

[1]沈彬,程远雄,李宁,等.血管紧张素II诱导被动致敏人气道平滑肌细胞合成I型胶原[J].第三军医大学学报,2013,35(18):1957-1960.

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## 血管紧张素II诱导被动致敏人气道平滑肌细胞合成I型胶原:

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Title: Angiotensin II induces collagen I synthesis in human passively sensitized airway smooth-muscle cells *in vitro*

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摘要: 目的 探讨血管紧张素II(Ang II)及其I型受体(Angiotensin Type 1 Receptor, AT1R)拮抗剂洛沙坦(Losartan)对被动致敏人气道平滑肌细胞(human airway smooth muscle cells, HASMCs)合成I型胶原的影响。方法 体外培养HASMCs,按处理因素将细胞分为4组:①被动致敏组(10%哮喘血清);②被动致敏+Ang II组(10%哮喘血清+ $10^{-7}$ mol/L Ang II);③被动致敏+Losartan组(10%哮喘血清+ $10^{-6}$ mol/L Losartan);④被动致敏+Ang II+Losartan组(10%哮喘血清+ $10^{-7}$ mol/L Ang II+ $10^{-6}$ mol/L Losartan)。免疫荧光染色法鉴定HASMCs,荧光定量PCR检测I型胶原mRNA表达,ELISA检测I型胶原蛋白分泌。结果  $10^{-7}$ mol/L Ang II作用于被动致敏的HASMCs 24 h后,I型胶原mRNA及蛋白的表达较被动致敏组明显增加( $P<0.01$ )。在Losartan存在的情况下,Ang II对被动致敏HASMCs I型胶原mRNA及蛋白表达的促进作用明显受到抑制( $P<0.01$ )。结论 Ang II能促进被动致敏的HASMCs分泌I型胶原,可能是通过与AT1R结合而实现的。

Abstract: Objective To determine the effects of angiotensin (Ang) II and losartan, an antagonist of angiotensin type 1 receptor (AT1R), on the production of collagen type I in human passively sensitized airway smooth muscle cells. Methods After human airway smooth muscle cells were isolated from normal

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bronchial tissue samples, and primarily cultured and identified by immunofluorescence staining of  $\alpha$ -actin. The obtained cells were divided into the following 4 groups: ① passively sensitized group: 10% serum from asthmatic patients; ② passively sensitized+Ang II group: 10% serum from asthmatic patients+Ang II (final concentration of  $10^{-7}$  mol/L); ③ passively sensitized+losartan group: 10% serum from asthmatic patients+losartan (final concentration of  $10^{-6}$  mol/L); ④ passively sensitized+Ang II +losartan group: 10% serum from asthmatic patients+Ang II (final concentration of  $10^{-7}$  mol/L)+losartan (final concentration of  $10^{-6}$  mol/L). The effect of Ang II and losartan on the collagen type I mRNA expression in the passively sensitized HASMCs was detected by real-time RT-PCR, and its protein content was analyzed by ELISA. Results Compared to control group, the mRNA expression and protein release of collagen type I in Ang II-induced group ( $10^{-7}$  mol/L for 24 h) was significantly higher ( $P<0.01$ ). Losartan treatment produced a significantly inhibitory effect on the expression of mRNA and protein synthesis ( $P<0.01$ ). Conclusion Ang II induces the synthesis of collagen type I by human passively sensitized airway smooth muscle cells, which might be through binding with AT1R.

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#### 参考文献/REFERENCES:

沈彬, 程远雄, 李宁, 等. 血管紧张素 II 诱导被动致敏人气道平滑肌细胞合成 I 型胶原[J]. 第三军医大学学报, 2013, 35(18): 1957-1960.

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