

Thyroid Autoimmunity in Type 2 Diabetic Female Patients

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BACKGROUND:

High prevalence of thyroid disorders is more common in T1 compared to T2 Diabetes Mellitus due to the associated autoimmunity, with hypothyroidism being the most common disorder.

OBJECTIVES:

The aim of this study is to assess the prevalence of thyroid dysfunction among T2 diabetic Egyptian females and to find the correlation between the metabolic syndrome components and autoimmune thyroid dysfunction.

METHODS:

The study included 81 T2 diabetic Egyptian female subjects and 60 sex and aged matched controls. Patients were divided in two age groups (\leq or $>$ 40 years). All patients in the study were subjected to anthropometric measures, HbA1c, lipid profile, serum uric acid, TSH, FT3, FT4, Anti TPO, Anti TG and thyroid ultrasound.

RESULTS:

Hypothyroidism was found in 35.8% of patients ($5.17 \pm 3.30 \mu\text{IU/ml}$) versus 10% of controls

($1.77 \pm 1.18 \mu\text{IU/ml}$) ($p < 0.001$). Anti TPO was found in 52% ($323.68 \pm 245.84 \text{ IU/ml}$) of patients versus 5% ($29.95 \pm 28.62 \text{ IU/ml}$) of control ($p < 0.001$). Anti TG was found in 40% ($476.98 \pm 361.15 \text{ IU/ml}$) of patients versus 0% ($54.12 \pm 38.20 \text{ IU/ml}$) of control ($p \text{ value} < 0.001$). A significant positive correlation was found between antithyroid antibodies (ATG, ATPO) and TSH ($P \text{ value: } 0.002, 0.008$ respectively). A significant positive correlation was found between all components of metabolic syndrome and TSH, but not with thyroid antibodies.

CONCLUSION:

Autoimmune thyroid disease is more common in Egyptian women with T2 diabetes than non diabetic women, regardless the age, and therefore raising a role of autoimmunity in the pathogenesis of T2DM. Thyroid dysfunction is positively correlated with increased cardiovascular risk in women with T2 diabetes

KEYWORDS:

Autoimmune thyroid dysfunction, TSH, Anti TPO, Anti TG, T2 Diabetes, Metabolic syndrome

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