POSITIVE ASSOCIATION BETWEEN ADIPONECTIN LEVEL AND HDL-CHOLESTEROL LEVEL IN TYPE 2 DIABETES

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BACKGROUND/AIMS: Atherosclerotic cardiovascular complications are the major causes of morbidity and mortality in type 2 diabetic patients Adiponectin is a recently identified protein that is produced exclusively by adipose tissue. Many studies demonstrated that it has both anti-atherogenic and anti-diabetic properties. This study aimed to examine the regulatory roles of serum adiponectin level in a homogenous type 2 diabetes cohort.

METHODS: From a population of 1236 registered diabetic patients, 116 subjects who met the following criteria were enrolled in the study: (1) between 40 and 70 years old, (2) Chinese, (3) had type 2 diabetes for more than 1 year, and (4) had been taking gliclazide and metformin for more than 6 months. All subjects were assigned to one of four plasma adiponectin level categories according to quartiles: quartile 1 (<25%), quartile 2 (25-49%), quartile 3 (50-75%) and quartile 4 (>75%), for further assessment and comparison. The main outcomes evaluated were factors associated with plasma adiponectin level using multiple linear regression analysis.

RESULTS: There were significant difference in insulin level and HDL-cholesterol level among quartiles of plasma adiponectin level categories according to the results of linear trend test (p=0.03, p=0.003). The coefficients of multiple regression analysis with force in run full model showed that HDL-cholesterol level (β=0.312, p=0.003) was the only and main predictor of adiponectin concentrations after adjusting for other factors in a homogeneous group of type 2 diabetic subjects.

DISCUSSION/CONCLUSIONS: These initial findings seem to denote a positive association between adiponectin level and HDL-cholesterol level in Type 2 diabetes.

Key words: Type 2 diabetes; Adiponectin; HDL-cholesterol