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论文

步长脑心通对大鼠急性脑缺血再灌注小胶质细胞炎症反应和神经细胞凋亡的影响

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摘要：

目的 观察步长脑心通对大鼠局灶性脑缺血再灌注损伤的保护作用及其机制。方法 采用线栓法建立SD大鼠大脑中动脉阻塞(MCAO)再灌注模型,随机将30只大鼠分为假手术组、对照组、脑心通治疗组各10只，采用神经功能缺损评分对大鼠神经功能缺损程度进行评价，采用免疫组化和Western blot分别检测CD68、白细胞介素1β（IL-1β）的表达差异,并通过TUNEL、尼氏染色检测大鼠神经细胞的凋亡。结果 脑心通治疗组CD68、TUNEL、尼氏阳性细胞数及IL-1β的表达均较对照组明显减少（P＜0.05），差异具有统计学意义。结论 脑心通能够明显减轻缺血再灌注损伤中脑组织的损伤程度，降低神经细胞的凋亡，其作用机制可能是通过抑制小胶质细胞激活导致的炎症介质释放，进而阻断缺血神经细胞的凋亡。

关键词： 缺氧缺血，脑；肿瘤坏死因子；白细胞介素1；炎症；大鼠，sprague-dawley

Effect of the Buchang naoxintong capsule on apoptosis of neurons and inflammatory reaction of microglias after acute cerebral ischemia-reperfusion injury in rats

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Abstract:

Objective To study the effect of the Buchang naoxintong capsule on focal cerebral ischemia-reperfusion injury in rats and to investigate its corresponding mechanisms. Methods A rat model of middle cerebral artery occlusion (MCAO) and reperfusion was established by I/R .Thirty rats were randomly divided into the sham operation group, the control group and the naoxintong-treated group, with 10 rats in each group. The neurological impairment score was used to evaluate the degree of neurological impairment of rats. Immunohistochemical stainning and Western blot were respectively used to detect expressions of CD68 and IL-1β. TUNEL and Nissl staining were used to detect neuron apoptosis in rats. Results Activation of microglial cells, TUNEL- and nissl-positive cells, and expressions of CD68 and IL-1β in the naoxintong-treated group were obviously lower than those in the control group. The differences all had statistical significances(P<0.05). Conclusion The Naoxintong capsule can significantly relieve the drgree of injury of brain tissues and depress apoptosis of neurocytes. The mechanisms could be that the Naoxintong capsule depresses activation of gitter cells which results in release of inflammation mediators, and then prevents apoptosis of ischemic neurocytes.

Keywords: Hypoxia-ischemia, brain; Tumor necrosis factor; Interleukin-1; Inflammation; Rats, sprague-dawley

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