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The effect of Rosa damascena essential oil on the amygdala electrical kindling seizures in rat

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Abstract

We investigated the effect of Rosa damascena Mill, essential oil on the development of induced amygdala kindling seizures. Male Wistar rats were implanted with one tripolar and two monopolar electrodes in right basolateral amygdala and dura surface, respectively. The control group was injected solvent of essential oil and two experimental groups were injected ٧٥٠ and ١٠٠٠ mg kg^{-1} of essential oil (ip), ٣٠ min before a daily kindling stimulation. The number of stimulations required for the first appearance of seizure stages was significantly larger in two experimental groups than in control group. Mean after discharge duration was significantly different and essential oil reduced the increase of after discharge duration. Mean after discharge amplitude was also shorter in the groups treated with essential oil than in control group. Duration time for ٥th stage of seizure at fully-kindled rats was significantly shorter in two experimental groups than control group. These results suggest that Rosa damascena essential oil significantly retarded the development of seizure stages and possesses the ability to counteract kindling acquisition. The flavonoids of Rosa damascena may act via $GABA_A$ receptors as previous studies have proposed for flavonoids of other medicinal plants. More detailed studies are recommended to define the effective component(s) of Rosa on different types of epilepsy. © ٢٠٠٨ Asian Network for Scientific Information.

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Indexed Keywords

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EMTREE medical terms: animal; article; brain; chemistry; drug effect; kindling; male; metabolism; pathology; physiology; plant leaf; rat; rose; seizure; time; Wistar rat

MeSH: Animals; Anticonvulsants; Brain; Kindling, Neurologic; Male; Oils, Volatile; Plant Extracts; Plant Leaves; Rats; Rats, Wistar; Rosa; Seizures; Time Factors
Medline is the source for the MeSH terms of this document.

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