

عنوان مقاله:

Behavioral and Histological Analysis of Crocus Sativus Effect in Intracerebroventricular Streptozotocin Model of Alzheimer Disease in Rats

محل انتشار:

فصلنامه آسیب شناسی ایران، دوره 5، شماره 1 (سال: 1389)

تعداد صفحات اصل مقاله: 7

نویسندگان:

Mohsen Khalili - *Dept of Physiology and Neuroscience Research Center, Shahed University of Medical Science, Tehran, Iran*

Zahra Kiasalari - *Dept of Physiology and Neuroscience Research Center, Shahed University of Medical Science, Tehran, Iran*

Batol Rahmati - *Dept of Physiology and Neuroscience Research Center, Shahed University of Medical Science, Tehran, Iran*

Jamshid Narenjkar - *Dept of Pharmacology, Shahed University of Medical Science, Tehran, Iran*

خلاصه مقاله:

Background and Objectives: There is well established the beneficial effects of Crocus sativus extract in learning and memory improvement. In the present study the effect of this plant in memory behavioral impairment and for brain histological damage induced by STZ-icv model of Alzheimer disease were investigated. **Materials and Methods:** This study was conducted at Shahed University (Tehran) in 2007. Forty five male rats were divided into three 15 number groups: 1- Control which received CSF bilaterally two times in 1 and 3 days (10 μ l in each injection) 2- STZ-icv, streptozotocin (3 mg/kg) dissolved in CSF was injected (icv) to the animals. 3- STZ+CSE, the STZ-icv animals received the plant extract (30 mg/kg; i.p) one other day as treatment ones. All of the animal groups were weighted and subjected to memory behavioral passive avoidance test and brain histological damage analysis. **Results:** STZ caused selective injury to the fornix and hippocampus and an enlargement as well as loss of ependymal cell in third ventricle. However, STZ-icv treated animals with CSE (30 mg/kg, i.p) one other day starting one day pre-surgery for three weeks show higher correct choice and lower errors in shuttle box test than vehicle-treated STZ-injected rats. But the same CSE treatment rats did not show any antagonizing effects on STZ-icv induced histological impairment. **Conclusion:** Our findings provide an explanation for effectiveness of CSE in preventing the cognitive deficits caused by STZ-icv in rats, which mediated by enzymes, metabolisms (glucose utilization) and other biochemical pathways, but not via histological injury repair.

کلمات کلیدی:

Memory, Crocus sativus, Streptozocin, Neurotoxicity Syndrome, Rat

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