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# CHANGES OF 5-HT1A RECEPTOR IN THE DORSAL RAPHE NUCLEUS IN THE RAT MODEL OF POST-TRAUMATIC STRESS DISORDER

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Introduction: Posttraumatic stress disorder (PTSD) is characterized mainly by symptoms of reexperiencing, avoidance and hyperarousal as a consequence of catastrophic and traumatic events that are distinguished from ordinary stressful life events. Single-prolonged stress (SPS) is an established animal model for post-traumatic stress disorder (PTSD). The dorsal raphe nucleus (DR)-serotonin (5-HT) system is dramatically affected by swim stress and has been implicated in affective disorders. The 5-HT1A receptor (5-HT1AR) is critically involved in regulating mood and anxiety levels.
Objective: In this study, we investigated changes in the expression of 5-HT1AR in DR of rats after SPS which may reveal part of the pathogenesis of PTSD.
Methods: Rats were randomly divided into 24h, 4d and 7d groups after SPS and a normal control group, 5-HT1AR expression in DR was examined using immunohistochemistry, western blotting and reverse transcription polymerase chain reaction.
Results: The expression of 5-HT1AR in DR after SPS exposure was increased when compared to that in the control group ($P < 0.05$).
Conclusion: These findings suggest increase of 5-HT1AR in DR of SPS rats, which may play important roles in the pathogenesis of PTSD rats.

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