

论著

## 掌叶半夏超临界CO<sub>2</sub>乙醇萃取物的抗惊厥作用

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**摘要** 目的 研究掌叶半夏超临界CO<sub>2</sub>乙醇萃取物(SEE-CO<sub>2</sub>PP)对青霉素诱发惊厥的对抗作用。方法 采用大鼠皮质局部定位注射青霉素诱发惊厥模型, 研究SEE-CO<sub>2</sub>PP对惊厥发作的潜伏期以及惊厥行为变化的影响, 并用RM6240C型多道生理信号采集处理仪记录皮质和海马痫性放电的潜伏期、频率和痫波最高发放波幅, 同时应用高效液相色谱法测定海马谷氨酸(Glu)、天冬氨酸(Asp)、甘氨酸(Gly)和γ-氨基丁酸(GABA)递质的含量。结果 SEE-CO<sub>2</sub>PP 15和30 g·kg<sup>-1</sup>(ig)可延长青霉素诱发惊厥的潜伏期, 并减弱发作强度。SEE-CO<sub>2</sub>PP能够延长痫性放电的潜伏期, 减少痫性放电的频率, 减小皮质和海马发放痫波的最高波幅, 同时, SEE-CO<sub>2</sub>PP可以增加海马GABA的水平, 对Gly, Asp和Glu水平无明显影响。结论 SEE-CO<sub>2</sub>PP可对抗青霉素诱发的惊厥行为和痫样放电, 具有抗惊厥作用。

**关键词** [关键词: 掌叶半夏](#) [青霉素](#) [惊厥](#)

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## Anticonvulsive action of *Pinellia Pedatisecta* Schott extract prepared by ethanol-modified supercritical CO<sub>2</sub> extraction

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### Abstract

**AIM** To investigate the anticonvulsive action of supercritical CO<sub>2</sub> ethanol extract from *Pinellia Pedatisecta* Schott (SEE-CO<sub>2</sub>PP). **METHODS** The rat convulsive model was induced by penicillin localized injected in rat cortex. The effects of SEE-CO<sub>2</sub>PP on the latency of seizure and changes of convulsive behaviors were investigated. The latency of epileptiform discharge, and frequency and amplitude of highest wave in cortex and hippocampus were recorded by using RM6240C multichannel physiological signal collection and analysis recorder. At the same time, the contents of glutamic acid (Glu), aspartic acid (Asp), glycine (Gly) and γ aminobutyric acid (GABA) in hippocampus were determined with high performance liquid chromatography. **RESULTS** SEE-CO<sub>2</sub>PP 15 and 30 g·kg<sup>-1</sup>, ig, prolonged the latent period of seizure and weakened the extent. SEE-CO<sub>2</sub>PP also prolonged the latent period of epileptiform discharge, reduced the frequency and decreased amplitude of the highest wave in both cortex and hippocampus. Moreover, SEE-CO<sub>2</sub>PP increased the content of GABA in hippocampus, but the levels of Gly, Asp and Glu had no obvious changes. **CONCLUSION** SEE-CO<sub>2</sub>PP inhibits the epileptiform discharge and convulsive behaviors of convulsive model rats, which suggests SEE-CO<sub>2</sub>PP has anticonvulsive action.

**Key words** [Pinellia Pedatisecta Schott](#) [penicillin](#) [convulsions](#)

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