

论著

洛土辛对心肌及阴茎海绵体环核苷酸含量和收缩功能的影响

赵志方^{1*}, 张延琳², 喻欣¹, 冯秀玲¹, 王嘉陵¹

(华中科技大学 1. 同济医学院药理学教研室, 2. 同济医院口腔医学中心, 湖北 武汉 430030)

收稿日期 2001-11-9 修回日期 网络版发布日期 2009-1-15 接受日期 2002-2-25

摘要 目的 研究洛土辛 (Lot) 对磷酸二酯酶 (PDE) III或V亚型的抑制作用及选择性。方法 采用放射免疫测定法及收缩张力记录。结果 Lot和氨力农 (Amr) 剂量依赖性地增加大鼠心肌cAMP含量, 且Lot的作用强于Amr。在家兔阴茎海绵体, Lot和扎普司特 (Zap) 可剂量依赖性地增加海绵体cGMP含量, Lot的作用远弱于Zap。Lot, 罂粟碱 (Pap)、Zap及Amr可显著抑制预先用苯肾上腺素诱发的阴茎海绵体血管收缩, 其EC₅₀分别依次为 Zap>Pap>Amr>Lot。结论 提示洛土辛的作用机理可能与选择性的抑制PDE III有关。

关键词 [洛土辛](#) [扎普司特](#) [环核苷酸](#) [磷酸二酯酶类](#) [心肌](#) [阴茎海绵体](#)

分类号 [R972](#)

Effects of lotusine on cyclic nucleotide levels and contractile function in rat myocardium and rabbit corpus cavernosum

ZHAO Zhi-Fang^{1*}, ZHANG Yan-Lin², YU Xin¹, FENG Xiu-Ling¹, WANG Jia-Ling¹

(1. Department of Pharmacology, Tongji Medical College, 2. The Center of Stomatology, Tongji Hospital, Huazhong University of Science and Technology, Wuhan 430030, China)

Abstract

AIM To study the inhibitory effect and selectivity of lotusine (Lot), an alkaloid extracted from *Nelumbo nucifera* Gaertn., on phosphodiesterase III or V. **METHODS** To use radioimmunoassay and recording of contractile force.

RESULTS Lot (0.1–3 μmol·L⁻¹) and amrinone (Amr, 0.1–10 μmol·L⁻¹) concentration-dependently increased the cyclic AMP level of the rat myocardium. The effect of Lot was stronger than that of Amr. Lot and zaprinast (Zap) enhanced the cyclic GMP level in rabbit corpus cavernosum in concentration-dependent manner. This effect of Lot was much weaker than that of Zap. Lot, papaverine (Pap), Zap and Amr obviously inhibited the rabbit corpus cavernosum contractile response induced by phenylephrine (10 μmol·L⁻¹). The -lg EC₅₀(mol·L⁻¹) of them was Zap(5)>Pap(4.9)>Amr(4.6)>Lot(3.7) respectively. **CONCLUSION** Lot selectively inhibits phosphodiesterase(PDE) III activity and maybe a novel PDE III inhibitor.

Key words [lotusine](#) [zaprinast](#) [cyclic nucleotides](#) [phosphodiesterases](#) [myocardium](#) [corpus cavernosum](#)

DOI:

通讯作者 赵志方 Zhifang.Zhao@tjmu.edu.cn

扩展功能

本文信息

▶ [Supporting info](#)

▶ [PDF\(280KB\)](#)

▶ [\[HTML全文\]\(0KB\)](#)

▶ [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](#)

▶ [复制索引](#)

▶ [Email Alert](#)

▶ [文章反馈](#)

▶ [浏览反馈信息](#)

相关信息

▶ 本刊中 包含“洛土辛”的 [相关文章](#)

▶ 本文作者相关文章

- [赵志方](#)
- [张延琳](#)
- [喻欣](#)
- [冯秀玲](#)
- [王嘉陵](#)