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Poster Presentation

The Protective Effect of Nano-Hesperetin on Memory Disorder Induced by Streptozotocinin Male Rat in Alzheimer Models

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Abstract

Introduction: Intracerebroventricular (i.c.v.) injection of streptozotocin (STZ) to rodents has been reported as an appropriate model for sporadic dementia of Alzheimer's type (SDAT), characterized by a progressive impairment of memory. However, very little or nothing is known about non-cognitive behavioral effects in the STZ model. This study was carried out in order to show the protective effects of nano-hesperetin on memory disorder in the brains of Alzheimer's animal models. **Materials and Methods:** 49 male rats were divided into 6 groups: control, sham, disease group (rats were injected with STZ), 2 treatment groups receiving 10 and 20 mg/kg/day of Nano-hesperetin. Then 3 µgr/rat of (STZ) was injected to the cerebroventricular of rats of all groups except the control and sham groups. The control and sham and toxin groups received distilled water orally. The two treatment groups were gavaged by, respectively10, 20 mg/Kg of nano-hesperetin 30 days. Then, three successive weeks, recognition memory was examined by shutl box test. **Results:** The results showed that injection of STZ increases memory disorders ($p \leq 0.001$) and treatment of Nano-hesperetin effectively decrease memory disorders ($p<0.001$) and increases duration that spends in light area of Shuttle box ($p<0.01$) compared with disease group. **Conclusion:** the treatment with Nano-hesperetin cause the protect cholinergic neurons against memory disorder in the Alzheimer rat model.

Keyword: Alzheimer's disease, STZ, Nano-hesperetin, Behavioral test of learning

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