

Ustokhoddus and epilepsy in Iran

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Background and Objective: Antiepileptic effects of Ustokhoddus have been explained in Iranian traditional medicine and it has been supported by scientific documents. But, it should be noticed that *Lavandula officinalis* and *Lavandula dentata* and also *Nepeta menthoides* all are called Ustokhoddus in Iran and sell under this label in the markets. Therefore, it is necessary to study antiepileptic effects of each plant in different animal models.

Materials and Methods: Extracts of mentioned plants were studied on Seizures induced by intraperitoneal (i.p) injection of pentylenetetrazol (PTZ), timed intravenous infusion of PTZ, PTZ kindling, maximal electro shock (MES), and also, Status Epilepticus (SE) induced by pilocarpine and kainic acid.

Results: *Lavandula officinalis* inhibited seizure induced by kindling, reduced duration and enhanced latency of seizures. On the other hand, *Nepeta menthoides* did not inhibit seizure factors induced by kindling. *Nepeta menthoides* not only failed to inhibit seizure but also intensified it in acute administration of PTZ and MES methods, and prevented antiepileptic effects of valproate and phenytoin. On the other hand, *Lavandula dentata* reduced seizure induced by pilocarpine but intensified kainic acid induced epilepsy. *Lavandula dentata* enhanced SE onset latencies and reduced total duration of seizures induced by pilocarpine and also reduced % of mortality. While speed up SE onset and also enhanced total duration and occurrence of SE induced by intrahippocampal administration of kainic acid.

Conclusion: We cannot nominate all these species as Ustokhoddus because they exhibited different effects on epilepsy.

Keywords: Epilepsy, *Lavandula officinalis*, *Lavandula dentata*, *Nepeta menthoides*, Ustokhoddus