**POSTNATAL AND PRENATAL STRESS INFLUENCE ON ANXIETY-LIKE-BEHAVIORAL AND BIOCHEMICAL PARAMETERS IN FEMALE RATS**

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**Introduction and objectives:**

The nervous system development is highly vulnerable to environmental influences during early life periods. Adverse experiences which occurs during early in life and pregnancy can be harmful to neural circuits of the individual and can facilitate the development of emotional and/or mental disorders. After exposure to stressful events, there is an increase of the circulating glucocorticoids levels, these effects are reflected on generation of reactive species, that when in excess, can induce oxidative damages cascade, thus affecting biomolecules and cell structures. In this sense, the aim of our study was assess the influence of prenatal and postnatal stress on behavior and biochemical parameters.

**Materials and methods:**

Ten pregnant Wistar dams pregnant from the breeding facility of Universidade Federal de Santa Maria (UFSM)/RS, Brazil, were maintained in accordance with the ethical principles (CONCEA-UFSM). Four dams were exposed to prenatal stress (Pre-NS) protocol. In PND 1, Litters were subdivided into more two groups: unhandled (UH) and postnatal stress (Post-NS) (n = 12). On PND 38, animals were initially subjected to behavioral assessments in order to evaluate anxiety parameters (elevated plus maze) and after the rats were euthanized to biochemical analyzes on hippocampus (carbonylation proteins and lipid peroxidation levels).

**Results and conclusions:**

Our results have shown that Pre-NS increased anxiety parameters, which were quantified in the EPM test, as well as an increase in in the carbonylation proteins. Contrary, Post-NS group showed a decrease of lipid peroxidation levels. Thus, we may suggest that environmental predictors in early periods of life development may be innovative biological targets related to anxiety and biochemical parameters.

**Acknowledgements:**

The authors are grateful to CNPq, CAPES and PRPGP for the research fellowships and financial support.

**Key Words:** Stress, Anxiety and Oxidative stress.