

عنوان مقاله:

The Effects of Olibanum and Its Constituents on Memory Impairment Induced by Lipopolysaccharide in Rats

محل انتشار:

سومین همایش بین المللی التهاب سیستم عصبی و سومین فستیوال دانشجویی علوم اعصاب (سال: 1398)

تعداد صفحات اصل مقاله: 1

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خلاصه مقاله:

Since ancient times, the therapeutic properties of resinous of *Boswellia serrata* were known. The resin obtained from the bark of trees are known as frankincense, olibanum or incense. More than 200 constituents have been known in these resin that can responsible for therapeutic properties in various inflammatory disease. Meanwhile, boswell Acid and incensole Acetate have distinct anti-inflammatory properties. Materials and Methods: 40 rats were divided into 6 groups (n=10): Control, LPS, boswellic acid 5 (BA 5), BA 10, incensole acetate 2.5 (IA 2.5) and IA 5. For 6 days, the animals received 1mg/kg LPS (i.p) with extract solvent (DMSO-saline), LPS along with treatments or DMSO and saline without LPS injection. LPS was also administered two h before the behavioral experiments and treatments were injected 30 minutes before LPS. Animals were tested with Morris Water maze (MWM) and Passive avoidance tests. In the last day, the hippocampus were removed. Results: LPS administration increased the duration and distance to find the platform in the MWM test in compare to control group in 5 days ($P<0.05$ to $P<0.001$). While, LPS decreased the latency to enter to the dark compartment after receive the shock in PA ($P<0.001$). Pretreatment with the both two doses of all treatments enhanced performances of the rats in MWM ($P<0.05$ to $P<0.01$) and PA test ($P<0.01$ to $P<0.001$). LPS also increased hippocampal IL-6, TNF- α , NO, GFAP and MDA levels ($P<0.001$) while, decreased IL-10, BDNF, CAT, SOD and thiol ($P<0.001$). All treatments increased hippocampal IL-10, BDNF, CAT, SOD and thiol groups ($P<0.01$ to $P<0.001$). Conclusion: We found for the first time that these resin and its constituents could attenuated the generation of pro-inflammatory, oxidant agents and reinforce the anti-inflammatory cytokines and anti-oxidant agents and improve memory impairment induced by LPS.

کلمات کلیدی:

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