

MORPHOLOGICAL STUDY OF QUINOCARB INFLUENCE ON DEVELOPMENT OF HEMODYNAMIC PULMONARY EDEMA IN RATS

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During the study results of research on morphological study of quinocarb influence on development of hemodynamic pulmonary edema were represented.

Materials and Methods. Respiratory part of rat lung tissue was studied and also state of small bronchus epithelium. The tissue fragments taken operatively were examined for histology. A single solution of 0,1% of adrenalin was injected intramuscularly to rats and 20 hours before injection of adrenalin the quinocarb and hydrochlorothiazide were given by injection. Lung tissue sample was drawn up 2 hours after adrenalin injection. All tissue material was fixed up in 10% solution of formaline. Tissue sections were stained with hematoxyline and eosine. On microslides a conventional grade of alveolar edema intensity, congestion, and failure of alveolar pattern according to the standard fifth-grade system were defined. In order to obtain statistical outputs the non-parametric analog of univariate dispersive analysis – Kruskal-Wallis was used during the comparing samples of relative variances, after that the criteria of Mann-Whitney was used.

Results and discussion. Data resulting from the study have shown that the respiratory part of lung tissue of intact group of rats was in normal and had a preserved alveolar pattern of parenchyma, while in group with the control pathology the respiratory part of rat lung tissue had a significant edematous nature, liquid was present inside alveolar cavities after adrenalin injection, interalviolar septums were demolished, occurrence of hemorrhages was observed, thrombosis, expanded emphysematosa alveoli, tissue pattern was deformed. Preventive and curative injection of quinocarb substances improved significantly the state of rats' lung tissue up nearly the norm. Any characteristics of pulmonary edema were found, typical histoarchitecture was preserved, perivazal tissue was normal. Respiratory part of parenchyma of pulmonary section of the rat injected with hypotiaside was characterized by nested-structured pulmonary edema with, alveolar parenchyma, closed to normal.

Outputs. Quinocarb in a dosage of 10 mg/kg improves state of rats' lung tissue that confirms its high anti-edema action.