

论著

## 四逆汤对大鼠局灶性脑缺血后bax、bcl-2表达的影响

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**摘要** 目的: 研究四逆汤对大鼠局部脑缺血后bax、bcl-2表达的影响。方法: 采用大鼠大脑中动脉局部阻塞(MCAO)模型, 观察四逆汤对脑缺血大鼠的神经功能、丙二醛(MDA)和神经酰胺含量、超氧化物歧化酶(SOD)活性以及bax、bcl-2表达的影响。结果: 四逆汤组脑含水量、MDA含量、神经酰胺含量、bax基因在转录和翻译水平的表达明显低于缺血模型组(P<0.05和P<0.01), 神经功能评分、SOD活性、Bcl-2蛋白的表达高于缺血模型组(P<0.05和P<0.01)。结论: 四逆汤对局部脑缺血大鼠具有显著的保护作用, 其作用机制可能与四逆汤能对抗脑缺血引起的氧化损伤, 减少神经酰胺的生成量, 抑制bax mRNA的转录及其蛋白的表达、增加Bcl-2蛋白的表达有关。

**关键词** [脑缺血](#); [细胞凋亡](#); [神经酰胺类](#); [四逆汤](#); [基因, bax](#); [基因, bcl-2](#)

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## Effect of sini decoction on the expression of bax and bcl-2 after focal cerebral ischemia in rats

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### Abstract

<FONT face=Verdana>AIM: To study the effect of sini decoction (SND) a Chinese medicine on the expression of bax and bcl-2 following focal cerebral ischemia in rats. METHODS: Model of middle cerebral artery occlusion (MCAO) was performed in adult male Sprague-Dawley (SD) rats. SD rats were randomly divided into control, model and SND treatment groups. The neurological score, the brain water content, the activity of SOD, the concentration of MDA and ceramide were determined. The bax mRNA expression in brain tissue was measured by means of RT-PCR. Bax and Bcl-2 protein expression in brain tissue were observed by immunohistochemistry. RESULTS: The concentration of MDA, concentration of ceramide, brain water content, bax mRNA expression and Bax protein expression in SND treatment group were markedly lower than those in model group (P<0.05, P<0.01). The neurological score, activity of SOD and Bcl-2 protein expression in SND treatment group were higher than those in model group (P<0.05, P<0.01). CONCLUSION: SND provides neuroprotection against focal cerebral ischemia in association with inhibition of neuron apoptosis through suppressing oxidative damage caused by focal cerebral ischemia, and reducing the concentration of ceramide which results in the down-regulation of bax, and the up-regulation of bcl-2 protein.</FONT>

**Key words** [Brain ischemia](#); [Apoptosis](#); [Ceramides](#); [Sini decoction](#); [Genes bax](#) [Genes bcl-2](#)

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