



Morphological Changes Observed in the Lungs in Chronic Renal Failure (Experiment)

D. A. Khasanova ¹, D. B. Avezova ²

¹ Bukhara State Medical Institute named after Abu Ali Ibn Sina

² Bukhara Institute of Innovative Medicine

Abstract: This article describes the morphological changes of an experimental model of the respiratory system of rats in chronic renal failure with macroscopic changes observed as a result of microcirculation disorders in the lung interstitial tissue.

Keywords: respiratory system, chronic kidney failure, pulmonary emphysema, hemorrhages, morphological changes, experimental.

The main part. Although less than a quarter of the 21st century has passed, the problems of chronic kidney failure (CKD) progression and treatment have not been sufficiently resolved.

In the early stages of the development of chronic renal failure, there is a decrease in the functional reserve of the kidneys (BFZ), in particular, a decrease in the ability to increase CFT in response to a protein loading test. At this stage, there will be no symptoms of kidney failure. A further decrease in the loss of working nephrons (up to 30 percent of the norm) leads to a more obvious impairment of kidney function - an increase in the concentration of nitrogenous metabolites, electrolyte imbalance, anemia, and various changes in organs. In particular, it causes the development of a number of complications in the lung tissue. Currently, in the functioning of the kidneys, experimental and clinical data show that one of the important mechanisms of pathogenesis is related to disorders of the blood coagulation (hemostasis) system in the kidneys, microcirculation flow disorders of other organs. the data were obtained [XBBarnoyev, LX Shukurova

Research goal. In the experiment Lung tissue in chronic renal failure macroscopic analysis, study of morphological changes.

Research materials and methods. _ In the study, 150 5,9,12-month-old male and female laboratory white mice were used, and they were divided into 3 groups (n=50 each) depending on the observation period. Animals were kept in vivarium conditions according to standard ration (with food and water supply). They were injected intramuscularly with 5%-0.8mg/100mg glycerin for one month to induce chronic kidney failure in the experiment. Animals were removed from the experiment according to the plan on the 30th and 60th days of observation for morphological examination. Conducting experiments, using experiments on animals, without leaving the scope of legal regulations and the global convention (on the protection of vertebrate animals, 1997) was fully followed. The lungs of white mice were isolated and fixed in 10% formalin. Histological sections with a thickness of 3-4 μ m were stained with hematoxylin and eosin. Histological preparations were analyzed under a microscope and photographed.

Results.

On the 30th day of follow-up, macropreparations of the lungs isolated from mice showed massive focal and total hemorrhages, typical signs of emphysema .

In micropreparations obtained from white mice, inflammatory elements around the bronchi, expansion of lung alveoli, and age-specific changes were observed. The elastic fibers of the interalveolar barriers have thinned, the alveoli have expanded like bubbles



Figure 1 and 2. Macropreparation: foci of hemorrhage are visible in all parts of the lungs.

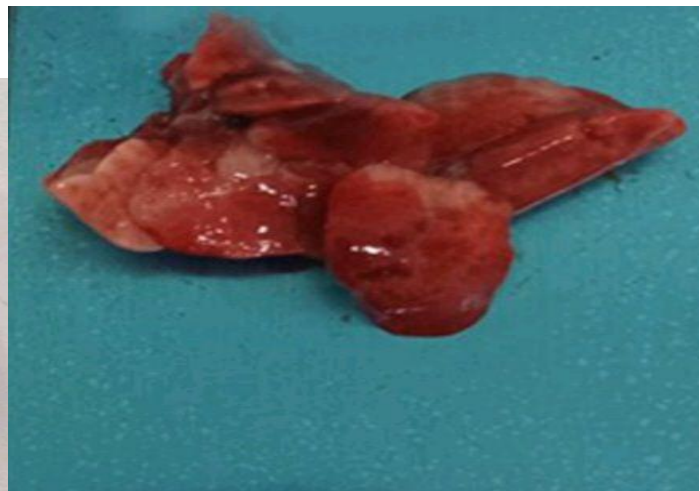


Figure 3: Hemorrhages with small foci. Macropreparation. Figure 4: Areas of total hemorrhage are visible.

and signs of emphysema are seen.

Conclusions.

1. **Hemorrhagic foci** in the lung tissue in chronic kidney failure, symptoms characteristic of emphysema occur depending on the duration and stages of the disease.
2. In chronic kidney failure, inflammatory elements increase in the lungs, the number of elastic fibers decreases, and morphological changes change depending on age.

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