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

Ucan B[1], Kebapci N[2], Uslu S[2], Kara M[2], Efe B[2], Oner S[2].
[1] Ministry of Health AIBU Izzet Baysal Medical Faculty Training and Research Hospital, Bolu, Turkey
[2] Osmangazi University Medical Faculty, Eskisehir, Turkey

**Backround :** 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-Bcell 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 nontradiotional 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

Table 1. The comparison of adipocytokines and oxidized-LDL in Hypothyroid patients and healthy controls

| | Hypothyroid patients (n=35) | Controls (n=18) | P |
|---|---|---|---|
| **Visfatin (ng/ml)** | 6.29 ± 1.63 | 6.36 ± 1.51 | P = 0.600 |
| **Ox-LDL (ng/ml)** | 111.25 ± 156.16 | 83.83 ± 68.38 | P = 0.077 |
| **TNF-α (pg/ml)** | 5.24 ± 3.08 | 4.43 ± 1.78 | P = 0.225 |
| **IL-6 (pg/ml)** | 4.32 ± 2.65 | 3.92 ± 1.12 | P = 0.199 |

Table 2. The comparison of adipocytokines and oxidized-LDL in before and after treatment Hypothyroid patients

| | Pre-treatment (n=35) | Post-treatment (n=35) | P |
|---|---|---|---|
| **Visfatin** | 6.29 ± 1.63 | 6.08 ± 1.85 | P = 0.600 |
| **Oksidized-LDL** | 111.25 ± 156.16 | 143.53 ± 251.95 | P = 0.077 |
| **TNF-α** | 5.24 ± 3.08 | 7.10 ± 7.98 | P = 0.225 |
| **IL–6** | 4.32 ± 2.65 | 17.86 ± 6.97 | P = 0.199 |

Table 3. The Correlation analysis between Anti-Tg and cardiovascular risc factors

| | r | p |
|---|---|---|
| **Anti-Tg – Ox-LDL** : | 0.373 | **0.027** |
| **Anti-Tg – T. kol** | 0.365 | **0.031** |
| **Anti-Tg – Homosistein** | 0.390 | **0.021** |
| **Anti-Tg – Proteinüri** | 0.577 | **0.000** |


DOI: 10.3252/pso.eu.17ece.2015
Poster presented at: ECE2015 16–20 May 2015 DUBLIN, IRELAND 17th EUROPEAN CONGRESS OF ENDOCRINOLOGY
PosterSessionOnline.com