

论著

阿司匹林对高脂高糖诱发的大鼠脂肪性肝炎的治疗作用

沈洪¹, 亓志刚², 谢梅林²

(1. 湖州师范学院医学院药理学教研室, 浙江 湖州 313000; 2. 苏州大学医学部药理学系, 江苏 苏州 215123)

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摘要 目的 探讨阿司匹林治疗高脂高糖诱发大鼠脂肪性肝炎的可能性及作用机制。方法 雄性SD大鼠随机分为正常对照组、模型组和阿司匹林10 mg·kg⁻¹组,在脂肪性肝炎造模成功后,阿司匹林组大鼠ig给予阿司匹林,每天1次,连续4周。测肝重系数,HE染色法观察肝脏组织病理变化,比色法测定血清及肝组织中总胆固醇(TC)、甘油三酯(TG)和空腹血糖(FBG)及血清谷丙转氨酶(GPT)含量;ELISA法测定肝组织中基质金属蛋白酶9(MMP-9)的含量。结果 阿司匹林治疗4周后,对降低的肝系数无改善作用,病理学检查结果显示,阿司匹林可明显减少肝组织中的炎性细胞浸润($P<0.05$)。大鼠血清TG,FBG和GPT水平分别从模型组的(0.55±0.14)mmol·L⁻¹, (7.18±0.93)mmol·L⁻¹和(85.7±7.1)U·L⁻¹降至(0.31±0.08)mmol·L⁻¹, (5.96±0.40)mmol·L⁻¹和(71.6±16.0)U·L⁻¹($P<0.01$ 或 $P<0.05$);肝组织中TC和TG水平亦降低,肝组织中MMP-9含量从模型组的(49±11)μg·g⁻¹蛋白降至(24±7)μg·g⁻¹蛋白($P<0.01$)。结论 阿司匹林对大鼠脂肪性肝炎有一定的治疗作用,其机制可能与降低肝组织中MMP-9含量有关。

关键词 脂肪性肝炎 阿司匹林 血糖 胆固醇 甘油三酯 基质金属蛋白酶9

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Therapeutic effect of aspirin on steatohepatitis induced by high fat and high sucrose in rats

SHEN Hong¹, QI Zhi-gang², XIE Mei-lin²

(1. Department of Pharmacology, Medical School, Huzhou Teachers College, Huzhou 313000, China;
2. Department of Pharmacology, Medical College, Soochow University, Suzhou 215123, China)

Abstract

OBJECTIVE To observe the therapeutic effect of aspirin on steatohepatitis induced by high fat and high sucrose in rats and to investigate its potential mechanisms. **METHODS** Male Sprague-Dawley rats were randomly divided into normal control group, model group and aspirin 10 mg·kg⁻¹ group. After the steatohepatitis model was developed, the rats in aspirin group were ig treated with aspirin, once a day for 4 weeks. The hepatic weight index was measured and hepatic histopathological changes were examined by HE staining. The total cholesterol (TC) and triglycerides (TG) in serum and hepatic tissues, fasting blood glucose (FBG) and serum glutamic pyruvic transaminase (GPT) were determined by colorimetric methods. The matrix metalloproteinase (MMP)-9 content in hepatic tissues was measured with ELISA. **RESULTS** After treatment with aspirin for 4 weeks, there was no improvement on the decreased hepatic index and aspirin could significantly reduce the degree of inflammatory cell invasion ($P<0.05$). TG, FBG and GPT levels in the serum of rats were decreased from (0.55±0.14)mmol·L⁻¹, (7.18±0.93)mmol·L⁻¹ and (85.7±7.1)U·L⁻¹ in model group to (0.31±0.08)mmol·L⁻¹, (5.96±0.40)mmol·L⁻¹ and (71.6±16.0)U·L⁻¹, respectively ($P<0.01$ or $P<0.05$). TC and TG levels in the liver were also significantly decreased. The MMP-9 content in the liver was decreased from (49±11)μg·g⁻¹ protein in the model group to (24±7)μg·g⁻¹ protein ($P<0.01$). **CONCLUSION** Aspirin is effective in treating steatohepatitis induced by high fat and high sucrose in rats, and its mechanism might be associated with reduction of MMP-9 content in hepatic tissues.

Key words steatohepatitis aspirin blood glucose cholesterol triglycerides matrix metalloproteinase 9

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