Materials of Conferences

ESTIMATION OF INFLUENCE OF 2-(1′-HYDROXY-4′-ISOPROPENYL-1′-METHYLCYCLOHEXYL-2′-THIO)-METHYLETHANOATE ON LIPID PEROXIDATION AND ANTIOXIDANT SYSTEM OF ANIMALS IN CHRONIC PROLIFERATIVE INFLAMMATION

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Experimental study of 2-(1-hydroxy-4-isopropenyl-1-methylcyclohexyl-2-thio)-methylethanoate on lipid peroxidation and antioxidant system of mongrel rats in chronic proliferative inflammation using «fedora granulomas».

Methods: investigation was conducted using 20 wite mongrel male rats weighing 150-180 g. Chronic inflammation was modeled using «fedora granulomas» method (V.P. Fisenko and co-authors, 2000). The first group of animals served as a control against the background of inflammation. The second group had being injected 2-(1-hydroxy-4-isopropenyl-1-methylcyclohexyl-2-thio)-methylethanoate at a dose providing pronounced anti-inflammatory effect (200 mg/kg) during 7 days. The animals were sacrificed by decapitation under light ether anesthesia. State of lipid peroxidation (LP) was studied using malondialdehyde (MDA) indicators and middle molecules (MM), the antioxidant system was judged by the activity of the enzyme catalase (KAT).

Results: the results indicates that 2-(1-hydroxy-4-isopropenyl-1-methylcyclohexyl-2-thio)-methylethanoate injection leads to significant reduction in level of MDA in the blood serum at an acerage by 2,7 times, in the liver homogenate – by 1,6 times and reduction of MM concentration on 47,5 %. At the same time the enzyme-KAT activity in the blood serum increases at the average by 1,45 times.

Conclusion: 2-(1-hydroxy-4-isopropenyl-1-methylcyclohexyl-2-thio)-methylethanoate decreases reduce LP reaction intensity increased as a result of inflammation and stimulates antioxidant protection of animals thus demonstrating, anti-inflammatory effect using «fedora granulomas» model.

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