

论文

地塞米松、吲哚美辛和白藜芦醇对巴豆油致炎小鼠耳部基质金属蛋白酶-9的抑制作用

李怡棠;沈放;白金叶;程桂芳

中国医学科学院、中国协和医科大学 药物研究所, 北京 100050

摘要:

目的研究巴豆油致炎小鼠耳部基质金属蛋白酶-9(MMP-9)的表达,以及地塞米松、吲哚美辛和白藜芦醇对MMP-9表达的影响。方法免疫组织化学法测定巴豆油致炎小鼠耳部MMP-9表达,明胶酶谱法测定U937细胞MMP-9表达。结果地塞米松和吲哚美辛以及白藜芦醇对巴豆油引起的小鼠耳部肿胀有明显抑制作用;对巴豆油引起的小鼠耳部MMP-9表达以及PMA诱导的U937细胞MMP-9表达也有显著抑制作用。结论巴豆油致炎小鼠耳部MMP-9表达增高;地塞米松、吲哚美辛和白藜芦醇的抗炎作用可能与抑制MMP-9表达增高有关。

关键词: 基质金属蛋白酶-9 地塞米松 吲哚美辛 白藜芦醇

Inhibition of dexamethasone, indomethacin and resveratrol on matrix metalloproteinase-9 and the mechanism of inhibition

LI Yi-tang; SHEN Fang; BAI Jin-ye; CHENG Gui-fang

Abstract:

AimTo investigate the expression of matrix metalloproteinase-9 (MMP-9) in mouse ears induced with croton oil and the inhibitory effect of dexamethasone, indomethacin and resveratrol on MMP-9 expression, and further explore the relationship between anti-inflammation and MMP-9 inhibition of these three medicines. MethodsImmuno-histochemistry was used to detect the expression of MMP-9 in mouse ears. Expression of MMP-9 in U937 cells was analyzed by gelatin zymography. ResultsMouse ear edema induced with croton oil was inhibited significantly by dexamethasone and indomethacin at the dose of 10 mg·kg<sup>-1</sup> and resveratrol at 50 mg·kg<sup>-1</sup> administered subcutaneously. The inhibitory rate was 76.2% (P<0.001), 56.7% (P<0.001) and 36.9% (P<0.001) respectively. The MMP-9 expression increased in mouse ears induced with croton oil and inhibited by dexamethasone, indomethacin and resveratrol at above doses. Gelatin zymography results showed that MMP-9 expression in U937 cells increased significantly after exposed to PMA at 1×10<sup>-8</sup> mol·L<sup>-1</sup> (P<0.001); MMP-9 expression induced with phorbol myristate acetate(PMA) was inhibited by dexamethasone at 1×10<sup>-9</sup>, 1×10<sup>-7</sup> and 1×10<sup>-5</sup> mol·L<sup>-1</sup>, indomethacin at 1×10<sup>-6</sup> and 1×10<sup>-5</sup> mol·L<sup>-1</sup> and resveratrol at 1×10<sup>-6</sup> and 1×10<sup>-5</sup> mol·L<sup>-1</sup>. ConclusionThe inhibition of MMP-9 expression may be one of the anti-inflammatory mechanisms of dexamethasone, indomethacin and resveratrol.

Keywords: dexamethasone indomethacin resveratrol matrix metalloproteinase-9

收稿日期 2002-09-16 修回日期 网络版发布日期

DOI:

基金项目:

通讯作者: 程桂芳

作者简介:

参考文献:

本刊中的类似文章

1. 李怡棠;刘柏合;张成义;沈放;程桂芳.地塞米松和吲哚美辛对基质金属蛋白酶-9的抑制作用及其机制研究[J]. 药学报, 2003,38(1): 1-1
2. 刘柏合;李怡棠;沈放;赵丹阳;程桂芳.脂多糖对人类风湿性关节炎滑膜细胞基质金属蛋白酶-9表达的影响[J]. 药学报, 2003,38(4): 245-249

扩展功能

本文信息

- ▶ Supporting info
- ▶ PDF(665KB)
- ▶ [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

- ▶ 基质金属蛋白酶-9
- ▶ 地塞米松
- ▶ 吲哚美辛
- ▶ 白藜芦醇

本文作者相关文章

- ▶ 李怡棠
- ▶ 沈放
- ▶ 白金叶
- ▶ 程桂芳

PubMed

- ▶ Article by
- ▶ Article by
- ▶ Article by
- ▶ Article by

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" value="8994"/>