

цит присутствия в пириформной коре незрелых нейронов. Коль скоро незрелые нейроны коры в норме способны дифференцироваться в зрелые клетки при действии стимулов, индуцирующих механизмы пластичности мозга, снижение количества таких клеток в пириформной коре в отдаленном периоде после перенесенного СРПЖ свидетельствует в пользу вовлеченности клеток DCX⁺PSA-NCAM⁺ в механизмы формирования феномена раннего программирования.

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Changes in the Population of Immature Neurons in the Piriform Cortex of Experimental Animals after Early Life Stress

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Early life stress is an important factor predisposing to the development of pathology of the nervous system in animals and humans in the late period of ontogenesis. We used an early life stress model to assess the activation of the piriform cortex upon presentation of olfactory stimuli in experimental animals (CD1 mice, P60 and 10 months old) as well as to assess the expression of markers of neurons with prolonged immaturity involved in the processes of plasticity of the adult brain and its recovery. We found that early life stress reduces the number of immature neurons with the DCX⁺PSA-NCAM⁺ phenotype in the piriform cortex and the response to olfactory memory induction. In addition, olfactory stimulation reduces sensitivity to unpleasant stimuli at a young age (P60), stimulates short-term memory. However, at the age of 10 months, these effects are less evident. The results obtained indicate a possible contribution of immature neurons of the piriform cortex to the mechanisms of aberrant neuroplasticity after early life stress.

Keywords: early life stress, neurons with prolonged immaturity, olfactory stimulation, piriform cortex, neuroplasticity