

عنوان مقاله:

Assessment of Anticonvulsant Activities of Petroleum Ether Extract of Anacyclus pyrethrum Roots on Experimental Rats

محل انتشار:

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خلاصه مقاله:

Background: Epilepsy is one of the most common neurological conditions and a significant cause of morbidity and mortality. Objectives: The present study aimed to evaluate the anticonvulsant activity of the petroleum ether extract of the root of Anacyclus pyrethrum on pentylenetetrazole (PTZ)-induced seizure model in Wistar rats. Methods: The composition of the petroleum ether extract of A. pyrethrum was first analyzed using gas chromatography-mass spectrometry (GC-MS). Subsequently, the anticonvulsant activities of these extracts (۷۰ and ۱۴۰ mg/kg, intraperitoneal injection) were evaluated on PTZ-induced seizures in rats. The protection rate against induced seizures, latency, and duration of seizures, as well as neurological symptoms, were assessed and compared to those protected by phenobarbital. Results: GC/MS analysis of the petroleum ether extract showed that the main components were octadecadienoic acid, hexadecanoic acid, diheptylcyclopropene, naphthalene, and methyl stearate. The extract (۷۰ and ۱۴۰ mg/kg) was found to provide significant protection against PTZ-induced seizures. Moreover, compared to the negative control, the extracts increased the latency of induced-convulsion and reduced the duration of epilepsy. Interestingly, the extracts showed a reduction in neurological symptoms and the severity of seizures compared to the negative control. All of these outcomes manifested in a dose-dependent manner. Conclusion: The petroleum ether extract of A. pyrethrum may produce anticonvulsant effects by reducing the duration of seizures and delaying the latency of seizures induced by PTZ.

کلمات کلیدی:

Anacyclus pyrethrum, Gas chromatography-mass spectrometry (GC/MS), Pentylenetetrazole, Anticonvulsant activity

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