

BANCA DE DEFESA: GLAYCIELE LEANDRO DE ALBUQUERQUE
9:30h - Meeting
Data: 22/07/2020

TITLE: EXPERIMENTAL CEREBRAL PALSY AND SEROTONERGIC MANIPULATION: REPERCUSSIONS ON THE NEUROMOTOR SYSTEM OF RATS IN THE NEONATAL PERIOD.

NUMBER OF WORDS: 278

Keywords: Cerebral Palsy; Fluoxetine; Neurogenesis.

Abstract: Cerebral palsy (CP) is commonly associated with neuromotor deficits. The use of selective serotonin reuptake inhibitors (SSRIs) has demonstrated beneficial effects on hypoxic-ischemic disorders through neuroplasticity. **Objective:** This study evaluated the effects of fluoxetine on the neuromuscular development of rats used in an experimental model of CP in the neonatal period. **Methods:** 75 male rats were distributed in groups: Control / Saline (CS, 19), Control / Fluoxetine (CF, 19), CP / Saline (CPS, 19) and CP / Fluoxetine (CPF, 18). The animals suffered postnatal anoxia associated with sensory-motor restriction. Fluoxetine (5 mg / kg) was administered during the lactation period. Neuromotor evaluations include: somatic growth, maturation of technical characteristics, reflex ontogenesis, locomotor activity, muscle strength, motor coordination and analysis of the somatosensory cortex. This study was approved by the Ethics Committee on Animal Use at UFPE (0015/2018). **Results:** Induction of CP, associated or not with fluoxetine, decreased body weight, tail length, lateral-lateral axis of the skull and longitudinal axis. In the reflex tests, only free time and negative geotaxy showed changes in the CP groups. There were no major differences in the resources involved in muscle strength. An analysis of coordination and locomotive activity showed the worst performance of animals in the CPS and CPF groups compared to their controls. An assessment of the somatosensory evidence cortex increased the number of neurons in the CF group. **Conclusion:** Despite the alterations shown in sounds, reflexes, locomotion and balance in groups suffering from cerebral palsy, a low dose of this SSRI shows a positive effect on S1, stimulating neurogenesis and opening the way for new treatment strategies in CP.

EXAMINATION BOARD::

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