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基础研究

阿魏酸钠干预对Rho/Rock信号通路的影响及其对肝脏的保护作用

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摘要：

［摘 要］ 目的：探讨阿魏酸钠(SF)干预后对Rho/Rock信号通路相关蛋白表达及肝脏的影响，阐明其对脏器的保护作用。方法：雄性Wistar大鼠20只，分为正常对照组、模型组、阳性药组及SF干预组。除正常对照组外，其余组大鼠注射盐酸异丙肾上腺素（Iso）15 mg/kg诱发大鼠心肌纤维化模型；稳定2 d后，除模型组外，其余2组给予SF和贝那普利。利用Masson染色分析给予SF后心肌胶原的含量变化；RT-PCR法分析Rho A和Rock mRNA表达；采用免疫组织化学染色分析心肌Rock蛋白表达；拉曼光谱分析肝脏的损伤。结果：与正常对照组比较，注射Iso后3周，Rho A和Rock mRNA表达即有所增加 (P<0.01)；给予SF和贝那普利后，Rho A和Rock基因和蛋白表达水平较模型组明显降低(P<0.01)；拉曼光谱分析结果显示，给予SF后大鼠肝脏组织的峰位较模型组向右移动1个单位，趋近正常对照组峰位。结论：SF可能通过阻断Rho/Rock信号通路进而起到抑制纤维化的作用，同时又起到肝脏保护作用。

关键词： 心肌纤维化；阿魏酸钠；Rho/Rock通路

Effect of sodium ferulate on |Rho/Rock signal pathway and its protective effect on liver tissue

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Abstract:

Abstract:Objective To investigate the effect of the expression of sodium ferulate(SF) on the related protein of Rho/Rock signal pathway and to clarify the protective effects on liver tissue and myocardium tissue.Methods Twenty male Wistar rats were divided into normal control group, model group, positive medicine group,and sodium ferulic group.Besides normal control group,the rats in the other groups were injected with 15 mg/kg Iso to induce rat myocardial fibrosis.2 d later, except control and model groups, the rats in the other groups were given SF and Bena zepril.The change of collagen content in myocardium was analyzed by Masson staining.The expressions of Rho A and Rock mRNA were analyzed by RT-PCR.The expression of Rock protein was analyzed by immunohistochemistry. The Raman spectrum was used to detect the liver tissue injury.Results Compared with control group,the expressions of RhoA and Rock mRNA were increased after injection with Iso for 3 weeks(P<0.01);compared with model group,the expressions of Rho A and Rock mRNA and protein were decreased after injection with SF (P<0.01).The Raman spectrum results showed that the peak value in SF group shifted to the right with one unit compared with model group,and tended to normal control group.Conclusion SF can not only protect the heart against fibrosis by inhibiting Rho/Rock pathway, but also can protect liver damage.

Keywords: myocardial fibrosis sodium ferulate Rho/Rock pathway

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