The aim: Analysis of the correlation of maternal antithyroid antibodies in pregnancies complicated with autoimmune thyroid disease with the frequency of miscarriages.

Patients and methods: Prospective and observational study included 71 patients. 20 patients with autoimmune hyperthyreosis, 31 with autoimmune hypothyreosis and 20 healthy pregnancies. All patients were tested for fT4, TSH, anti-TPO and TSH receptor antibodies (TRAK). Results: Hyperthyroid patients reported an incidence of previous miscarriage at a rate of 20% and all of them reported one previous pregnancy loss. Hypothyroid patients reported an incidence of previous miscarriage at a rate of 35.5%. Reported incidence of previous miscarriage at a rate of 15% in the control group. Average values of anti-TPO antibodies in patients without previous pregnancy loss were 173.32, SD 360.66. Average values of anti-TPO antibodies in patients with previous pregnancy loss were 231.43, SD 293.256. Average values of TRAK antibodies in patients without previous pregnancy loss were 14.83, SD 57.06. Average values of TRAK antibodies in patients with previous pregnancy loss were 12.01, SD 19.56. We did not find a significant difference in the average anti-TPO antibodies comparing patients with and without previous pregnancy loss, (Kruskal-Wallis 1.265, p> 0.05), as well as in the group with TRAK antibodies (Kruskal-Wallis 0.968, p> 0.05). Conclusion: Our results show a difference in anti-thyroid antibodies serum concentrations in patients with previous pregnancy loss compared to those without pregnancy loss. Rate of pregnancy loss similar to that in the control group could possibly be explained with good treatment control of disease and primary influence of normal fT4 values in maternal blood on the rate of spontaneous abortion. Correlation of antithyroid antibodies with pregnancy loss could be explained by the influence of antibodies on the fT4 values in maternal blood.