

Natureza do trabalho: Resumo

TÍTULO

DEPRESSION AND COLD HIPERSENSITIVITY INDUCED BY NEUROPATHIC PAIN MODEL IN RATS

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RESUMO

Introduction: Chronic pain can cause structural brain changes and affect mechanisms not directly related to pain, such as depression, a mood disorder in which anhedonia, fatigue and psychomotor disturbances may be present, with a mortality rate for suicide of up to 15 %. The pathophysiology is still poorly elucidated, but it is believed to involve the expression of neurotransmitters, and possibly cytokines that bind to brain endothelium. **Objective:** Standardize the method of induction of depression by neuropathic pain by sciatic nerve injury in male rats to use as an experimental model at UFGD. **Methodology:** Male Wistar rats (\pm 250 g) had the common peroneal and tibial nerves, branches of the sciatic, tied and sectioned distally to the connection without sural nerve injury. They were divided into 3 groups (n= 6). A sham group went through the process of opening the skin and exposure of the nerves, without neuronal injury. A control group went through the whole process, and received saline. Finally, in a positive control group, which went through the whole process, it was administered ketamine 10 mg/kg (s. c) daily. The cold hyperalgesia was evaluated by acetone test until 15 days after the surgery. The forced swimming test was used to assess depression in the 10th and 15th days after the surgery. **Results:** The cold sensitivity test showed a difference of $74 \pm 8\%$ in increasing sensitivity by comparing the group vehicle with the ketamine group on the 15th day. In the forced swimming behavioral test the control group presented lower locomotor activity compared to the ketamine group with values of $p < 0.001$ (***). **Discussion and Conclusion:** The spared nerve injury is valid for standardization of studies in the field of depression at UFGD.