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**Influence of carbamazepine and its pharmacological combinations on emotionally-behavioral reactions of rats**

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**Topicality.** There is a frequent combined therapy in medical practice to increase the drug’s effect. The opportunity of getting more powerful activity from pharmacological composition in comparison with every separate drug became a basis to creation of a new pharmacological combination. There was found out from literature sources that, this is the frequent procedure to add an nitrocontaining organic compounds to combined analgesic remedies such as: paracetamol, carbamazepine, caffeine. The data about these pharmacological combinations is absent. The purpose of the work is in studying of carbamazepines’ combinations with paracetamol and caffeine effect on CNS of the rats (in particular on the emotionally-behavioral reactions of rats in the background of formalin edema in the “open field” test).

**Materials and methods.** Experimental research was done on the “WAG-line” rats, middle weight of 210-230 g (5 groups of 6 animals in each). The rating of the preparations and their combinations of animals’ behavioral characteristics was done in comparative way of 3-5 groups in conditions of formalin edema (gr.3 – carbamazepine (6,25 mg/kg), gr.4 – combination of carbamazepine (6,25 mg/kg) with caffeine (0,6 mg/kg), gr.5 – combination of carbamazepine (6,25 mg/kg) with paracetamol (30 mg/kg) with positive control (gr.1 – 3% starch mucus, 2ml/200 g) and with negative control (gr.2 – 3% starch mucus, 2 ml/200g in conditions of starch mucus) in 4 hours after its modeling (in the background of maximal starch edema). Researching drugs were injecting in one time intragastrically in view of suspension to 3% starch mucus in 1 hour before the development of maximal edema, 3% starch mucus was injected analogically. The animals” behavior in “open field” test was evaluated in common behavioral acts: motor activity, oriental-researching reaction and emotional reactivity in common method along 3 minutes.

**Received results.** Starch edema modeling (group 2) contributed to statistically reliable increasing of horizontal motor activity (HMA and VMA) and decreasing of defecations’ amount, and also sturch edema contributed in increasing vertical motor activity development and amount of urinations, in decreasing of cognizing activity (CA) and grooming. Monoinjection of carbamazepine (gr.3) contributed in statistically reliable decreasing of HMA, VMA, CA, grooming, the amount of defecations concerning to starch edema (gr.2) and control group (gr.1). The adding to capbamazepine a caffeine (gr.4) and paracetamol contributed to statistically reliable decreasing (concerning to group 3) of HMA, VMA, the amount of defecations and did not has an influence on CA, grooming, the amount of urinations.

**Conclusions**. 1. Carbamazepine and its combinations with caffeine and paracetamol in starch edema conditions have an influence on EBR of rats.

2. It is need to be researched the influence of three-component compounds (carbamazepine, caffeine, paracetamol) on the EBR of rats in starch edema conditions.

3. It is perspectival to research an influence of nitrocontaining drugs on EBR of rats in starch edema conditions in the view if mono-, two-, three-component combinations in other model pathologies’ conditions.