

## INFLUENCE OF CLONAZEPAM AND CARBAMAZEPINE ON ALCOHOL WITHDRAWAL SYNDROME, PREFERENCE AND DEVELOPMENT OF TOLERANCE TO ETHANOL IN RATS

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The effects of clonazepam (0.3 and 1.0 mg/kg or 0.1 mg/kg, *b.i.d.*, 5 days) and carbamazepine (50 and 100 mg/kg or 12.5 and 50 mg/kg *b.i.d.*, 5 days) on alcohol withdrawal syndrome in rats were investigated. Moreover, the influence of clonazepam (0.3 mg/kg, single dose, or repeated doses for 8 days) and carbamazepine (50 mg/kg, single dose, or repeated doses for 8 days) on the development of tolerance to ethanol was also examined. To study the influence of clonazepam and carbamazepine on preference to ethanol, both drugs were administered for 5 days during the last week of the experiment, (clonazepam at 0.1 mg/kg, *b.i.d.*, *ip* and carbamazepine at 12.5 mg/kg, *b.i.d.*, *ip*).

Clonazepam and carbamazepine administered at single doses as well as multiple doses diminished the symptoms of withdrawal syndrome. Clonazepam did not prevent the development of tolerance to sleep-inducing and hypothermal action of ethanol, while carbamazepine prevented the development of tolerance to hypnotic effect of ethanol. Carbamazepine clearly reduced preference to ethanol (significantly vs. the control group and vs. the baseline values). Clonazepam also diminished preference to alcohol, but only in comparison with baseline values.

**Key words:** *clonazepam, carbamazepine, ethanol, withdrawal, preference, tolerance, rats*

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