

论文

依那普利对2型糖尿病大鼠血浆Ang II水平及血管、肾脏AT₁受体表达的影响

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摘要:

目的研究依那普利对2型糖尿病大鼠血浆Ang II和AT₁受体表达的影响。方法用放射免疫法测定血浆Ang II水平, 免疫组化法观察血管和肾脏AT₁受体表达。结果糖尿病大鼠血浆Ang II明显高于对照组, 应用依那普利后大鼠血浆Ang II明显降低。免疫组化染色发现糖尿病大鼠血管内皮细胞、平滑肌细胞和肾脏AT₁受体表达明显增加, 依那普利治疗组大鼠血管内皮细胞、平滑肌细胞和肾脏AT₁受体表达与正常组接近。结论糖尿病大鼠血浆Ang II升高, 血管和肾脏AT₁受体表达增加, 依那普利可降低糖尿病大鼠血浆Ang II水平, 下调血管和肾脏AT₁受体表达。

关键词: 依那普利 2型糖尿病大鼠 血管紧张素II 血管紧张素II₁受体

Effects of enalapril on plasma Ang II level and the expression of AT₁ in blood vessel and kidney of type 2 diabetic rats

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Abstract:

AimTo study the plasma angiotensin II (Ang II) levels and the expressions of angiotensin II₁ receptor (AT₁) in blood vessels and kidneys in diabetic and high fat diet rats, and the effects of enalapril on plasma Ang II levels and the expressions of AT₁ in blood vessels and kidneys in diabetic rats.

MethodsThe plasma Ang II level was assayed with ¹²⁵I-Ang II radioimmunoassay, and the expression of AT₁ in blood vessel and kidney was analyzed with immunohistochemical technique. Results The plasma Ang II level was significantly higher in type 2 diabetic rats (241±49) pg·mL⁻¹ than that in the control (71±22) pg·mL⁻¹, high fat diet group (151±29) pg·mL⁻¹ (P<0.01), and enalapril-treated groups (136±25) pg·mL⁻¹ (P<0.05). The plasma Ang II levels in high fat diet and in enalapril-treated groups were also significantly higher than that in control group (P<0.01). With immunohistochemical technique, it was found that the expression of AT₁ in endothelial cells of blood vessels, vascular smooth muscle cells, and kidneys in diabetic group increased. The expression of AT₁ in endothelial cells of blood vessels, vascular smooth muscle cells, and kidney in enalapril-treated group was similar to that in control group. ConclusionThe plasma Ang II levels and the expression of AT₁ in type 2 diabetic and high fat diet rats increased. Enalapril was shown to decrease the plasma Ang II level and downregulate the expression of AT₁ in blood vessels and kidneys in type 2 diabetic rats.

Keywords: type 2 diabetic rats angiotensin II angiotensin II₁ receptor enalapril

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2. 陶亮;饶曼人.依那普利和牛磺酸逆转肾性高血压大鼠左心室肥厚及抗心律失常的作用[J]. 药学报, 1996,31(12): 891-896

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3. 谭力;袁倚盛;张昕;赵飞浪.固相萃取高效液相色谱法测定人血浆中依那普利浓度[J]. 药学学报, 1997,32(11):

857-860

4. 季勇;陶亮;徐皓亮;饶曼人.依那普利与牛磺酸对肾性高血压大鼠血压、左室肥厚及血小板聚集率的影响[J]. 药学学报, 1995,30(12): 886-890

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