

عنوان مقاله:

Frankincense improves memory retrieval in rats treated with Lipopolysaccharide

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خلاصه مقاله:

Introduction: Frankincense has been shown to possess anti-inflammatory activity. In this study the effect of pretreatment with the hydro-alcoholic extract of frankincense on memory retrieval was assessed in lipopolysaccharide (LPS) treated rats. **Methods:** Forty-two adult male Wistar rats were distributed into 7 groups of 6 each. One group received LPS (1 mg/kg; i.p) pre-test. The control group received saline (1 ml/kg; i.p). 2 groups of animals received frankincense (50 mg/kg; P.O) or DMSO 5% (1 ml/kg; P.O) and 30 minutes later LPS (1 mg/kg; i.p). Two other groups of animals received frankincense (50 mg/kg; P.O) or DMSO 5% (1 ml/kg; P.O) and 30 minutes later saline (1 ml/kg; i.p). Another group of rats received LPS (1 mg/kg; i.p) and 30 minutes later Ibuprofen (100 mg/kg; P.O). In all the experimental groups, memory retrieval was assessed 4 hours following the last injection, using a passive avoidance task (PAT). Hippocampal TNF- α levels were measured by ELISA as an index of LPS-induced neuroinflammation. **Results:** LPS impaired memory retrieval by decreasing step-through latency (STL), significantly. LPS also increased levels of TNF- α in the hippocampus as compared to the control group. Administration of frankincense (50 mg/kg; P.O) before LPS (1 mg/kg; i.p) improved memory retrieval as compared to the control group. Frankincense reduced hippocampal TNF- α level in the LPS treated rats, significantly, compared to the control group. **Conclusion:** The results indicate that the hydro-alcoholic extract of frankincense has the potential to improve memory retrieval in LPS treated rats, possibly via an anti-neuroinflammatory activity.

کلمات کلیدی:

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