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### **Clinical and immunological features of chronic viral hepatitis C with autoimmune thyroiditis**

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**Background:** Features of autoimmune destruction of the thyroid gland (TG) with chronic viral hepatitis C (CVHC) were investigated.

**Materials and methods.** The study involved 184 patients with CVHC treated with antiviral therapy (AVT). It was singled out patients with autoimmune thyroiditis (AIT), which debuted during the AVT (5.97%) and the group with transient increase of autoimmune antibodies without diagnosis AIT (3.8%). In these groups, duration of disease was ( $15.3 \pm 0.9$ ) and ( $16.9 \pm 1.7$ ) years, respectively. It was studied the level of thyroid hormones, antinuclear (ANA) and antimitochondrial antibodies (AMA), antibodies to thyroglobulin (ATTH) and thyroid peroxidase (ATPO).

**Results.** Among the patients with CVHC men (59.4%) were dominated, women were 1.5 times less (40.6%) ( $p < 0.05$ ). In the group with AIT women were dominated (90.90% and 9.09%) ( $p < 0.05$ ), among patients with a transient increase in antibody was a tendency to a predominance of men (57.14% and 42.86%). Among patients with Hashimoto's thyroiditis genotype 1 HVCV (81.81%) was more common, 3 - much less (18.19%). Most patients has fibrosis F3 (6 people), more rarely F2 (4) and F1 (1). In persons with a transient increase of antibodies parameters were the same statistically. All patients with Hashimoto's thyroiditis were defined with low viral load ( $253748.3 \pm 305.4$ ) copies/mL against ( $2637059.0 \pm 394.3$ ) copies/ml in those without it ( $p < 0.05$ ). During AVT the number of patients who have had rejection of laboratory parameters reduced. Thus, in the 1st month of treatment increased level of ATPO ( $312.4 \pm 42.1$ ) IU/ml was determined in 8 cases, ATTH ( $206.3 \pm 60.9$ ) IU/ml – 3, with normal ANA, AMA indices. At the 3rd month of treatment increased level of ATPO ( $334.5 \pm 58.6$ ) IU / ml was found in 6 patients, ATTH ( $115.2 \pm 30.4$ ) IU/ml - 3, 2 - ANA and in 1 - AMA. At the 6th month of treatment increased level of ATPO ( $390.2 \pm 60.8$ ) IU / ml was detected in 3 persons, ATTH ( $105.1 \pm 20.3$ ) IU/ml – 3 patients. The level of thyroid hormones (T3 and T4) remained normal during the entire observation period. Reduction of TSH was found in 3 cases, increase - 4.

Among patients with a transient increase of antibodies viral load reached on the average ( $1421226.61 \pm 70.900$ ) copies/ml, which is significantly more than in the group with AIT ( $T_{EMF} > T_{cr}$ ,  $p < 0.05$ ). Thus, the 1st month of treatment was determined by the elevated levels of ATTH in 1 patient, 3 positive results for ANA, 1 - AMA. At the 3rd month: 3 positive for ANA, one has ATTH increase. At the 6th month: 1 positive ANA and AMA, one has ATTH increase to 445.8 IU/ml, and ATPO to 122.7 IU/ml. The level of thyroid hormones T3 and T4 and TSH-free fractions also remained within normal limits.

**Conclusions.** AIT was diagnosed often in women with low viral load, with normal values of T3 and T4 hormones. This trend is not detected within transient increase of autoimmune thyroid antibodies. Number of patients with high titers of antibody to the thyroid was reduced during prolonged AVT, and in patients with a transient increase of autoimmune antibodies the tendency to normalization held with the conduction of the PVT, but unlike the AIT rarely ATPO indices increase, more often ANA ( $p > 0.05$ ).