

عنوان مقاله:

Assessment of the neuroprotective effect of Cocos nucifera L. oil on learning and behavior impairment in ovariectomized rats

محل انتشار:

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خلاصه مقاله:

Objective: The current study aimed to investigate whether Cocos nucifera L. oil (CO) is effective on menopause-related memory dysfunction in ovariectomized (OVX) rats. **Materials and Methods:** Fifty healthy female Wistar rats were randomly selected and classified into five groups as control, OVX rats, and three OVX groups of rats which received three different doses (100, 200, and 400 mg/kg/day) of CO for five consecutive weeks by gavage. To assess the effect of CO, neurobehavioral tests such as Morris water maze (MWM) and Passive avoidance (PA) were done and then the animals were sacrificed to remove cortical and hippocampal tissues for biochemical analysis. **Results:** In both behavioral tests including MWM and PA, treatment with CO particularly two higher doses of 200, and 400 mg/kg demonstrated significant improvement in comparison with OVX group. Furthermore, antioxidant biomarkers such as total thiol content, catalase and superoxide dismutase (SOD) activities were significantly higher in the OVX-CO groups versus the OVX group. On the contrary, malondialdehyde (MDA) concentration as an oxidative stress biomarker was remarkably lower in the OVX-CO200 and 400 mg groups than the OVX group. **Conclusion:** The present study demonstrated the significant improvement of CO on learning and memory impairment induced by ovariectomy.

Although the exact mechanism needs further investigation, it might have occurred due to the anti-oxidative effect of .CO

کلمات کلیدی:

Cocos nucifera L, Morris Water Maze, Ovariectomy, Oxidative stress

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