

The IEM 1460 is a potential age-specific anticonvulsant and an indicator of the distribution of AMPA receptor subtypes among rat brain cells. It is a derivative of adamantane, that was tested in previous studies on models of human myoclonic and generalized tonic-clonic seizures with promising results. In this thesis we evaluated its effect on the motor activity of rat offspring in the age of 12, 18 and 25 days, we used 90 animals in total . The effect was evaluated 30 minutes after intraperitoneal administration of IEM 1460 in two doses, 10 mg/kg or 20 mg/kg, and was compared to the control animals with physiological solution applied intraperitoneally in amount of 20 mg/kg. To test the animals we used Open field test, righting reflex, negative geotaxis, horizontal bar test, rope climbing test, regular and irregular horizontal ladder test. The tests were applied to animals in mentioned order. There were found significant changes influencing motor behaviour, primarily in the 12 days old animals with the dose of 20 mg/kg IEM 1460 and in the 25 days old animals with both doses of IEM 1460, 10 and 20 mg/kg. In the 18 days old animals the results were less significant.