

论文

前胡丙素对高血压大鼠血压及犬血管阻力的影响

饶曼人;陈丹

南京医科大学心血管药理研究室,江苏南京210029

摘要:

目的 观察前胡丙素(pra C)的降压及对外周血管阻力的影响。方法 在肾型高血压大鼠模型与正常血压大鼠用尾容积法测血压。用RDB III型输液泵连接于麻醉杂种犬,以控制血流量与压力法直接测定椎动脉、冠脉左旋支、股动脉的阻力。结果 pra-C 20 mg·kg<sup>-1</sup>·d<sup>-1</sup> ig给药3 0d对肾性高血压大鼠(RHR)降压峰值时间为6h,从(213±10) mmHg降至(144.0±1.5)mmHg,降低原水平30%,持续至20h。pra-C分别以100 μg·kg<sup>-1</sup>及20 μg·kg<sup>-1</sup>与pra-E 20 μg·kg<sup>-1</sup> iv可降低上述血管的阻力,减慢心率,降低阻力呈剂量相关。结论 pra-C有降压作用,降低犬外周动脉阻力,增加小鼠耐缺氧时间。

关键词: 前胡丙素 肾型高血压 外周阻力 耐缺氧

EFFECTS OF PRAERUPTORIN C ON BLOOD PRESSURE IN HYPERTENSIVE RATS AND VASCULAR RESISTANCE IN DOGS

RAO Man-ren; CHEN Dan

Abstract:

AIM To study the effects of praeruptorin C (pra-C) on conscious renovascular hypertensive and normotensive rats and the vascular resistance of vertebral, left circumflex coronary and femoral artery in anesthetized dogs. METHODS Hypertensive rats were obtained after the left renal arteries of normal rats were narrowed to 0.2 mm diameter by silver clips. Systolic blood pressure was measured by the tail cuff method. Measurements of systolic blood pressure were carried out before administration of the drug as well as 2, 4, 6, 20 and 24 h after drug administration. Hypertensive and normotensive rats were given pra-C 20 mg·kg<sup>-1</sup> orally once daily for 30 days. Using sum of squares of deviations from the mean data were analysed and compared with the controls before and after drug administration. Nifedipine was compared with pra-C on the same dose. Vascular resistance were measured on the constant rate perfusion preparation. RESULTS Pra-C reduced significantly the blood pressure in hypertensive and normotensive rats. The peak effect of pra-C and nifedipine were observed 4-6 h and 2-4 h after drug administration respectively. The hypotensive effect of pra-C was similar to that of the nifedipine at the same dose, but the action of oral pra-C lasted longer than that of nifedipine. The blood pressure lowering effect of pra-C after 3 weeks (20-30 d) of treatment is even more potent than at the beginning (1-15 d) of the trial. This indicates that there is no acquired tolerance in blood pressure. Pra-C 20 μg·kg<sup>-1</sup> or 100 μg·kg<sup>-1</sup> iv in dogs produced distinct fall of vascular resistance in vertebral, left circumflex coronary and femoral arterial resistance. Peak of effect was observed 50-60 min after drug administration. Reduction in vertebral vascular resistance was much more than that of the other two arteries. However, the effects recovered to its initial values 70 min after medication. The medication caused a reduction of systolic blood pressure and slowing of heart rate. Pra-C is better than nifedipine in slowing heart rate. Pra-C prolonged the tolerance to anoxia in mice. CONCLUSION These results suggest that the antihypertensive action of pra-C may be due to peripheral vasodilation. It is reasonable to anticipate that pra-C may be an agent of choice in the treatment of hypertensive encephalopathy.

Keywords: renovascular hypertensive rats peripheral vascular resistance tolerance to anoxia praeruptorin C

收稿日期 2000-12-11 修回日期 网络版发布日期

DOI:

基金项目:

通讯作者:

作者简介:

扩展功能

本文信息

- Supporting info
- PDF(121KB)
- [HTML全文]
- 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
- 引用本文
- Email Alert
- 文章反馈
- 浏览反馈信息

本文关键词相关文章

- 前胡丙素
- 肾型高血压
- 外周阻力
- 耐缺氧

本文作者相关文章

- 饶曼人
- 陈丹

PubMed

- Article by
- Article by

参考文献:

本刊中的类似文章

1. 饶曼人;刘宛斌;刘培庆.前胡丙素对高血压大鼠血管肥厚、细胞内钙、胶原及NO的影响[J]. 药学学报, 2001,36(3): 165-169
2. 饶曼人;刘宛斌;张晓文.前胡丙素对Ang II致离体血管平滑肌细胞肥厚及胞内钙、NO含量和信号转导的影响[J]. 药学学报, 2002,37(1): 5-5
3. 吴献礼;孔令义;闵知大.白花前胡丙素的结构修饰研究[J]. 药学学报, 2002,37(7): 527-534
4. 孔令义;吴献礼;闵知大.白花前胡丙素C-3'和C-4'反式结构类似物的半合成白花前胡丙素C-3'和C-4'反式结构类似物的半合成[J]. 药学学报, 2003,38(5): 358-363
5. 孙兰;饶曼人;刘培庆.前胡丙素对肾性高血压左室肥厚大鼠心功能、左室顺应性及心肌胶原含量的影响[J]. 药学学报, 1997,32(8): 578-582
6. 吴欣;石成璋;吴晓冬.前胡丙素对培养大鼠心肌细胞内游离Ca<sup>2+</sup>的影响[J]. 药学学报, 1993,28(10): 728-731
7. 杨解人;李庆平;饶曼人.前胡丙素与硝苯啶对大鼠工作心脏缺血再灌注损伤的保护作用[J]. 药学学报, 1992,27(10): 729-733

文章评论 (请注意:本站实行文责自负, 请不要发表与学术无关的内容!评论内容不代表本站观点.)

反 馈 人	<input type="text"/>	邮箱地址	<input type="text"/>
反 馈 标 题	<input type="text"/>	验证码	<input type="text"/> 5076