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MORPHOLOGICAL CHANGES IN THE SPLEEN OF OFFSPRING BORN FROM MATERNAL RATS IN THE STATE OF EXPERIMENTAL STRESS

Mirsharapov U. M.
Eshmirzaeva Z. U.
Tashkent Medical Academy
Tashkent, Uzbekistan

Annotation:
The article tells about the universal non-specific neurogormonal reaction of the body in the form of stress, an injury manifested by increased resistance of the body, or the tension of non-specific adaptation mechanisms in response to a signal that threatens the life or well-being of the body.

Keywords: spleen, morphological indicators, my mechanics, experience.

A certain amount of Blood Reserve is maintained in the spleen and, if necessary, is released into the circulatory circle. Due to this, the spleen is also called a blood Depot [3,4]. When the spleen is removed (splenectomy), the body's protective capacity is impaired. In recent years, the method of blood purification (splenosorption) is widely used in various diseases (poisoning, infections) by passing blood through the spleen taken from an animal [1,2]. This is important in the spleen further one confirms the importance.

The purpose of the study. Study of morphological changes in the liver of offspring born from maternal rats in the state of experimental stress.

Research materials and methods. For study, 180-220 grams of white laboratory rats are used.White laboratory rats are divided into 2 groups. The first group is a control group, and healthy bats form a control group. The second group is an experimental group,and in 50 white laboratory rats of the female sex, they are stored in specially prepared labyrinth cages to call experimental stress. Stress is induced in pregnant rats in the cage using factors such as bright light, cold and hot temperatures, and food deprivation. Several methods are used to achieve the result: general

histological method, organometric, morphometric. After opening the abdominal cavity and separating the thymus the anatomical parameters of the organ are measured (diagramm 1). These dimensions of the thymus are measured using a caliper. Electronic scales are used to measure the thymus and spleen of mice and rats.

Results of the study: The thymus of the rats of the control group is surrounded on the outside by a connective tissue capsule consisting of numerous cellular elements with round and oval-elongated pale-stained nuclei, having a clearly defined kareolemma and a well-distinguished chromatin pattern, as well as thin wave-like fibers oriented along the surface of the organ. In some areas, the capsule contains lymphoid cells, apparently penetrating here from the parenchyma of the thymus (diagramm 1).

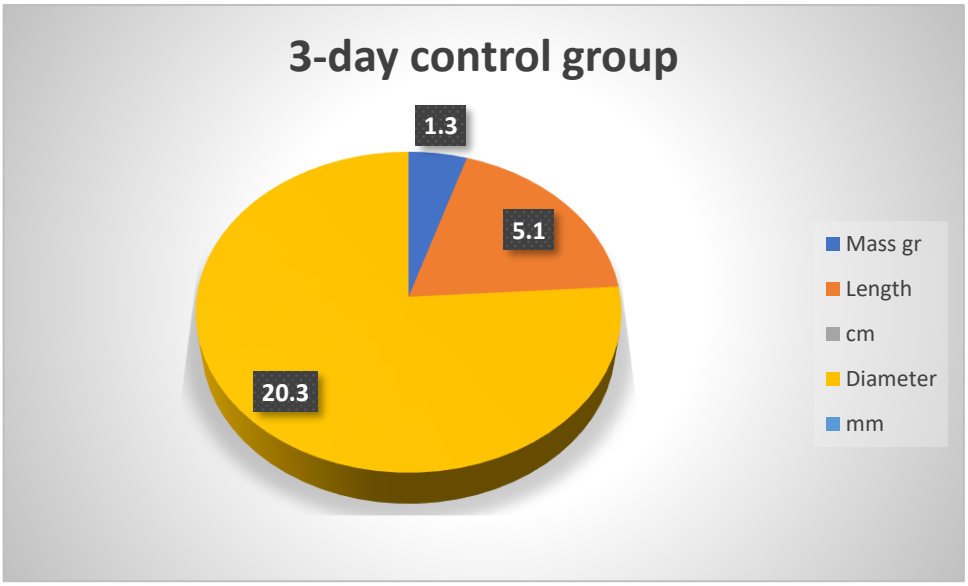

Diagramm 1
Indications of spleen organ in rats

Septa depart from the capsule and penetrate deep into the organ. However, they do not completely divide the thymus tissue into compartments, as a result of which the thymus tissue is located in a continuous state in the central part of each of them. The septa include thin-walled blood vessels filled with formed elements of blood and

lined with smooth endothelium, the cells of which contain weakly stained nuclei of an elongated shape and are oriented along the border of the vascular plate.

Conclusion.

1. In the case of experimental stress,morphological changes in the spleen in offspring, the effect of the drug on morphological changes are studied.
2. A correlation between morphological changes developed during the early postnatal period in the spleen is established and these are scientifically substantiated.

References

1. Tarry-Adkins J.L., Aiken C.E., Ashmore T.J., Fernandez-Twinn D.S., Chen J.H., Ozanne S.E. A suboptimal maternal diet combined with accelerated postnatal growth results in an altered aging profile in the thymus of male rats. Faseb J. 2019 Jan;33(1):239-253.
2. Veru F., Laplante D.P., Luheshi G, King S. Prenatal maternal stress exposure and immune function in the offspring. Stress. 2014 Mar;17(2):133-48.
3. Xiao F, Liu C., Zhang T, Yu.G., Cui G. Early maternal deprivation decreases the immunological function of F1 generation offspring in mice. 2014 Apr;30(4):360-2.
4. Yaglova N.V., Nazimova S.V., Obernikhin S.S., Yaglov V.V. Differences in Age-Related Changes in the Thymus in Rats Developmentally Exposed to Endocrine Disrupter Dichlorodiphenyltrichloroethane. Bull Exp Biol Med. 2023 Mar;174(5):689-692.