

论著

血管紧张素 II 对 THP-1 源性泡沫细胞 ATP 结合盒转运子 A1 的影响

陈志坚, 王彦富, 廖玉华, 梅春丽, 彭红玉, 郭和平

华中科技大学同济医学院附属协和医院心内科, 湖北 武汉 430022

收稿日期 2005-7-5 修回日期 2005-9-29 网络版发布日期 2008-8-3 接受日期 2005-9-29

摘要 目的: 以 THP-1 源性泡沫细胞为研究对象, 探讨血管紧张素 II (Ang II) 对 THP-1 源性泡沫细胞 ATP 结合盒转运子 A1 (ABCA1) 表达、细胞内胆固醇含量及胆固醇流出的影响。

方法: 运用逆转录-多聚酶链反应 (RT-PCR) 和 Western blotting 分别检测 Ang II 对 ABCA1 mRNA 与 ABCA1 蛋白表达的影响, 采用酶法, 通过荧光分光光度计检测细胞内胆固醇含量, 应用液体闪烁计数器检测胆固醇流出的变化。

结果: Ang II 能引起 THP-1 源性泡沫细胞胆固醇含量显著升高 ($P < 0.05$)、ABCA1 表达显著减少 ($P < 0.05$) , Ang II 受体拮抗剂厄贝沙坦 (Irb) 能显著减少细胞内胆固醇含量 ($P < 0.05$)、促进细胞内胆固醇流出及减轻 Ang II 对 ABCA1 的抑制作用 ($P < 0.05$)。

结论: Ang II 有通过其受体抑制 ABCA1 表达, 促进泡沫细胞形成, 加速动脉粥样硬化的作用。

关键词 [血管紧张素 II](#) [ATP 结合匣式转运子](#) [动脉硬化](#) [泡沫细胞](#)

分类号 [R363](#)

Effects of angiotensin II on ATP binding cassette transporter A1 in THP-1 derived foam cells

CHEN Zhi-jian, WANG Yan-fu, LIAO Yu-hua, MEI Chun-li, PENG Hong-yu, GUO He-ping

Cardiovascular Department, Union Hospital, Tongji Medical College, Huazhong University of Science & Technology, Wuhan 430022, China. E-mail: drchenok@sohu.com

Abstract

AIM: To study the influence of angiotensin II (Ang II) on ATP-binding cassette transporter A1 in THP-1 derived foam cells. The variance of the expression of ABCA1, the content and the effluent rate of cholesterol were also investigated.
METHODS: The regulatory effect of Ang II on the expression of ABCA1 mRNA and protein in THP-1 derived form cells were measured by RT-PCR and Western blotting. The effect of variance of cholesterol content was measured by zymochemistry via-fluorospectrophotometer, cholesterol effluent was measured by liquid scintillator.
RESULTS: A positive facilitative effect of Ang II on form cells was observed. Total cholesterol content were increased significantly by Ang II treatment ($P < 0.05$). The mRNA and protein of ABCA1 were down-regulated significantly by Ang II stimulation ($P < 0.05$). Irbesartan reduced the total cholesterol content significantly ($P < 0.05$). Meanwhile, the increase in the effluent rate of cholesterol and the expression of ABCA1 were observed ($P < 0.05$).
CONCLUSION: The effects of Ang II on the formation of foam cells and atherosclerosis may be correlated to the activation of AT1 receptor and down-regulation of ABCA1.

Key words [Angiotensin II](#) [ATP-binding cassette transporters](#) [Arteriosclerosis](#) [Foam cells](#)

DOI: 1000-4718

通讯作者 陈志坚 drchenok@sohu.com

扩展功能

本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(1078KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [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“血管紧张素 II”的相关文章](#)
- ▶ [本文作者相关文章](#)

- [陈志坚](#)
- [王彦富](#)
- [廖玉华](#)
- [梅春丽](#)
- [彭红玉](#)
- [郭和平](#)