

## 实验研究

四物汤对血虚证小鼠肝细胞凋亡相关分子  
Caspase3 及 Caspase8 表达的影响<sup>\*</sup>王正引<sup>1\*\*</sup> 郭明章<sup>2</sup> 陈燕<sup>1</sup>

(1. 福建中医药大学药学院, 福建 福州 350122; 2. 福建中医药大学中医学院, 福建 福州 350122)

**摘要:**目的 观察四物汤对血虚证小鼠肝细胞凋亡相关分子 Caspase3 及 Caspase8 表达的影响。方法 24 只 C57BL/6J 小鼠随机分为空白组、模型组、给药组。以腹腔注射环磷酰胺建立血虚证模型, 采用全自动血液分析仪检测外周血象, TUNEL 法检测肝细胞凋亡百分率, 荧光定量 PCR 法检测 Caspase3 及 Caspase8 mRNA 表达。Western blot 检测 Caspase3 及 Caspase8 蛋白表达。结果 与模型组相比, 给药组小鼠外周血红细胞数及血红蛋白含量升高 ( $P<0.01$ ), 肝细胞凋亡百分率下降 ( $P<0.01$ ), Caspase3 及 Caspase8 mRNA 及蛋白表达水平下降 ( $P<0.05$ ,  $P<0.01$ )。结论 四物汤可改善血虚证模型小鼠外周血象, 下调凋亡相关分子 Caspase3 及 Caspase8 表达, 减少肝细胞凋亡。提示四物汤减少血虚证模型肝细胞凋亡的作用机制可能与其抑制 Caspase3 及 Caspase8 激活。

**关键词:** 四物汤; 血虚证; 肝细胞; 凋亡; 半胱天冬氨酸蛋白酶

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Effects of Siwu Decoction on Expression of Caspase3 and Caspase8 in  
Hepatocytes of Mice with Blood Deficiency SyndromeWang Zhengyin<sup>1</sup> Guo Mingzhang<sup>2</sup> Chen Yan<sup>1</sup>

(1. College of Pharmacy in Fujian University of Chinese Medicine, Fuzhou 350122, China;

2. TCM college in Fujian University of Chinese Medicine, Fuzhou 350122, China)

**Abstract Objective** To observe the effects of Siwu Decoction on expression of Caspase3 and Caspase8 in hepatocytes of mice with blood deficiency syndrome. **Method** 24 C57BL/6J mice were randomly divided into blank group, model group and administration group. The model of blood deficiency was established by intraperitoneal injection of cyclophosphamide. The peripheral hemogram was detected by automatic blood analyzer. The percentage of hepatocyte apoptosis was detected by TUNEL method. The expression of Caspase3 and Caspase8 mRNA was detected by fluorescence quantitative PCR. Western blot was used to detect the expression of Caspase3 and Caspase8 protein. **Result** Compared with the model group, the number of erythrocyte and the content of hemoglobin in the peripheral blood of the mice in the administration group increased ( $P<0.01$ ), the percentage of hepatocyte apoptosis decreased ( $P<0.01$ ), the expression of Caspase3 and Caspase8 mRNA and protein decreased ( $P<0.05$ ,  $P<0.01$ ). **Conclusion** Siwu Decoction can improve the peripheral hemogram of mice with blood deficiency syndrome, reduce the expression of Caspase3 and Caspase8, and lessen the apoptosis of hepatocytes. It is suggested that the mechanism of action of Siwu Decoction on decreasing hepatocyte apoptosis in blood deficiency syndrome model may be related to the inhibition of Caspase3 and activation of

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\*\* 作者简介: 王正引(1978-), 男, 讲师, 医学博士, 主要从事方剂配伍及临床应用研究。E-mail: johnzwang@163.com