**Study of Adiponectin Level in Diabetic Adolescent Girls in Relation to Glycemic Control and Complication of Diabetes**

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**OBJECTIVE**

to study the relation between adiponectin level with glycemic control and complication of diabetes.

We are aiming to determine the influence of adolescent girls with type 1 DM on circulating levels of adiponectin and to study the relation between adiponectin level with glycemic control and complication of diabetes.

**METHODS**

It is a cross-sectional observational study done after obtaining approval from the ethical committee of the National Research Centre, Cairo, Egypt. It conforms to the provisions of the Declaration of Helsinki (as revised in Edinburgh 2000).

The study included 40 female adolescents with type 1 diabetes mellitus attending the Pediatric Endocrinology Out-patient Clinic, National Research Center, Cairo, Egypt. Another group of 40 age matched healthy female adolescents with no obvious medical disorders and not receiving any medication were enrolled as a control group.

Inclusion criteria is type 1 diabetic females on insulin therapy with age between 9-18 years. Exclusion criteria is adolescent girls with other chronic diseases.

**Methods:**

All included cases were subjected to full medical history taking. Assessment of anthropometric data, blood pressure. Clinical examination including; chest, cardiac, abdomen and neurological examination were done for all patients.

All patients and controls underwent the following tests: lipid profile, Assessment of glycosylated hemoglobin (% (HbA1 %) and reviewing two previous readings to calculate the mean value of HbA1 % in the last year prior to the study. Reviewing the records of urinary albumin excretion in an early morning fasting urine sample was determined as urinary albumin-to-creatinine ratio.

**RESULTS**

Diabetic patients had a significantly higher diastolic blood pressure, triglyceride, total cholesterol, LDL and adiponectin than controls. Patients with diabetes complication had a significant lower BMI and HDL. On the other hand, they had higher disease duration, total cholesterol, HbA1, albumin / creatinine ratio and adiponectin. Patients with microalbuminuria had a lower BMI, higher disease duration, diastolic blood pressure and adiponectin. Patients with diabetic retinopathy had higher disease duration, insulin dose, HbA1, microalbuminuria and adiponectin. Adiponectin in diabetic patients had a significant negative correlation with BMI and positive correlation with systolic blood pressure and microalbuminuria.

**Conclusion:** serum adiponectin level is high in adolescent type 1 diabetic girls. It can be used as a predictor of diabetes complications rather than a sensitive biochemical marker for glycemic control.

**CONCLUSIONS**

We conclude that serum adiponectin level is high in adolescent type 1 diabetic girls. It can be used as a predictor of diabetic complications rather than a sensitive biochemical marker for glycemic control.