

论著

尾加压素 II 对自发性高血压大鼠血管外膜成纤维细胞增殖活性及细胞外信号调节激酶 1/2 磷酸化的影响

戴红艳, 葛志明, 李永红

山东大学 教育部和卫生部心血管重构与功能研究重点实验室, 济南 250012

收稿日期 2006-3-23 修回日期 网络版发布日期 2006-12-29 接受日期

摘要 摘要: 目的 研究尾加压素 II (U II) 对自发性高血压大鼠 (SHR) 血管外膜成纤维细胞增殖活性的影响, 并进一步探讨其可能涉及的信号转导通路。方法 用胸腺嘧啶掺入法 (3H-TdR)

观察 U II 诱导的 SHR 大鼠血管外膜成纤维细胞的增殖活性, 及 U II 受体拮抗剂 Urantide、细胞外信号调节激酶 1/2 (ERK1/2) 特异性的抑制剂 PD98059 对 U II 诱导 SHR 大鼠血管外膜成纤维细胞增殖活性的影响;

用免疫印迹技术观察 U II 诱导后 ERK1/2 的磷酸化, 及 Urantide、PD98059 对 ERK1/2 磷酸化的影响。结果

U II 可以剂量依赖性地诱导 SHR 大鼠血管外膜成纤维细胞的增殖活性, 且这一作用可以完全及部分被 Urantide、PD98059 抑制; U II 可以时间依赖性地诱导血管外膜成纤维细胞 ERK1/2 的磷酸化, 且这一作用可以完全被 Urantide、PD98059 抑制。结论 U II 可以诱导 SHR 大鼠血管外膜成纤维细胞的增殖活性, 且该过程部分由 ERK1/2 信号通路所介导。

关键词 [尾加压素 II](#) [成纤维细胞](#) [增殖](#) [细胞外信号调节激酶 1/2](#)

分类号

Effect of Urotensin II on Proliferative Potential and Phosphorylation of Extracellular Signal-regulated Kinase 1/2 of Adventitial Fibroblasts from Spontaneously Hypertensive Rat

DAI Hong-yan, GE Zhi-ming, LI Yong-hong

Key Laboratory of Cardiovascular Remodeling and Function Research, Chinese Ministry of Education and Chinese Ministry of Public Health, Shandong University, Jinan 250012, China

Abstract ABSTRACT: Objective To study the effect of urotensin II (U II) on the proliferative potential of adventitial fibroblasts (AFs) from spontaneously hypertensive rat (SHR) and to determine whether extracellular signal-regulated kinase 1/2 (ERK1/2) pathway is involved in this progress. Methods 3H-thymidine incorporation test was used to estimate the U II-induced proliferative potential of AFs from SHR and the influence of Urantide (U II receptor antagonist) and PD98059 (ERK1/2 inhibitor). Western blotting was used to test the U II-induced ERK1/2 phosphorylation as well as the effect of Urantide and PD98059 on U II-induced ERK1/2 phosphorylation. Results U II increased the proliferative potential of AFs from SHR in a dose-dependent way. Urantide and PD98059 wholly or partly inhibited U II-induced proliferation of SHR-AFs. In SHR-AFs, U II induced the phosphorylation of ERK1/2 in a time-dependent way, which was completely inhibited by Urantide and PD98059. Conclusion U II can increase the proliferative potential of AFs from SHR and ERK1/2 pathway is partly involved in this progress.

Key words [urotensin II](#) [fibroblasts](#) [proliferation](#) [extracellular signal-regulated kinase 1/2](#)

DOI:

通讯作者 葛志明 gezhiming@sdu.edu.cn

扩展功能

本文信息

▶ [Supporting info](#)

▶ [PDF\(1009KB\)](#)

▶ [\[HTML全文\]\(0KB\)](#)

▶ [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](#)

▶ [复制索引](#)

▶ [Email Alert](#)

▶ [文章反馈](#)

▶ [浏览反馈信息](#)

相关信息

▶ [本刊中 包含“尾加压素 II” 的相关文章](#)

▶ [本文作者相关文章](#)

· [戴红艳](#)

· [葛志明](#)

· [李永红](#)