after the end of the experiment with a severe degree of dyshydria, were transferred to the usual drinking and food diet for 1, 2, 4 and 8 weeks.

During the experiment, the following research methods were used: anatomical method, histological and histochemical methods, morphometric method, elemental analysis by atomic absorption method, scanning electron microscopy method, statistical methods.

HEPATIC IMMUNOCOMPETENT CELL RESPONSE TO BLOCKING THE SYNTHESIS OF LUTEINIZING HORMONE ON DAY 180

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The study is a fragment of the research project «Experimental morphological study of the effect of cryopreserved preparations of cord blood and embryofetoplacental complex, diferelin, ethanol and 1% methacrylic acid on the morphofunctional state in a number of internal organs », state registration No. 0119U102925.

Hepatic macrophages play a central role in maintaining liver homeostasis and in the pathogenesis of acute or chronic liver injury. Liver macrophages are composed of functionally distinct cellular subpopulations. These characteristics are not static, as cells react to environmental signals in a diversified manner, leading to a wide range of "polarization states" in vitro and in vivo. Currently, there is interest in the effect of androgens and their receptors on different liver cells and the development of liver pathology.

The aim of the study was to establish both quantitative and qualitative aspects of changes in hepatic immunocompetent cells induced by luteinising hormone synthesis inhibition in male rats as a result of tryptorelin acetate administration on day 180, and to investigate the possible mechanism of quercetin effect.

The experiments were conducted on 30 sexually mature white male rats. Animals in experimental group I were injected subcutaneously with tryptorelin acetate. In experimental group II, animals received tryptorelin acetate and quercetin 3 times a week, and the control group was provided with saline.

In the study of semi-thin sections of the liver in experimental group I, the diameter of the veins of the triads was increased by 10% compared to the control group of animals. The lumen of the bile ducts is ellipsoidal, and signs of bile stasis are detected. Kupffer's cells are observed, the amount of which was increased both in the lumen of sinusoidal capillaries and in the space of Dissé. In the animals of the first experimental group, the total activity of NO synthases in the liver is 103.1% higher. Arginase activity was decreased by 47%. Nitrite concentration increased by 46%. Administration of quercetin, against the background of inhibition of luteinizing hormone synthesis, leads to a decrease in the total activity of NO synthases by 70.4%.

The shift in macrophage polarization toward the predominance of M1 may be a consequence of endothelial dysfunction as a result of luteinizing hormone synthesis inhibition. Endothelial impairment can be responsible for oxidative damage to various organs and tissues due to excessive production of reactive oxygen forms. The sources of overproduction of active oxygen species may be constitutive forms of NO synthase. Quercetin is a powerful antioxidant due to direct interception of reactive oxygen forms and stimulation of the glutathione system activity and it is also capable of suppressing the transcription factor NF-kB activation. Quercetin can reduce the expression of iNOS genes, which explains the results of reduced iNOS and total NOS activity