



ROLE OF ADIPONECTIN IN PATIENTS WITH NON-INSULIN DEPENDENT DIABETES MELLITUS

A. M. El-Nuweihy, N. T. El-Melegy, N. F. Ameen and E. M. Radwan

Abstract:

Adiponectin is a collagen-like protein that is solely secreted by adipocytes. Different studies showed that it plays an important role in the pathophysiology of insulin resistance, diabetes and dyslipidemia and thus affects risk for cardiovascular disease and obesity. In the present study the role of adiponectin in pathogenesis of type 2 diabetes mellitus was evaluated. The current study was carried on 51 diabetic patients with documented NIDDM and 22 age and sex matched healthy controls. Diabetic patients were subdivided into 2 subgroups according to BMI where 40 were obese and 11 were non obese and according to the presence of cardiovascular disease with obesity where 16 were obese with CVD and 24 were obese with no CVD. Controls were subdivided according to BMI where 7 were non obese and 15 were obese. The levels of plasma adiponectin, insulin, c-peptide, fasting blood glucose, glycated hemoglobin, lipid profile, NO and lipid peroxides. The results of the present study showed that adiponectin was significantly lower in all groups with variations compared to controls, in obese patients with CVD than those without CVD. NO and MDA levels were higher in diabetic patients than in controls and the highest levels of MDA were observed in patients with cardiovascular disease. Lipid profile was altered in diabetic patients showing higher levels than in controls. In the diabetic patients, adiponectin was significantly positively correlated with NO and HDL, while it was significantly negatively correlated with glucose, HbA1C, Cholesterol, LDL, insulin and c-peptide. The ability of adiponectin to increase insulin sensitivity in conjunction with its anti-inflammatory and anti-atherogenic properties have made this novel adipocytokine a promising therapeutic tool for the future.

Keywords:

Adiponectin, Type 2 diabetes Mellitus

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