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## THE INFLUENCE OF HORMONAL REPLACEMENT THERAPY ON IMMUNE SYSTEM IN PATIENTS WITH HYPERGONADOTROPIC OVARIAN INSUFFICIENCY

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**Objective:** To study the influence of steroid hormones on interferon (IFN) status indices and cytotoxic activity of natural killer (NK)-cells index in patients with hypergonadotropic ovarian insufficiency.

**Methods:** 20 patients with secondary hypergonadotropic amenorea (23–37 yrs.) were examined; the control consisted of 28 healthy women of reproductive age. All women had normal female caryotype 46/XX. IFN status and cytotoxic activity of NK-cells indices were investigated in the blood serum before and during cyclic hormonal replacement therapy (HRT).

**Results:** The initial cytotoxic activity of NK-cells and IFN status indices were higher than in control ( $p < 0.05$ ). Under the influence of estradiol there was a decrease of cytotoxic activity of NK-cells index by 18.9%, production of IFN-a/b – by 19.5% and IFN-g – by 37.5% ( $p < 0.01$ ). Against the background of maximum progesterone influence the cytotoxic activity of NK-cells increased by 8% ( $p < 0.05$ ), IFN-g production – by 19% ( $p < 0.01$ ) and IFN-a/b production – by 9% ( $p > 0.05$ ). Common serum IFN indices before and during HRT were higher than in control ( $p < 0.05$ ).

**Conclusions:** The results demonstrate the influence of sexual steroid hormones on leukocytes ability to produce IFN-a/b/g and cytotoxic activity of NK-cells and allow to assume that estrogens in the progesterone deficiency favour the decrease of these indices. Gestagens, in their turn, stimulate the leukocytes ability to produce IFN-a/b/g and cytotoxic activity of NK-cells.

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## ABO-ISOIMMUNIZATION PROGNOSIS

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**Objective:** predelivery prognosis of immunoconflict in the course of clinical observation of ABO-incompatible pregnancy.

**Methods:** 177 pregnant and their new-born infants were examined. Peculiarities of anamnesis are studied, significance of serologic methods of diagnosis is determined, some clinico-laboratorial indices are estimated (bilirubin, electrolytes  $K^+$ ,  $Na^+$ , hemoglobin, erythrocytes and their correlation). For the first time condition of hemomicrocirculation at ABO-incompatible pregnancy and the conjunctiva index are studied with the help of biomicroscopy of eyeball conjunctiva vessels in the area of the external corner of an eye. A statistical programme

Statgraf was used for quantitative treatment of the data.

**Results:** analysis of the pregnant's Rhesus-factor dependence of ABO-immunization is carried out. In the course of determination of the group agglutinins titre with the help of parallel agglutination in the salt and serum medium, four variants of the group agglutinins titre level are revealed in the ABO-isoimmunized pregnant. Peculiarities of their dynamics and correspondence to the level of severity of the hemolytic disease of newborn are revealed too. Besides it is found out that the erythrocytes, hemoglobin and bilirubin indices are pronouncely dependent on indices of the level of electrolytes  $K^+$  and  $Na^+$  ( $r=0.889$ ,  $p < 0.05$ ). Study of hemomicrocirculation in the ABO-isoimmunized pregnant revealed definite changes of ratio between the arteriola and venule diameter and bloodflow.

**Conclusion:** More accurate determination of possible ABO-isoimmunization of a pregnant may be achieved only by complex use of anamnestic and clinical data. The most valuable of them are: 1) dynamic study of the group antibody titre of a pregnant with the help of the husband's erythrocytes, 2) study of indeces of hemoglobin, erythrocytes and electrolytes ( $K^+$ ,  $Na^+$ ) level, 3) hemomicrocirculation.