

论文

芩丹胶囊对高血压大鼠血管壁 I 型胶原蛋白与 mRNA 表达的影响

郭雪峰¹, 张继东¹, 姜红², 王博¹, 任敏¹, 冯利¹

山东大学齐鲁医院 1. 中医科; 2. 教育部和卫生心血管重构和功能研究重点实验室, 济南 250012

摘要:

目的 观察芩丹胶囊对老年自发性高血压 (SHR) 大鼠血管壁 I 型胶原蛋白和基因表达的影响, 并进一步探讨其对血管重构的作用机制。**方法** 32 只 40 周龄老年自发性高血压大鼠模型随机分为模型组 (SHR 组)、芩丹胶囊大剂量组 (SHR+QDH 组)、芩丹胶囊小剂量组 (SHR+QDL 组)、氯沙坦组 (SHR+Los 组), 另设老年 Wistar-Kyoto (WKY) 大鼠为空白对照组 (WKY 空白组) 及正常药物对照组 (WKY+QD 组), SHR+QDH 组、SHR+QDL 组和 SHR+Los 组分别经灌胃给予芩丹胶囊及氯沙坦, SHR 组和 WKY 空白组给予等量生理盐水, WKY+QD 组给予等量芩丹胶囊灌胃。最后用免疫印迹法和实时定量 PCR 法检测 I 型胶原的表达水平。**结果** WKY 空白组、WKY+QD 组、SHR+Los 组、SHR+QDH 组、SHR+QDL 组、SHR 组 I 型胶原蛋白表达依次增强, SHR+QDH 组、SHR+QDL 组、SHR+Los 组与 SHR 组比较 I 型胶原蛋白和 mRNA 表达均显著降低 ($P < 0.05$), SHR+QDH 组与 SHR+Los 组比较, 差异无统计学意义 ($P > 0.05$)。**结论** 芩丹胶囊能有效地降低自发性高血压大鼠血管壁 I 型胶原蛋白与 mRNA 的表达, 改善血管胶原重塑, 进而抑制并逆转动脉血管重构。

关键词: 芩丹胶囊; 血管重构; I 型胶原; 免疫印迹; 实时定量 PCR; 大鼠

Effect of Qindan Capsule on expressions of vascular wall collagen I and mRNA in spontaneous hypertensive rats

GUO Xue-feng¹, ZHANG Ji-dong¹, JIANG Hong², WANG Bo¹, REN Min¹, FENG Li¹

1. Department of Traditional Chinese Medicine; 2. Key Laboratory of Cardiovascular Remodeling and Function Research, Chinese Ministry of Education and Ministry of Public Health, Qilu Hospital of Shandong University, Jinan 250012, China

Abstract:

Objective To investigate the effect of Qindan Capsule (QD) on expression of vascular wall collagen I in old spontaneously hypertensive rats (SHRs), and further research into the mechanism of vascular remodeling. **Methods** Thirty-two 40 week old SHRs were divided into the model group (SHR group), the QD high dosage group (SHR+QDH group), the QD low dosage group (SHR+QDL group), and the losartan group (SHR+Los group). At the same time, 16 Wistar-Kyoto (WKY) rats at the same age were taken as the normal control group (WKY control group) and QD group (WKY+QD group). All rats were administered with corresponding drugs or normal saline. After 12 weeks, the level of collagen I in thoracic aorta was detected by immune-histochemical staining, and mRNA expression of collagen I in thoracic aortic wall was analyzed by real-time quantitative fluorescent PCR. **Results** The order in expression of collagen I from low to high was as follows: WKY control group, WKY+QD group, losartan group, QD high dosage group, QD low dosage group, and the model group. Compared with the normal control group, expression of collagen I in the QD group was reduced ($P < 0.05$). The difference in the reduction of expression of collagen I between the QD high dosage group and the losartan group was unobvious ($P > 0.05$). **Conclusions** QD could lower and inhibit expression of collagen I in the thoracic aortic wall, and modify collagen remodeling. Also, it could suppress and even reverse thoracic aorta vascular remodeling.

Keywords: Qindan Capsule; Vascular remodeling; Collagen I; Western blotting; Real-time PCR; Rats

收稿日期 2010-04-13 修回日期 网络版发布日期

DOI:

基金项目:

国家自然科学基金资助项目 (30873324)。

通讯作者: 张继东 (1949-), 教授, 博士生导师, 主要从事中西医结合治疗心血管病的研究。 E-mail: drzjd@sdu.edu.cn

扩展功能

本文信息

▶ Supporting info

▶ PDF (639KB)

▶ [HTML全文]

▶ 参考文献 [PDF]

▶ 参考文献

服务与反馈

▶ 把本文推荐给朋友

▶ 加入我的书架

▶ 加入引用管理器

▶ 引用本文

▶ Email Alert

▶ 文章反馈

▶ 浏览反馈信息

本文关键词相关文章

▶ 芩丹胶囊; 血管重构; I 型胶原; 免疫印迹; 实时定量 PCR; 大鼠

本文作者相关文章

PubMed

作者简介: 郭雪峰(1984-),女,硕士研究生,主要从事中西医结合心血管研究。

作者Email:

参考文献:

本刊中的类似文章

Copyright by 山东大学学报(医学版)