ACUTE TREATMENT WITH AQUEOUS FRUIT EXTRACT OF PHOENIX DACTYLIFERA LINN DOES NOT AFFECT VISUO–SPATIAL LONG TERM MEMORY OF MICE

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ABSTRACT
Phoenix dactylifera fruits were found to possess essential properties such as analgesic, antioxidant and nephroprotective activity but there is paucity of information on researches centered on the benefits of Phoenix dactylifera on learning and memory. This study was designed to evaluate the effects of Phoenix dactylifera fruit extract on spatial learning and memory. The following neurobehavioral paradigms were used for the study: Morris water, Barnes, and elevated plus mazes. Acetylcholinesterase enzyme activity of the brain tissues of the mice studied was also evaluated. Seventy five mice of both sexes were used for the study and divided into five groups (n=5) for each neurobehavioral paradigm. Group 1 (distilled water 10 ml/kg) served as control, Group 5 (Piracetam 100 mg/kg) served as positive control. Groups 2-4 were treated with graded doses of Phoenix dactylifera extract 1000, 500 and 250 mg/kg respectively. Results obtained from this study revealed that Phoenix dactylifera fruit (1000 mg/kg) impaired learning and memory of mice in Morris water maze (p<0.05), but did not affect learning and memory in Barnes and elevated plus mazes. Therefore, acute administration of aqueous fruit extract of Phoenix dactylifera impaired spatial learning and memory in Morris water maze and did not affect spatial learning and memory of mice in Barnes and elevated plus mazes.

Keywords: Phoenix dactylifera; piracetam, acetylcholinesterase, spatial learning, spatial memory.
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