higher in atherosclerotic patients than that of non-atherosclerotic and control subjects. However, the level of adiponectin in arteriosclerosis group was lower than other two groups. (2) There were negative correlation between adiponectin and CIMT, ICAM-1, TNF α , hs-CRP and HOMA-IR ($r=0.574, -0.635, -0.681, -0.768, -0.752, p<0.01$). There were negative correlation between HOMA-IR and ICAM-1, TNF α , hs-CRP ($r=0.657, 0.706, 0.688, p<0.01$). (3) TG, LDL-C and HOMA-IR were risk factors of T2DM complicated with arteriosclerosis according to multiple regression analysis.

Conclusion The results suggested that inflammatory factors and adiponectin involved in the occurrence and development of diabetic vascular complications. The protective effects of adiponectin may exist in its anti-inflammation to improve insulin resistance and inhibit the development of atherosclerosis.