REACTIVE MORPHOLOGICAL CHANGES OF CORTICOSTEROCYTES IN THE RETICULAR ZONE OF THE CORTICAL SUBSTANCE IN THE ADRENAL GLANDS OF WHITE RATS AT THE 9TH MONTH OF CENTRAL BLOCKADE OF GONADOTROPIC HORMONES

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Background and Aim. Morphological changes of corticosterocytes in the reticular zone of the adrenal cortex of white rats during inhibition of testosterone synthesis by experimental blockade of gonadotropic hormones at 1, 3, 6 and 9 months.

Material and Methods. The adrenal glands of 50 white rats were studied. They were divided into 5 groups: the 1st – 10 intact rats; the 2nd, 3rd, 4th, 5th groups of 10 rats, which were administered the drug "Diferelin". Material was collected at the end of the: 1st month (2nd group), 3rd month (3rd group), 6th month (4th group), 9th month (5th group).

Results. Increase in cytoplasm size and unchanged nucleus size of corticosterocytes in the reticular zone at the 1st month of the experiment, compared with the indicators in 1st group. The appearance of corticosterocytes in which large lipid vacuoles displace the nucleus to the periphery.

Increase of average size of corticosterocytes (ASC) and a significant decrease in average value of the size of the nucleus (AVSN) at the 3rd month of the experiment, compared with the indicators in the 2nd group, cytoplasmic basophilia and fat inclusions.

Moderate increase in ASC of the reticular zone, a significant increase in AVSN at the 6th month of the experiment compared with the group 3, decrease in cytoplasmic basophilia, the appearance of lipid inclusions indicates a gradual return of cells to intact state.

Significant decrease of ASC in reticular zone and AVSN at the 9th month of the experiment, moderate basophilia with minor lipid inclusions confirms the return of cells to the indicators of the intact group.

Conclusions. This research proves that testosterone inhibition causes dystrophic reactive changes in corticosterocytes of the reticular zone in the first month of the study and compensatory synthetic activity in the third month.

Keywords: adrenal glands, corticosterocytes, testosterone, reticular zone