

论著

氯沙坦抑制糖基化终末产物刺激培养的人内皮细胞外基质基因的表达

郑丽丽^{1*}, 李承光², 朱琳², 傅向华¹, 叶启霞², 王筠², 范清堂²

(1. 河北医科大学第二附属医院心内科, 河北 石家庄 050017; 2. 河南医科大学, 河南 郑州 450052)

收稿日期 2001-9-28 修回日期 网络版发布日期 2009-1-13 接受日期 2001-11-6

摘要 目的 探讨氯沙坦防治糖尿病血管病变的作用机理。方法 用反转录-聚合酶链反应(RT-PCR)和Northern印迹杂交方法测定了0.1~10 $\mu\text{mol} \cdot \text{L}^{-1}$ 浓度的氯沙坦对经体外制备的糖基化终末代谢产物(AGEs)处理培养的人脐静脉内皮细胞(HUVECs)转化生长因子(TGF)- β_1 和纤连蛋白(FN)基因表达的影响。结果 由AGEs处理的HUVECs TGF- β_1 和FN mRNA表达较正常对照组明显增高; 与AGEs组相比, TGF- β_1 和FN mRNA的表达在氯沙坦1.0 $\mu\text{mol} \cdot \text{L}^{-1}$ 时分别降低了29%和23%, 10 $\mu\text{mol} \cdot \text{L}^{-1}$ 时降低了56%和62%。结论 氯沙坦通过抑制AGEs刺激的内皮细胞TGF- β_1 和FN mRNA表达, 从而抑制细胞外基质的生成, 防止血管重构可能是其防治糖尿病血管并发症的机理之一。

关键词 [糖基化终末产物](#) [内皮细胞](#) [转化生长因子 \$\beta\$](#) [氯沙坦](#) [细胞外基质](#) [人](#)

分类号 [R966](#)

Losartan inhibits the expression of extracellular matrix mRNA stimulated by advanced glycation end products in cultured human vascular endothelial cells

ZHENG Li-Li¹, LI Chen-Guang², ZHU lin², FU Xiang-Hua¹, YE Qi-Xia², WANG Jun², FAN Qing-Tang²

(1. Department of Cardiology, the Second Affiliated Hospital of Hebei Medical University, Shijiazhuang 050017, China; 2. Henan Medical University, Zhengzhou 450052, China)

Abstract

AIM To investigate the mechanism of preventive and therapeutic actions of losartan on diabetic angiopathy. **METHODS** Reverse transcription-polymerase chain reaction(RT-PCR) and Northern blot were applied to determine the effect of losartan over the concentration range from 0.1 to 10 $\mu\text{mol} \cdot \text{L}^{-1}$ on inhibiting both gene expression of transforming growth factor(TGF)- β_1 and fibronectin (FN) that were stimulated by advanced glycation end products(AGEs) in cultured human umbilical vein endothelial cells(HUVECs). **RESULTS** The expression of TGF- β_1 and FN mRNA was higher in the HUVECs stimulated by AGEs than control groups of the cells. Administration of losartan suppressed the expression of TGF- β_1 and FN mRNA by 29% and 23% at 1.0 $\mu\text{mol} \cdot \text{L}^{-1}$, 56% and 62% at 10 $\mu\text{mol} \cdot \text{L}^{-1}$. **CONCLUSION** Losartan can reduce the forming of extracellular matrix by decreasing the expression of TGF- β_1 and FN mRNA, which maybe one possible mechanism of losartan to prevent diabetic angiopathy.

Key words [advanced glycation end products](#) [endothelial cells](#) [transforming growth factor beta](#) [losartan](#) [extracellular matrix](#) [human](#)

DOI:

通讯作者 郑丽丽 zh101@371.net

扩展功能

本文信息

▶ [Supporting info](#)

▶ [PDF\(477KB\)](#)

▶ [\[HTML全文\]\(0KB\)](#)

▶ [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“糖基化终末产物”的相关文章](#)

▶ 本文作者相关文章

· [郑丽丽](#)

· [李承光](#)

· [朱琳](#)

· [傅向华](#)

· [叶启霞](#)

· [王筠](#)

· [范清堂](#)