

MORPHOLOGICAL CHARACTERISTICS OF THE AORTA OF RAT PUPS BORN TO HYPOTHYROID RAT MOTHERS

Mahmudova Umida Muhiddin qizi- Toshkent tibbiyot akademiyasi odam anatomiyasi va OXTA magistri
Odam anatomiyasi va OXTA kafedrası t.f.d. professor - *Ahmedova.S.M*
Ilmiy rahbar-*Mirzamuxammedov O.X.*

ABSTRACT

According to the World Health Organization, radiological contamination poses a significant threat to human life. In recent years, diseases of the cardiovascular system and arterial hypertension have been increasing in all countries. The disease is characterized by a severe course, a decrease in the quality of life of patients and an increase in mortality.

The rapid development of nuclear energy and the widespread use of sources of ionizing radiation in various fields of science, technology and the national economy to a certain extent create the risk of accidents and radioactive poisoning of new territories. After the accident at the Chernobyl nuclear power plant, the issue of agricultural production in radioactively contaminated areas became acute.

Keywords: radiological contamination, diseases of the cardiovascular, arterial hypertension, Chernobyl nuclear.

INTRODUCTION

On a global scale, in experimental conditions, a number of scientific studies are being carried out in order to improve the comprehensive description of the aortic wall in complex characteristics and under the influence of a biostimulator at the basis of radiation sickness. In this regard, changes in the morphometric parameters of the membranes of the aortic wall of rabbits in dynamics, at different ages of pathomorphological changes have been assessed membranes of the aortic wall of rabbits with chronic radiation sickness; development of morphometric properties of the membranes of the aortic wall in chronic radiation sickness in various age aspects, assessment of pathomorphological changes in the floors of the aortic wall after correction in chronic radiation sickness and with the help of a Dorogov antiseptic biostimulator, assessment of the stimulating properties of the membranes of the aorta after correction using a biostimulator Dorogov antiseptic-biostimulator.

Main body

In our country, certain measures are being taken to develop the medical sector aimed at adapting the medical system to the requirements of world standards, including measures aimed at treating various somatic diseases. In this regard, in accordance with

the 7 priorities of the development strategy of New Uzbekistan for 2022-2026, to increase the level of medical services provided to the population to a new level, tasks have been defined to “... improve the quality of qualified services to the population in the primary health care service...” installed.

The practical results of the study are as follows:

under experimental conditions, various levels of radiation sickness were assessed and their pathological mechanisms were identified;

morphological changes and morphometric parameters in the layers of the aortic wall under the influence of gamma radiation were assessed;

to compare clinically damaged cells after irradiation, for the first time in the experiment, the standard value of using a biostimulator for rabbits based on gamma radiation was chosen; treatment with a biostimulant for radiation sickness revealed the identified morphological changes and morphometric parameters of the layers of the rabbit aortic wall in the pathogenesis of radiation sickness;

structural changes by assessing the morphometric parameters of the layers of the aortic wall in the normative age aspect helped to identify the complex mechanism of immunological processes occurring in the body in the age aspect under the influence of various pathogenic factors; structural changes upon exposure to a biostimulant were assessed based on radiation sickness in rabbits with chronic radiation sickness; the morphological and morphometric properties of the layers of the aortic wall are revealed in case of radiation sickness;

The reliability of the research results is based on the theoretical approaches and methods used, the methodological correctness of the research, the adequacy of the number of animals studied in the experiment, the use of modern complementary experiments in research, morphological, morphometric and statistical comparisons with data from international and domestic experiments to improve the comprehensive description of the normal aortic wall and under the influence of a biostimulant against the background of radiation sickness, the conclusion and results confirmed by competent structures.

Results of treatment of pathomorphological processes in the aortic wall that developed under the influence of radiation, using ASD. The results of microscopic studies of the aorta of animals during irradiation and after its correction with an antiseptic Dorogov stimulant (ASD) showed that if in the group that did not receive treatment, there was no edema in the intima of the aortic wall from the early period of the experiment (3 months) and no edema processes, dystrophy and destruction on the surface of the media, then over a 6-month period it was found that endothelial cells were clearly differentiated in relation to the control and irradiated groups, in some areas they were hypertrophied and protruded above the surface of the intima. It was found

that the nuclei of these cells were mostly round in shape and had dark colored chromatin.

The basement membrane and elastic fibers beneath the endothelium are observed to be slightly thickened due to proteinaceous degenerations such as mucoid and fibrinoid edema, and some areas of altered staining undergo metachromasia, although the tumor process persisted in the intimal wall of some animals in this group and its intimal layer spread on the connective tissue, in which case the surface of the endothelial cells is uneven, in some places endothelial cells protrude, in the head regions they are immersed in the basement membrane. Their nuclei are of different sizes, and most of them are hyperchromic in relation to chromatin. The basement membrane and elastic fibers peel off, some areas disintegrate, change color and metachromasia occurs. The connective tissue cells contained in the intima are relatively hypertrophied and arranged randomly, among which inflammatory cells have appeared.

Conclusion

In this group of experiments and at an early time point, the smooth muscle cells contained in the mediastinum of the aortic wall were slightly hypertrophied, disrupting the parallel arrangement. The nuclei of some have increased in size and are hypertrophied. Myofibrils were loosened in relation to the control group and lost their tinctorial arrangement. The bundles of elastic fibers between them are relatively thick and crookedly located.

Taking into account the above discussion, modeling and testing pathological changes characteristic of diseases that develop in the human body, including the aorta, the most important element of the cardiovascular system, will help to distinguish these pathological changes.

FOYDALANILGAN ADABIYOTLAR

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