



Epilepsy Behav. 2012 Jun;24(2):199-206. Epub 2012 May 8.

Evaluation of the antiepileptic effect of curcumin and *Nigella sativa* oil in the pilocarpine model of epilepsy in comparison with valproate.

Noor NA, Aboul Ezz HS, Faraag AR, Khadrawy YA.

Source

Zoology Department, Faculty of Science, Cairo University, Giza, Egypt. neveen.nour5@gmail.com

Abstract

The present study aimed to investigate the effect of curcumin and *Nigella sativa* oil (NSO) on amino acid neurotransmitter alterations and the histological changes induced by pilocarpine in the hippocampus and cortex of rats. Epilepsy was induced by i.p. injection of pilocarpine, and the animals were left for 22 days to establish spontaneous recurrent seizures. They were then treated with curcumin, NSO or valproate for 21 days. Pilocarpine induced a significant increase in hippocampal aspartate and a significant decrease in glycine and taurine levels. In the cortex, a significant increase in aspartate, glutamate, GABA, glycine, and taurine levels was obtained after pilocarpine injection. Treatment of pilocarpinized rats with curcumin and valproate ameliorated most of the changes in amino acid concentrations and reduced the histopathological abnormalities induced by pilocarpine. *N. sativa* oil failed to improve the pilocarpine-induced abnormalities. This may explain the antiepileptic effect of curcumin and suggest its use as an anticonvulsant.

Copyright © 2012 Elsevier Inc. All rights reserved.

PMID: 22575751 [PubMed - in process]