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عنوان مقاله:

The effects of Artemisia absinthium L. on scopolamine-induced learning and memory impairment and brain tissue oxidative damage in adult rats

محل انتشار:

مجله گیاهان دارویی ابن سینا, دوره 13, شماره 1 (سال: 1402)

تعداد صفحات اصل مقاله: 15

نویسندگان:

Marzieh Rahimi - *Student Research Committee, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran*

Narges Marefati - *Department of Physiology and Medical Physics, Faculty of Medicine, Baqiyatallah University of Medical Sciences, Tehran, Iran*

Farimah Beheshti - *Neuroscience Research Center, Torbat Heydariyeh University of Medical Sciences, Torbat Heydariyeh, Iran*

Somaieh Ahmadabady - *Applied Biomedical Research Center, Mashhad University of Medical Sciences, Mashhad, Iran*

Hassan Rakhshandeh - *Pharmacological Research Center of Medicinal Plants, Mashhad University of Medical Sciences, Mashhad, Iran*

Mahmoud Hosseini - *Psychiatry and Behavioral Sciences Research Center, Mashhad Universityof Medical Sciences, Mashhad, Iran*

خلاصه مقاله:

Objective: The present study examined the effects of Artemisia absinthium L. on scopolamine-induced memory dysfunction and brain tissue oxidative damage in rats. Materials and Methods: Fifty rats were used in five groups: Control: received dimethyl sulfoxide (DMSO)/saline, Scopolamine: scopolamine (۲ mg/kg) was administered along with DMSO/saline, and Scopolamine-Ext ۵۰, Scopolamine-Ext ۱۰۰, and Scopolamine-Ext ۲۰۰ groups: A. absinthium hydroalcoholic extract ۵۰, ۱۰۰ and ۲۰۰ mg/kg were administered before scopolamine. The Morris water maze (MWM) and passive avoidance (PA) tasks were used for assessment of behavioral parameters. Malondialdehyde (MDA), nitric oxide (NO) metabolites, total thiol, catalase (CAT), and superoxide dismutase (SOD) were measured in the cortex and hippocampus.Results: A. absinthium decreased the delay time and distance traveled to reach the platform in the MWM test (p<۰.۰۵-p<۰.۰۰۱). Besides, the extract increased the delay time to pass in the dark and the light time while decreasing the number of entrances and the dark time in the PA task (p<۰.۰۵-p<۰.۰۰۱). In biochemical assessments, A. absinthium attenuated NO metabolites (p<۰.۰۰۱) and MDA (p<۰.۰۵- p<۰.۰۰۱) while enhanced total thiol (p<۰.۰۰۱), CAT and SOD (both p<۰.۰۵-p<۰.۰۰۱).Conclusion: This study revealed that A. absinthium improved memory and learning .impairment and brain tissue oxidative damage in scopolamine-treated rats

کلمات کلیدی:

Artemisia absinthium, Memory, Oxidative stress, Scopolamine

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