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Poster Presentation

Beneficial Effect of 5-HT Receptor Agonist Administration on Memory Rehabilitation after Closed Head Injury

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Abstract

The serotonin (5-HT) receptors are a group of G protein-coupled receptors (GPCRs) and ligand-gated ion channels that found in the central and peripheral nervous systems. 5HT receptor can substantially influence brain functions such as learning and memory, perception of the environment, mood states, and responses to alcohol and other drugs of abuse. Lysergic acid diethylamide (LSD) as a 5HT receptor agonist causes expansion and an altered experience of senses, emotions, memories, time, and awareness. As we know closed head injuries are usually caused by blows to the head and frequently occur in traffic accidents, falls and assaults and leads to some disorders like spatial memory dysfunctions. Acute treatments of Adult 8-week-old male Wistar rats with agonists of 5-HT receptor subtypes were followed by a single injection of 5-bromodeoxyuridine (200 mg/kg, i.p.) 2 h before killing to examine the effect of these drugs specifically on spatial memory rehabilitation. Our data showed that LSD can promote rehabilitation of spatial memory dysfunction after closed head injury.

Keywords: Serotonin, Lysergic Acid Diethylamide, Brain Injury, Memory Dysfunction.

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