

P-1402 - THE ROLE OF MGLURI IN DEPRESSIVE BEHAVIOUR IN OFFSPRING RATS INDUCED BY PRENATAL STRESS

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A substantial number of human epidemiological data, as well as animal experimental studies, suggest that prenatal stress (PS) is closely related with abnormal behavior and mental and cognition disorder in depression, but the pathophysiology of it was unraveling . Recent years, glutamate, the main excitatory neurotransmitter of the central nervous system, with its receptors is considered to be associated with the neuronal excitotoxicity in depression. In this study, we aimed to investigate the effects of prenatal stress on mGluRI expression in offspring rat hippocampus, striatum, prefrontal cortex. A rat model of prenatal constraint stress was adopted, the pregnant rats were randomly divided into late-stressed group which pregnant rats were given restraint stress (3 times/day for 7days and 45 minutes each time) at the 14-20d of gestation , mid-prenatal stress group at the 7-13d of gestation 1-month-old offspring rats and control group which were not given any restraint stress (n=6 for each group). In this study, we used forced swimming test on one month offspring rats, the immobile timing was significantly increased in late-stressed group ($P < 0.05$) as well as the female rats ($P < 0.05$) . The expression of mGluR1 and mGluR5 among the three regions were determined by Western-blot. The expression of mGluR1 was significantly increased in the late-stressed group in hippocampus and prefrontal cortex($P < 0.05$) and the expression of mGluR5 was significantly increased in the late-stressed group among the three regions($P < 0.05$). The results suggest that PS may cause depressive-like behavior of offspring rats and the mGluRI may have an important role in it.