

论文

吲哚醌对大鼠杏仁核点燃的抑制作用

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摘要:

目的: 研究吲哚醌对大鼠杏仁核点燃发作的影响及其抗惊厥作用。方法: 建立大鼠杏仁核点燃模型, 观察发作的生理指标和行为学变化; 在小鼠最大电休克惊厥、戊四唑惊厥和氨基脲惊厥模型计数惊厥发生率。结果: ip吲哚醌50~200 mg.kg-1均可升高杏仁核点燃大鼠的局灶性后放电阈值, 降低发作强度和全身性发作 (stage 5) 百分率; 可剂量依赖性对抗小鼠最大电休克发作, 并能取消戊四唑惊厥和氨基脲惊厥的强直相, 降低戊四唑惊厥的死亡率。结论: 吲哚醌对癫痫发作有抑制作用, 其机制与抑制MAO-B活性、升高发作阈值有关。

关键词: 吲哚醌; 单胺氧化酶抑制剂; 点燃效应; 杏仁核; 癫痫

THE INHIBITORY EFFECT OF ISATIN ON SEIZURE ACTIVITY IN AMYGDALOID KINDLED RATS

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Abstract:

AIM: To study the effect of isatin on amygdala-kindled seizure and the anticonvulsant effect in convulsion models. METHODS: The electrophysiological and/or behavioral indices were observed and recorded in the amygdaloid kindling model of rat and several convulsant models of mice, ie maximal electroshock seizure, semicarbazide (SCZ)- and pentylenetetrazole (PTZ)-induced seizures. RESULTS: In fully kindled rats, isatin, tested at doses of 50 to 200 mg.kg-1 ip, significantly increased the focal afterdischarge threshold (ADT), reduced the seizure severity and the percentage of generalized seizure (P<0.01). In addition, isatin was shown to dose-dependently antagonize maximal electroshock seizure, with ED50 of (123±31) mg.kg-1. Isatin at the dose of 200 mg.kg-1 specifically modified the tonic component of sc PTZ or iv SCZ induced convulsion (P<0.01) and thus reduced mortality in PTZ-induced seizure (P<0.05). CONCLUSION: The present data demonstrated that isatin exerted inhibitory effect on kindled seizure in fully kindled rats and on convulsions induced either electrically or by chemicals, indicating that it might possess anticonvulsant efficacy.

Keywords: kindling effect monoamine oxidase inhibitor amygdala epilepsy isatin

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