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considered early in the management of muscular impairment in these patients. An attractive hypothesis to explain our encouraging result could be represented by a functional inhibition of small conductance calcium-activated potassium channels expressed 3 (SK3) in muscle of DM1 subjects.

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EFFECTS OF CAFFEINE, ACETAMINOPHEN, CARBAMAZEPINE AND THEIR COMPOSITIONS ON LIPID PEROXIDATION AND STATE OF THE ANTIOXIDANT SYSTEM IN A BLOOD SERUM OF RATS

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Actuality. One of the ways to improve traditional medicines is to create co-formulated drugs. The drug combination in multicomponent composition mutually enhances their pharmacological effects; effectively eliminates pain, inflammation, than each individual component.

The aim. Determination of lipid peroxidation (LPO) and state of the antioxidant system (AOS) in a blood serum of rats in multicomponent composition compare to mono-preparation in rats under the condition of formalin induced edema.

Materials and Methods. An experimental study was performed on 54 rats of WAG line with the average weight 210 - 230 g. The animals were divided into 9 groups of 6 animals in each group. 3% starch mucus was injected orally via gastric tube to intact animals of 1st group (2 ml/200 g of rat weight). The animals in 2nd group were administered 3% starch mucus and formalin edema was caused by subplantar introduction of 2% formalin solution in the hind paw of rat. Animals of 9 groups were administered the investigated drugs once orally via gastric tube. Animals of the 3rd group received paracetamol (6 mg/1 kg of body weight); 4th –caffeine (0.6 mg/1 kg), 5th group – carbamazepine (5 mg/1 kg); 6th group – a combination of carbamazepine (5 mg/1 kg) and caffeine (0.6 mg/1 kg); 7th group – a combination of carbamazepine (5 mg/1 kg) and paracetamol (6 mg/1 kg); 8th group – a combination of paracetamol (6 mg/1 kg) with caffeine (0.6 mg/1 kg); 9th group – a combination of carbamazepine (5 mg/1 kg) with caffeine (0.6 mg/1 kg) and acetaminophen (6 mg/1 kg).

Intact animals and animals of 2-9th groups were decapitated under

ether anesthesia after 4 hours after modeling formalin induced edema – at a time of the maximal edema in 2-9th groups animals. The serum was used for investigation of LPO. The level of primary oxidation products – diene conjugates (DC) and secondary products – malondialdehyde (MDA) was determined using a spectrophotometric method. Also this method was used for the determination of AOS: the activity of catalase (CAT) and superoxide dismutase (SOD).

Results. All investigated drugs reduce the level of DC and TBARS statistically significant with regard to formalin induced edema and results are relatively close to the control group. The three-component composition (paracetamol + caffeine + carbamazepine) has the best influence on the level of DC in investigated drugs. The level of TBARS is affected by all investigated composition. All investigated drugs and their composition affect the state of CAT, SOD in rat serum and reduce it compare to formalin induced edema and even intact animals. Tri-component composition of paracetamol + caffeine + carbamazepine brings studied parameters close to values of control group.

Conclusions. Consider the results of the CAT and SOD study under the condition of formalin induced edema we can conclude that these values correlate better than adjusted figures of LPO (DC and TBARS), it indicates that the composition of caffeine have a strong antioxidant effect. The experiment results confirm that tri-component composition paracetamol + caffeine + carbamazepine is an effective at the state of LPO and AOS under the condition of formalin induced edema and can be recommended for further study.

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DETERMINATION OF CATALASE ACTIVITY AFTER MODELING CRYONECROSIS OF THE MYOCARDIUM IN RATS

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Relevance. 50 thousand of new cases of myocardial infarction are recorded each year in our country. Myocardial infarction (MI) - is one of the forms of necrosis of the myocardium caused by violation of the blood flow through the affected arteries.