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Poster Presentation

A New Approach for a Rodent Model of Post-Traumatic Stress Disorder (PTSD)

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Abstract

introduction: One of the most important challenges in studying the anxiety disorders like PTSD is ethical limits in order to make the animal anxious. Sometimes this anxiety should last for a long time such as rodent models of PTSD, and this needs aggressive processes on rats. We found a new approach for a rodent model of PTSD, which seems to be more efficient and ethical. Materials and Methods: 36 adult male Wistar rats weighing 200±20 were divided into two groups of experimental and control. The experimental group were exposed to a male adult cat for 5 minutes, one by one. The cat was kept hungry for 14 hours and the rat's cage was smeared up with cat's food. The control group have not been exposed to the cat. After 7 days, the EPM and the Open-field test was performed and the blood samples were sent to laboratory for corticosteroid tests. Results: The results of the EPM test in conjunction of the open-field test showed that the anxiety in the experimental group was significantly higher than the control group. The cortisol level was also significantly higher in the experimental group. Conclusion: In this study we showed that long-lasting manifestations of PTSD such as increased anxiety and higher cortisol can persist by only a single 5 minutes cat exposure, which is a significantly shorter time in comparison to the previous methods.

Keywords: Post-Traumatic Stress Disorder, Anxiety, Cortisol level, Rodent Model

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