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Morphological and morphometric changes in the spleen after administration of two types of nonsteroidal anti-inflammatory drugs in 3-month-old white inbred rats

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Abstract: In this study, two types of anti-inflammatory drugs were used in 3-month-old white rats. These anti-inflammatory drugs were given for 10 days. After 10 days, the macroscopic structure and microscopic structure of the spleen, which was extracted by decapitation, were stained with hematoxylin eosin and vangison methods, and the results of the spleen data obtained using macromorphometric and micromorphometric methods of shedding are presented.

Key words: Spleen morphology, effect on the spleen in nostroid anti-inflammatory drug, polyprogamy, spleen morphometry

The purpose of the study: Determination of morphological and morphometric changes in 3-month-old white outbred rats after administration of 2 types of nosteride anti-inflammatory drugs.

Research materials and methods: As the materials of the study, 3-month-old white sterile rats were selected at the Bukhara State Medical Institute and divided into 2 groups: 30 rats were selected as a control group and 30 rats were selected as an experimental group. In the experimental group, two types of anti-

inflammatory drugs, i.e. parastamol 15mg/kg and aspirin 5mg/kg, were administered on an empty stomach for 10 days using a metal probe. In the control group, white rats in the control group were given 0.5 ml of distilled water in the stomach through a metal probe for 10 days. . On the eleventh day, experimental and control laboratory animals were weighed in the morning, decapitated on an empty stomach with ether anesthesia, and morphological and morphometric tests were performed.

Research results: 3-month-old white sterile rat Group II - 2 types of anti-inflammatory drugs: paracetamol 15 mg/kg, aspirin 5 mg/kg, the following changes occurred after the rats were given (Fig. 1). Macroscopically, the surface was smooth dark-red and three-sided. In the form, it was determined that the orgonometric dimensions are as follows: length 38.21±0.55, width 7.62±0.24 mm and thickness 2.96±0.13 mm. the weight is 0.64±0.03 g and the size of the member is 861.82±20.13.

Microscopically, the connective tissue capsule surrounding the spleen is unevenly located and relatively thinned. Interstitial swelling is seen in the organ stroma and red pulp of the subcapsular area, signs of fullness of the sinusoidal veins of the spleen, and signs of hemosiderosis caused by the breakdown of erythrocytes in the vessel and stroma are detected. It was found that the amount of broken erythrocytes in the erythrocyte was relatively increased, as well as the amount of accumulated lymphocytes and macrophages. Small signs of thrombosis and intravascular hemasiderosis are visible in the vessel with thickened walls of the splenic central artery. When viewing the white pulp, primary and secondary lymph nodes with developed areas are visible. In the periarterial lymph node, the number and surface of lymphocytes are slightly

increased, developing lymphocytes are seen in the marginal and mantle areas. The area of proliferation appears to be developing lymphocytes.

When looking at the morphometric indicators, the average surface of the lymph node is 109010.10 µm2, the diameter of the lymph node is 428.86±30, the surface of the PALM area is 11039±1367µm2, the sperm area is 46654±10432±µm2, the marginal area is 54654±12987µm2, and the reproduction area is and the diameter of the surface is 7657±1253µm2 It measures 109.23±14.11 µm. When calculating the lymph node surfaces in percentages, it looks like this. PALM is 9.82%, the mantle area is 39.11%, the marginal area is 45.19%, and the reproduction area is 6.5 5

Conclusions: Morphologically, it was found that the surface of the spleen capsule is unevenly thickened when studied in the experiment. The vessels of the red pulp were especially full compared to the veins, the breakdown of erythrocytes (hemosiderosis) was found in the inner and outer vascular tissue, and the increase in the amount of macrophages and lymphocytes was found in the red pulp. Morphometrically, it was found that the surface and diameter of the periarterial lymphatic coupling and marginal area in the white pulp increased.

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