

points at the nephroprotective effect of KATP channels activation with Flocalin predominantly in the proximal part of the nephron.

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CHRONORHYTHMOLOGIC FEATURES OF LIPIN ON ANTIOXIDANT PROTECTION INDICATORS IN RATS WITH MODEL PATHOLOGIES

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Any biological system of the organism is subjected to the natural functioning organization. Renal function has a conspicuous circadian periodicity. Thus, circadian rhythms of biochemical parameters in organs and tissues are indicators of the body state, including kidneys. Many pathological processes are accompanied by a violation of the temporal organization of physiological functions, which is also characteristic of the pathogenesis of the acute renal failure development.

The aim of the given study was to establish chronorhythmic indicator changes of antioxidant protection of renal tissues under the conditions of model pathology with a single injection of lipin.

The experiments were conducted on 21 adult outbred white rats, weighing 120-160 g. Acute renal failure was caused by intramuscular administration of 50% glycerol solution at a dose of 10 mg/kg. Lipin was administered at a dose of 500 mg/kg once intraperitoneally in 40 min after administration of glycerol. To perform biochemical studies, kidney tissue was collected after decapitation of rats for the 12th hour of the experiment with a 6-hour interval: 4 times a day - at 8 am, 2 pm, 8 pm and 2 am.

Antioxidant effects were evaluated by the content of lipid peroxidation products (malondialdehyde (MDA)) and proteins (protein oxidation products (POP)).

The obtained data on MDA content in the animal kidney tissues with model pathology reached a minimum value at 8 pm and a maximum one at 2 am, which was 1.6 times higher than control group and remained high at 8 am. Lipin reduced the MDA content on the background of acute renal failure by 1.3 times during the period of its maximum value by 2 hours, and at 8 am the effect of the drug reduced the MDA content by 1.2 times. The POP content reached its peak in the affected animals at 8 pm (1.3 times) compared with the control group. Lipin with a single injection had the greatest effect (in 1.4 times) on the intensity of the POP formation at 8 pm.

Thus, in animals with model pathology there were changes in the structure and nature of circadian rhythms that characterized antioxidant protection. The correction of model pathology by lipin should be noted to enhance since 8 pm till the end of the experiment.

Therefore, the treatment of acute renal failure should be prescribed taking into account the rhythm of antioxidant protection processes and the use of antioxidant drugs is recommended mainly in the afternoon.

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HISTOLOGICAL CHANGES IN THE KIDNEY STRUCTURE IN THE DYNAMICS OF FEVER DEVELOPMENT

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Fever is a typical pathological process characterized by a shift of the thermoregulatory reference point to a higher level of body temperature regulation due to the influence of pyrogenic substances. Fever development includes three stages: rising of temperature, maintenance of high temperature and decrease in body temperature.

The aim of our experiment was to study the histological changes the kidney structure in the dynamics of fever development and detect the mechanisms of damage to nephrocytes of the kidney cortex, medulla and papilla in conditions of the fever development.

Research was conducted on 60 non-linear white male rats weighing 130-180 g, maintained under the standard vivarium conditions with a constant temperature and humidity. Aseptic fever was induced according to recommendations by a single subcutaneous injection of pyrogenal at a