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## MORPHOLOGICAL CHANGES IN COLLAGEN FIBERS OF URINARY BLADDER CAUSED BY INFLUENCE OF HEAVY METAL SALTS

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**Introduction.** Today the environmental pollution with heavy metal salts (HMS) is an important issue, because of their toxic effects and prevalence in different layers of the biosphere. Once getting in the body, they circulate with blood and partly accumulated in the organs causing harmful effects on tissues and cells.

Urinary bladder (UB) refers to bodies that are subject to double impact of heavy metals. Thus, urine together with its components (including HMS) accumulate and definite time contact with mucous membranes of UB and also the pollutants get into the organ hematogenously.

Thus, the *purpose* of this research was to study the effect of HMS on the collagen fibers of UB.

**Materials and methods.** The material for the research was UB of white laboratory rats of Wistar line, which were divided into two groups: control (rats consumed drinking water) and experimental (rats consuming water with the mixture of HMS). To evaluate the results of the research, the rats were taken off the research at 30 and 90 days. The properties of collagen fibers in the wall of bladder were studied with Van Hizon staining.

**Results.** In contrast with the control group in the UB of experimental rats on the 30th day of the experiment it was recorded the histoarchitecture changes of collagen fibers presented with their edema and diffuse dissection of their fibrous structures with signs of disorganization, disintegration and denaturation of collagen in the layers of bladder. On the 90th day of the experiment the changes in UB were presented with edema, thickening, disorientation, dissection and re-formation of collagen fibers, and also there was an increase in their number. Detecting changes were less pronounced than in previous group of rats and had focal nature.

**Conclusions.** Heavy metals salts cause negative changes in collagen fibers of urinary bladder walls, which is manifested with their disorganization and destruction. The resulting changes depend on the duration of the experiment.