

Poster Presentation

Berberine Attenuates Convulsing Behavior in 4-aminopyridine Treated Rats

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Abstract

Introduction: 4-Aminopyridine (4-AP), a K⁺ channel blocker, causes seizures by stimulating the release of glutamate from nerve terminals. The natural isoquinoline alkaloid berberine has neuroprotective properties. The present study aimed to investigate the effect of berberine on seizure onset produced by 4-AP in rats. **Materials and Methods:** The rats were given berberine (50, 100, and 200 mg/kg, IP) 40 min before administration of 4-AP (15 mg/kg, IP), and the onset of seizure was recorded. Additionally, diazepam (DZP, 15 mg/kg, IP) was given to a group of rats 20 minutes before 4-AP was administered. **Results:** The beginning of the seizure was markedly postponed by berberine following the 4-AP injection. **Conclusion:** Our findings imply that berberine may be able to stop seizures brought on by 4-AP. This research highlights the therapeutic potential of berberine to treat neurological diseases.

Keywords: 1. Seizures 2. Plants, Medicinal 3. Epilepsy

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