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The effects of the Pirenperone and Ketanserin injected into the CA1 region on spatial discrimination

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Abstract:

In this study the effects of 5-HT2A receptor blockers in CA1 region of rat hippocampus on spatial learning were assessed in a T-maze, a spatial discrimination task. Rats were connulated and bilateral injection of vehicle (saline) and 5-HT2A-selective antagonist, ketanserin (0.6, 1.2 or 2.4 µg/0.5 µl) were injected through the connulae 30 miutes before training each day. Results indicated that direct ketanserin and pirenperone injection did not affect spontaneous alternation. They also did not show a significant effect on trials to reach criterion and errors made by animals throughout spatial discrimination and reversal learning and reversal stages. During extiction, no change was observed in the choice of the previously reinforced arm in both ketanserin and pirenperone groups. The slope of latency in highest dose of ketanserin (2.4 µg/0.5 µ/l) compared to the sham operated group but not in the pirenperone group.These findings suggest that 5-HT2A receptors blockade (ketanserin, not prienperone) in the CA1 region may decrease decision time and increase behavioural flexibility in T-maze

Keywords:

Ketanserin ، Pirenperone ، CA1 ، T-maze ، Spatial discrimination, Rat

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