

عنوان مقاله:

Effects of aqueous extract of *Hyssopus officinalis* on seizures induced by pentylenetetrazole and hippocampus mRNA level of iNOS in rats

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خلاصه مقاله:

Objective: We examined the effectiveness of *Hyssopus officinalis* (hyssop) aqueous extract on pentylenetetrazole (PTZ)-induced acute seizures and the hippocampus iNOS (inducible nitric oxide synthases) gene expression as a potential mediator of the effects. **Materials and Methods:** Adult male Wistar rats were used. Tonic-clonic seizures were induced by intraperitoneal (i.p.) injection of PTZ (80 mg/kg) then behavioral profile during 30 min was characterized by stages defined as seizure scores. Hyssop extract were prepared and injected (i.p.) 15 minutes before the seizure induction at three doses 50, 100 and 200 mg/kg. Experimental groups were as below: (1) saline+PTZ (n=5); (2) Hyssop 50mg/kg+PTZ (n=10); (3) Hyssop 100mg/kg+PTZ (n=10); (4) Hyssop 200 mg/kg+PTZ (n=8). Two hours after the experimental procedure, all animals were decapitated, brain was removed and right hippocampus was quickly dissected. After total RNA extraction and cDNA synthesis quantitative PCR were used for gene expression of iNOS. **Results:** Our results showed significant increase ($p<0.05$) in latency to reach stages 5 and 6 of tonic-clonic seizure at dose 100 mg/kg hyssop extract. In addition, this dose caused significant increase in the gene expression of iNOS in the hippocampus. **Conclusion:** It seems a 100 mg/kg dose of hyssop extract might have anticonvulsant effects. However, these anticonvulsant effects might not occur through the iNOS gene expression.

کلمات کلیدی:

Anticonvulsive, Epilepsy, Aqueous extract, Nitric oxide, *Hyssopus officinalis*

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