

**THYROID FUNCTION, SERUM LIPIDS AND INSULIN RESISTANCE IN PATIENTS WITH AUTOIMMUNE THYROIDITIS**

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**Background:** Thyroid disease, insulin resistance, and serum lipids are associated with cardiovascular disease.

**Objective:** To evaluate the hypothesis that thyroid function, in euthyroid subjects with autoimmune thyroiditis (AIT) is associated with insulin resistance, serum lipid concentrations and other cardiovascular (CV) risk factors.

**Methods:** We recorded in 112 patients (91,2 % females; mean age of 48,42 ± 14,2 years) with AIT, thyroid function tests, BMI, insulin resistance markers (HOMA, QUICKI, Hepatic Insulin Sensitivity Index, Whole-Body Insulin Sensitivity Index (WBISI), Insulinogenic Index (IGI)) and total cholesterol, HDL, LDL-cholesterol, triglycerides (TG), apolipoprotein B (ApoB), ApoA1, lipoprotein (a) (Lp[a]), homocysteine, C-reactive protein (CRP), folic acid and vitamin B12 levels. A 75-g OGTT was performed and blood samples for glucose, insulin, and C-peptide were obtained. Statistical analysis was performed with ANOVA and Persons Correlations test. Results are expressed as means ± SD or percentages. A two-tailed p value < 0.05 was considered significant.

**Results:** There were significant positive correlations between TSH and serum total cholesterol (R=0.382, P=0.01), LDL (R=0.384; P= 0.01), TG (R=0.278; P=0.01), and ApoB (R=0.341; P=0.01). BMI was positively correlated with FT4 (R=0.274; P=0.01) and negatively with HDL (R=-0.279; P=0.01) and Apo A1 (R=-0.299; P=0.01). There were significant negative correlations between CRP and HDL (R=-0.269; P=0.01) and a positive correlation between CRP and TG (R=0.567; P=0.01) and homocysteine (R=0.234; P=0.05). There were significant positive correlations between IGI and TG (R=0.264; P=0.01) and TSH (R=0.217; P=0.05), and between WBISI and HDL-C (R=0.203; P=0.05).

**Conclusion:** Thyroid function and lipid levels are associated even in subjects classified as being euthyroid. These findings are consistent with an increased cardiovascular risk in subjects with low normal thyroid function.