

عنوان مقاله:

Therapeutic effect of Melissa officinalis in an amyloid- β rat model of Alzheimer's disease

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خلاصه مقاله:

Introduction: Medicinal herbs have several components with different pharmacological effects. It has been described that *Melissa officinalis* is able to improve memory in different models of learning. Nevertheless, its influence has not been studied in animal models of AD. Here, we studied the potential therapeutic effect of *M. officinalis* in intracerebroventricular (i.c.v) amyloid- β ($A\beta$) model of Alzheimer's disease (AD). **Methods:** Male Wistar rats weighing 260-330 g received the hydro-alcoholic extract of *M. officinalis* (50, 100, 200, 400 mg/kg; P.O), chronically for 30 consecutive days. The control group received solvent of the drug. Memory retrieval was assessed, using the passive avoidance task. Three groups of the rats received $A\beta$ (1-42; 10 μ g/rat bilaterally; i.c.v). One group received DMSO 1% (2 μ L/rat; i.c.v). Twenty days later memory retrieval was assessed. The $A\beta$ -treated rats, received *M. officinalis* (50, 100 mg/kg; P.O) or saline (1 mL/kg; P.O), chronically for 30 consecutive days. The DMSO 1%-treated rats received saline (1 mL/kg; P.O). **Results:** The hydro-alcoholic extract of *M. officinalis* (50, 100, 200, 400 mg/kg; P.O) did not have a significant effect on step-through latency (STL). $A\beta$ impaired memory retrieval by decreasing STL and increasing the time spent in the dark compartment (TDC). *M. officinalis* (50, 100 mg/kg; P.O) improved memory retrieval in AD rats by increasing STL and decreasing TDC, significantly. **Conclusion:** The outcomes of the study show that *M. officinalis* has a therapeutic effect in the $A\beta$ model of AD. It seems that the extracts of *M. officinalis* can be suggested as a powerful therapeutic herb for AD patients.

کلمات کلیدی:

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