

论著

## 粉防己碱对肾血管性高血压大鼠阻力血管反应性的影响

李庆平\*, 陆泽安, 饶曼人

(南京医科大学药理学系, 江苏 南京 210029)

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**摘要** 目的 探讨肾血管性高血压 (RH) 大鼠阻力血管重构时功能变化特点, 分析粉防己碱的影响与机制。方法 两肾一夹法制备RH大鼠模型, 观察肠系膜动脉床和尾动脉对收缩和舒张刺激的反应性。结果 RH大鼠肠系膜动脉和尾动脉对去甲肾上腺素 (NE) 诱导的收缩反应性增高, 最大收缩值增大; 对乙酰胆碱和硝普钠引起的血管舒张反应性降低; 对鸟苷酸环化酶 (GC) 抑制剂敏感性下降。粉防己碱降低肠系膜动脉的静息阻力和NE诱导的阻力升高幅度, 改善去内皮后或GC抑制后血管压力及管壁张力。结论 RH大鼠阻力血管对收缩刺激反应性增高, 对内皮依赖及非内皮依赖性的舒张刺激反应性降低; 粉防己碱可通过保护内皮和维护细胞GC活性而有效逆转阻力血管功能异常。

**关键词** [粉防己碱](#) [血管阻力](#) [高血压](#), [肾血管性](#) [内皮](#), [血管](#) [肠系膜动脉](#) [尾动脉](#)

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## Effect of tetrandrine on resistance vessel reactivity in renovascular hypertensive rats

LI Qing-Ping\*, LU Ze-An, RAO Man-Ren

(Department of Pharmacology, Nanjing Medical University, Nanjing 210029, China)

### Abstract

**AIM** To investigate the special changes in resistance vessel reactivity to vasomotor stimuli and analyze the effect and concerned mechanism of tetrandrine on those changes in renovascular hypertensive (RH) rats. **METHODS** The contraction and relaxation of resistance vessels

to stimuli were investigated in tail artery and mesenteric arteriole bed. **RESULTS** Compared with sham-operated rats, the isolated mesenteric arteriole bed and tail artery exhibited an enhanced reactivity to norepinephrine (NE) induced vasoconstriction, with an increase in maximum vasoconstriction and a decrease in vasodilation produced by acetylcholine and sodium nitroprusside. The sensitivity of tail artery to methylene blue, an inhibitor of guanylate cyclase, was greatly reduced. The amplitude of elevated pressure in mesenteric artery bed after removal of endothelium was attenuated. The changes mentioned above were greatly improved in tetrandrine treated RH rats. **CONCLUSION** In RH rats, the reactivity of resistance vessels to vasoconstrictive stimuli is increased, whereas the reactivity to both endothelium dependent or independent vasorelaxative stimuli are reduced. Tetrandrine 50 mg·kg<sup>-1</sup>·d<sup>-1</sup> for 9 weeks significantly reverse those changes by preserving endothelium functions and guanylate cyclase activity.

**Key words** [tetrandrine](#) [vascular resistance](#) [hypertension](#) [renovascular](#) [endothelium](#) [vascular mesenteric arteries](#) [tail artery](#)

DOI:

通讯作者 李庆平 [gpli@njmu.edu.cn](mailto:gpli@njmu.edu.cn)

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