

عنوان مقاله:

Intraperitoneal injection of buprenorphine on anxiety-like behavior and alteration in expression of Gfap and Nrf γ in methamphetamine treated rats

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خلاصه مقاله:

The effects of buprenorphine (BUP) on anxiety-like behavior and the expression of the glial fibrillary acidic protein (Gfap) and nuclear factor erythroid γ -related factor γ (Nrf γ) in methamphetamine (METH)-treated rats were investigated in this study. Twenty-eight male Wistar rats were randomly divided into four groups including control (saline), METH (10.00 mg kg⁻¹), BUP (10.00 mg kg⁻¹), and BUP + METH groups and treated for five days. On the final day of treatment, gene expression levels and anxiety were evaluated using elevated plus-maze (EPM). According to the results, five days of METH injection reduced open arm exploration in the EPM. In contrast, the open arm entries and the time spent in the open arms were increased in the BUP + METH group compared to the METH group. The expression levels of Gfap and Nrf γ were lower in METH-treated rats compared to controls, whereas Gfap and Nrf γ expression levels were higher in the METH+BUP-treated rats compared to the METH-treated rats, however, it was similar to the controls. These findings suggested that co-administration of BUP+METH could decrease anxiety-like behavior through increasing the activity of the antioxidant protection system and might have therapeutic potential for preventing anxiety in METH users.

کلمات کلیدی:

Anxiety, Buprenorphine, Glial fibrillary acidic protein, Methamphetamine, Nrf γ

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