

COMPARATIVE CHARACTERISTICS OF BEHAVIORAL DISORDERS CAUSED BY TWO-WEEK ALCOHOLIZATION IN MALES OF WHITE RATS OF DIFFERENT AGES TAKING INTO ACCOUNT INDIVIDUAL CHARACTERISTICS

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Research objective consisted in the studying of the individual sensitivity to two-week administration of ethanol in young and old male rats.

Method. The experiment is executed on two groups of sexually mature rats-males – 40 animals (100–120 g, age 3 months, *young rats*) and 40 animals (360–420 g, age of 23–25 months, *old rats*). The anxiety level of rats was determined in the elevated plus-maze by the total time of stay of the animal in the open space of the maze for 5 minutes of testing and the frequency of repeated outputs on it. Locomotor and exploratory activity, grooming behavior of animals was assessed using open field within 5 minutes. The level of depressiveness of animals was determined using the standard Porsolt test counting the number and total duration of periods of immobilization of the animal. The number of fecal boluses was tried

about emotional animals. After the initial (control) test battery in the above test animals were divided into three subgroups according to the severity of depression in the test of Porsolt. Alcoholism was carried out for 14 days by intraperitoneal injection of a solution of ethanol in a 10 % solution at the rate of 2 g/kg of animal weight, after which the animals were again tested.

Results. It is established that a two-week alcoholization leads to increase of an indicator of depressiveness at males of young rats with initially low and middle level of depressiveness on what specifies the increase of the total time of immovability in the Porsolt test at rats of these subgroups corresponding in 7,4 and 3,8 times. Long ethanol administration doesn't influence on the depression state of the old males.

Ethanol administration within 14 days differently influences on the level of emotionality of rats of different age: the emotionality of young males is increased by 2–3,5 times regardless of their initial level of depressiveness, whereas at old males with initially middle and high level of depressiveness – is decreased by 1,5–2,3 times.

Two-week alcoholization renders the expressed anxiogenic effect in the elevated plus-maze on young males with initially low and middle level of depressiveness and induces the depressive-like state at low-depressive old animals.

Administration of ethanol within 14 days leads to depressing of the exploratory activity at the animals regardless of their initial level of depressiveness and age by 2,8–5,7 times and practically doesn't exert impact on the implications of the locomotors activity in the open field. The grooming activity at all old rats is completely depressing by the 14-day alcoholization and doesn't change at young animals except for low-depressive males.

Conclusion. The sensitivity to long ethanol administration depends of the individual and age features of animal organism: young animals are showing the larger sensitivity to the alcoholization.

Keywords: depressive, anxiety, exploratory activity, emotionality, ethanol.

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