OBJECTIVES

It is known that thyroid peroxidase is expressed on the apical surface of thyrocytes, where catalyze the iodination of thyroglobulin and may, also, be a surface-cell antigen, which involves in the complement-dependent cytotoxicity reactions. Objective: to study the immune status indices depending on thyroid peroxidase (anti-TPO) antibodies in patients with Graves' disease (GD).

METHODS

The study included 35 women aged from 18 to 55 years, mean age of 39.1±7.2, with manifestations of GD, before antithyroid therapy. Concentrations of thyroid hormones were measured by RIA. Anti-TPO concentrations was assessed by ELISA. The analysis of lymphocytes subset pattern were performed by indirect immunofluorescence using the FITC-marked monoclonal antibodies to CD3, CD4, CD8, CD16, CD19, HLA-DR. The Ig A, M, G concentrations were determined by ELISA. The CD4+/CD8+ T cell ratio and the relative synthesis of IgA (IgA/CD19+), IgM (IgM/CD19+) and IgG (IgG/CD19+) were also calculated. Results. The patients with more than 100 IU/mL anti-TPO level were characterized by an increase in absolute lymphocytes, relative and absolute number of CD19+ and HLA-DR cells, compared to the control range and patients with anti-TPO less than 100 IU/L.

RESULTS

The most significant changes of immunological indices in GD were found in patients with more than 100 IU/mL anti-TPO level. In the case of anti-TPO level less than 100 IU/L the immunopathogenesis of GD is characterized by the appearance of positive relationships anti-TPO with B-, and negative with T-cell immunity indices. Thus, the immunopathogenesis of GD is characterized by positive correlation in AT-TPO and indicators of b-cell immunity, and negative – with the parameters of T-cell immunity, regardless of thyrocytes peroxidase autoantibodies concentration.

CONCLUSIONS

The immune status peculiarities depending on the level of thyroid peroxidase antibodies in Graves' disease

References