

عنوان مقاله:

Folic Acid and Coenzyme Q₁₀ Ameliorate Cognitive Dysfunction in the Rats with Intracerebroventricular Injection of Streptozotocin

محل انتشار:

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خلاصه مقاله:

Objective(s) The present study aimed to investigate the effects of a fat soluble antioxidant, coenzyme Q₁₀ (CoQ₁₀) and folic acid on learning and memory in the rats with intracerebroventricular injection of streptozotocin (ICV-STZ), an animal model of sporadic type of Alzheimer's disease. **Materials and Methods** The lesion groups were injected bilaterally with ICV-STZ (1.5 mg/kg b.wt., in normal saline). In the treated groups, rats received folic acid (4 mg/kg; i.p.) or CoQ₁₀ (10 mg/kg; i.p.), either alone or together, for 21 days. Passive avoidance learning test was used for evaluation of learning and memory. **Results** The results showed that learning and memory performance was significantly impaired in the rats with ICV-STZ ($P < 0.001$), however CoQ₁₀ and folic acid, either alone or together, prevented impairments significantly ($P < 0.001$), as there was not any significant difference between these treated lesion groups and control group. **Conclusion** The present results suggest that CoQ₁₀ and folic acid have therapeutic and preventive effects on cognitive impairments in Alzheimer's disease.

کلمات کلیدی:

Alzheimer disease, Coenzyme Q₁₀, folic acid, Passive avoidance learning, Streptozotocin

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