Plasma Visfatin/ Pre-B-cell Colony Enhancing Factor levels in hypothyroid patients and relationship of these levels with thyroid autoimmunity and atherosclerosis.

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Background: Visfatin/pre-B-cell enhancement factor is an adipocytokine, which is found in the visceral fat tissue and enhances the growth of precursor of B cells through showing synergy with IL-7 and stem cell factors. Other cytokines released from the adipose tissue are TNF-α, and IL-6, which has been shown to be related with pathogenesis of insulin resistance, diabetes, dyslipidemia, inflammation and atherosclerosis. Our aim was to determine the relationship of plasma visfatin/ Pre-B-cell Colony Enhancing Factor levels with thyroid autoimmunity, and atherosclerosis.

Material and Methods: The study was performed randomly on 35 patients (32 women/ 3 men, mean age 43.8 ± 9.6 years) diagnosed with Hashimoto thyroiditis and 18 healthy controls (17 women/ 1 men, mean age 43.3 ± 5.2 years) attending our outpatient clinic between June 2009 and January 2010. Before therapy anthropometric levels, carotid intima media thickness (CIMT), serum anti-Tg, anti-TPO, hsCRP, homocystein, lipo(a), ApoA, ApoB1, beta-2 microglobulin, insulin, glucose, Visfatin, IL-6, TNF-α, oxidized-LDL levels and lipid profile was measured.

Results: Plasma visfatin oxidized -LDL, IL-6, and TNF-α levels did not differ from the control group before and after therapy in hypothyroid patients, statistically (Table 1,2). The cardiovascular risk factors like systolic and diastolic blood pressure, HOMA-IR index, triglyceride, Apo B and ApoB/ApoA, homocystein, beta-2 microglobulin, CIMT were found to be elevated in the patients (Table 3). Ox-LDL, cholesterol, homocystein and proteinuria levels were positively correlated with anti-Tg levels (Table 4).

Conclusion: We think that nontraditional CVD risk factors are elevated in hypothyroid Hashimoto thyroiditis patients and as a atherosclerosis indicator CIMT increase accompanies it and anti-Tg antibody is a bridge between autoimmunity and atherosclerosis.

Key Words: Hypothyroidism, Atherosclerosis, Visfatin, Autoimmunity