# AUTOIMUNE ANTIBODIES IN THYROID DISEASES

1 Danijela Janicevic-Ivanovska, 1 Saska Domazetovska, 1 Valentina Koloska, 2Biljana Gorgoska 1 University Clinic of Clinical Biochemistry, Faculty of Medicine, Ss. Cyril and Methodius University, Skopje, Macedonia 2 University Goce Delcev, Stip,

Macedonia Email: djanicevic@yahoo.com

Background: Irrespective of the recommendations to use the measurement of serum TSH as cornerstone of thyroid function testing, the laboratory diagnosis and monitoring of thyroid diseases are based on the thyroid panel including TSH, FT4, TT4, TT3, FT3, anti–TPO and anti-TG. Autoimmune thyroid diseases include Graves' disease, Hashimoto thyroiditis and these types of disorders are caused by immune system malfunction. In other words, instead of protecting the body's healthy tissues, malfunctioning immune cells actually attack them.

Methods: Morning serum concentrations of anti-TPO and anti-TG were assessed in a prospective study in 50 subjects with Graves' disease, 50 subjects with Hashimoto thyroiditis and 40 healthy subjects as control 52 BALKAN JOURNAL OF CLINICAL LABORATORY - XXVI, 18, 1 th 26 BCLF 2018 Skopje l October 3 - 5, 2018 group. Serum concentration of anti–TPO and anti-TG were determined by chemiluminescence immunoassay using Immulite 2000 analyzer.

Results: The following results were obtained: serum concentration of anti-TPO in the control group was 3.7 IU/mL ± 0.46, in Graves' disease 195 IU/mL ± 0.70 and in Hashimoto thyroiditis 238.5 IU/mL± 0.95. Serum concentration of anti-TG in Hashimoto thyroiditis was highest (333.3 IU/mL ± 0.55). Patients with Graves' disease and Hashimoto thyroiditis showed significantly higher concentrations of anti-TPO and anti-TG compared to healthy individuals ($P<0.001$).

Conclusion: Serum concentrations of anti-TPO and anti-TG organ specific autoantibodies respectively are very precious parameters - markers for reliable diagnosis of autoimune thyroid diseases.