

THE USE OF TORASEMIDE AS A STRESS PROTECTOR IN MORPHOLOGICAL RESEARCH OF HEPATIC REACTION

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Introduction: Nowadays the negative impact of stress factors on the liver is well-studied and substantiated. However, this issue remains open and priority for medicine, particular attention being paid to the stress protective effect of torasemide saluretics.

Aim: To prove at the morphological level the effectiveness of using torasemide to correct changes that occur in the tissues of liver of white rats under the influence of acute immobilization stress.

Materials and methods: The research was performed on 15 white rats (males), their age ranged from 9 to 10 months, body weight 230-250 grams. The I intact group consisted of 5 animals, the II control group also consisted of 5 animals, which were affected by acute immobilization stress. Group III in the number of 5 white rats stress condition was adjusted by torasemide. A model of acute immobilization stress was reproduced by a six-hour fixation of white rats in the supine position. White rats were administered intraperitoneally with a torasemide dose of 0.1 mg once to correct stress 20 minutes before the time of fixation. As a result of the opening of the abdominal cavity, a macroscopic examination of the liver was performed, as well as the collection of material for microscopic examination.

Results: No macroscopic changes were detected. The obtained microscopic examination revealed that acute immobilization stress in the rat liver produces significant morphological changes. Expansions of perisinusoid spaces and swelling of hepatocytes with smoothing of intercellular borders are revealed. The interlobular vessels and the central vein are full-blooded, mainly in the sinusoidal capillaries the phenomenon of sledging is noted. There is also a slightly full-blooded the sinusoidal capillaries and pronounced perivascular edema. Dystrophic changes (hydropic and hyaline-drip dystrophy) were observed in the center of the lobules. Subcapsular focal collication necrosis of some hepatocytes was observed. White rats with correction of torasemide revealed less pronounced stress changes: moderate plethora of the central veins, in some hepatocytes on the periphery of the lobes hydropic dystrophy, the structure of the liver lobes is preserved, the sinusoids are not expanded, the triads are not changed.

Conclusions: The use of torasemide as a stress protector in acute stress reactions on the example of the liver has shown the feasibility of its use, as a result of morphological studies.

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