

عنوان مقاله:

The effect of oral administration of eggplant hydroalcoholic extract on avoidance memory retrieval in streptozotocin-induced diabetic male rats

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خلاصه مقاله:

Introduction: Diabetes is caused by defects in insulin secretion or function. Diabetes causes structural and functional damage in the central and peripheral nervous system, including degeneration of the memory system. The present study is an attempt to determine the effect of eggplant extract on memory retrieval in diabetic rats. **Methods:** Mature male Wistar rats (۲۰۰-۲۵۰ g) are divided into five groups (n = ۷): ۱) healthy (control), ۲) untreated diabetic, ۳, ۴ and ۵) diabetic rats treated by the hydroalcoholic extract of eggplant (۲۵, ۵۰ and ۱۰۰ mg/kg). Rats with streptozotocin (STZ) (۶۰ mg/kg) became intraperitoneally diabetic. On the fifth day after receiving the STZ, the animals with blood glucose higher than ۲۰۰ mg/dL, were considered diabetic. The control group only received saline and the treated diabetic group received eggplant extract orally for two weeks. The healthy group did not receive any medication or extract. Shuttle box was used to assess the spatial memory of the rats. **Results:** Eggplant extract in higher doses (۵۰ and ۱۰۰ mg/kg) significantly reduced blood glucose levels in diabetic rats ($P < ۰.۰۰۱$). The spatial memory in diabetic rats was weakened ($P < ۰.۰۰۱$). Eggplant extract at a dose of ۵۰ mg/kg significantly improved the paramnesia in diabetic group ($P < ۰.۰۰۵$). **Conclusion:** STZ increased blood glucose, resulting in spatial memory deficits, And this has probably occurred through the production of free radicals in the brain tissue. It seems that, in addition to reducing blood glucose levels, eggplant, due to containing compounds with antioxidant properties, can reduce free radicals and thereby improve memory deficits caused by diabetes.

کلمات کلیدی:

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