

论著

山莨菪碱对乙酰胆碱诱导的猫离体动脉内皮依赖性舒张反应的影响

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摘要 目的 观察山莨菪碱对乙酰胆碱(ACh)诱导的内皮依赖性血管舒张反应的影响。方法 采用猫离体血管功能实验, 观察山莨菪碱对ACh诱发的内皮依赖性血管舒张反应的影响。结果 在猫肠系膜动脉、肾动脉和股动脉, 山莨菪碱 $0.01 \sim 1.0 \text{ nmol} \cdot \text{L}^{-1}$ 能够浓度依赖地抑制ACh诱导的内皮依赖的血管舒张反应。山莨菪碱抑制 $10 \mu\text{mol} \cdot \text{L}^{-1}$ ACh所诱导血管舒张的 IC_{50} 分别为 0.236 , 0.729 和 $0.508 \text{ nmol} \cdot \text{L}^{-1}$, 山莨菪碱的拮抗作用符合非竞争性拮抗模式。此外, $10 \text{ nmol} \cdot \text{L}^{-1}$ 山莨菪碱能有效拮抗ACh诱导的冠状动脉内皮依赖性舒张反应。结论 山莨菪碱能强效拮抗ACh诱发的内皮依赖性血管舒张反应, 这种效应具有组织特异性的特点。

关键词 [山莨菪碱](#) [乙酰胆碱](#) [内皮](#), [血管](#) [动脉](#) [血管舒张](#)

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Effect of anisodamine on acetylcholine-induced endothelium-dependent vasorelaxation in cat isolated arteries

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Abstract

AIM To examine the effect of anisodamine on acetylcholine(ACh)- induced endothelium-dependent vasorelaxation. **METHODS** Using isometric-tension test, in isolated artery rings derived from cat femoral, renal, mesentery and coronary arteries, the effects of anisodamine on endothelium-dependent vasorelaxation induced by ACh were observed. **RESULT** The endothelium-dependent vasorelaxation induced by ACh could be blocked by anisodamine in a concentration-dependent manner in the isolated preparations derived from cat mesentery, femoral and renal arteries, the value of IC_{50} were 0.236 , 0.729 and $0.508 \text{ nmol} \cdot \text{L}^{-1}$, respectively, against ACh $10 \mu\text{mol} \cdot \text{L}^{-1}$. The antagonism of anisodamine was fit for non-competitive mode. Moreover, anisodamine at concentration of $10 \text{ nmol} \cdot \text{L}^{-1}$ inhibited the endothelium-dependent coronary artery relaxation induced by ACh($P < 0.05$). **CONCLUSION** Anisodamine has potent effect against ACh-induced endothelium-dependent vasorelaxation with the tissue specific property.

Key words [anisodamine](#) [acetylcholine](#); [endothelium](#) [vascular](#) [arteries](#) [vasodilation](#)

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