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Evaluation of the effect of *Cyperus rotundus* L. in scopolamine-induced learning deficit in mice

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Background and Aims: In Iranian traditional practices C. rotundus has been used to treat memory and cognition disorders. This study was aimed to evaluate the effect of C. rotundus on cholinergic memory deficit in mice.
Methods: Cognition was evaluated using the object recognition task. The novel object recognition task was performed in a square wooden open-field box using different shape objects. The test was consisted of three sections: 15 min exploration, first trial for 12 min and second one for 5 min. In the second trial the difference in exploration between a previously seen object and a novel one, was considered as an index of memory performance (recognition index: RI). Memory deficit was induced by scopolamine (0.5 mg/kg) 30 min before injection of plant extract.
Results: Rivastigmin at 0.7 mg/kg reversed the scopolamine-induced memory dysfunction in mice ($P<0.05$). On the contrary, neither the hydroalcoholic extract (200 and 400 mg/kg) nor the polyphenolic extracts (50, 100 and 200 mg/kg) of C. rotundus produce significant improvement of learning dysfunction.
Conclusions: The fact that rivastigmine reversed the scopolamine-induced memory dysfunction confirms the validity this memory paradigm. Since none of the tested doses of the plant extract change the memory status of the animals, these fractions of the C. rotundus do not seem to be having effective ingredient as far as this model of memory is concerned.

Keywords: *C. rotundus*; Memory; Scopolamine