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Poster Presentation

Comparison the Effect of Coriandrum Sativum and Salvia Officinalis Hydroalcoholic Extract on Learning and Memory in Mice; the Role of oxidativeS

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Abstract

In this study, the efficacy of Coriandrum and salvia extracts in spatial and passive avoidance memory in mice was s tudied. 56 male mice (25-30g) divided randomly into 8 groups: negative control, positive control and extract adminis tered (50, 100 and 200 mg/kg of both plants), and treated for 25 days. negative and positive control group received normal saline and Ritalin respectively. After training, passive Avoidance memory was measured with shuttle box and spatial memory was measured with Morris water maze and Y maze, twenty-four hours and one week after the last injection. Finally, blood samples were collected, MDA and SOD in serum were measured using ELISA kits of Zell Bio, Germany. Data were analyzed by using ANOVA and Tukey test. The $P<0.05$ was considered significant. Data analysis showed both Coriandrum and salvia hydroalcoholic extract(200mg/kg) improved passive avoidance memory ($P<0.01$) and spatial memory ($P<0.05$) in mice in compared with control groups.after one week this effect was seen in salvia but wasn't seen for Coriandrum.and in both group (100 and 200mglkg) amount of MDA was significantly. decreased, but no significant change was observed in the SOD content between them. It seems that the beneficial effects of these plants on memory related to oxidative stress indices and reducing the level of lipid peroxidation of the serum but other mechanisms maybe have effect in longer efficacy in salvia rather than Coriandrum and more studies is needed to determine the mechanism this effect.

Keywords: Coriandrum Sativum, Salvia Officinalis, Memory, Oxidative Stress, Mice

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