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论著

Curcumin 对注射脂多糖大鼠肺脏血红素氧合酶-1表达的影响

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摘要 目的：探讨活化蛋白-1（AP-1）阻断剂curcumin对注射脂多糖大鼠肺组织血红素氧合酶（HO-1）表达的转录调节机制。 方法： 18只大鼠随机分为3组：对照组（经舌静脉注入等量生理盐水）、脂多糖（LPS）组（经舌静脉注入LPS 5 mg·0.5 mL-1·kg-1）和LPS+curcumin组（经腹腔注入AP-1阻断剂curcumin 20 mg·0.5mL-1·kg-1，20 min后再注入LPS 5 mg·0.5 mL-1·kg-1）。给药7 h后杀死动物留取肺组织，应用逆转录聚合酶链反应（RT-PCR）和Westren 印迹法分别检测HO-1 mRNA和蛋白的表达，生化方法检测肺组织匀浆碳氧血红蛋白（HbCO）含量，间接代表肺组织中一氧化碳（CO）含量。 结果： LPS组大鼠肺组织HO-1 mRNA和蛋白的表达水平及肺组织CO含量高于对照组（均P<0.01），而LPS+curcumin组肺组织HO-1 mRNA、蛋白表达及CO含量明显低于LPS组（均P<0.01）。 结论： LPS攻击的大鼠肺组织中HO-1基因转录可能是通过激活AP-1进行调控的。

关键词 活化蛋白1； 脂多糖类； 肺； 血红素氧化酶(脱环)

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Effect of curcumin on heme oxygenase-1 expression in the lung of rats treated with LPS

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Abstract

<FONT face=Verdana>AIM: To study the regulatory effect of curcumin on expression of heme oxygenase-1 (HO-1) in the lung of rat treated with LPS. METHODS: Eighteen rats were divided into three groups injected with different agents via lingua vein: control group (animals received equivalent saline), LPS group (animals received a bolus dose of LPS 5 mg·0.5 mL-1·kg-1) and LPS+curcumin group (animals received AP-1 inhibitor curcumin 20 mg·0.5 mL-1·kg-1 20 min before the injection of LPS 5 mg·0.5 mL-1·kg-1). The expression of HO-1 mRNA and protein in the lung were examined 7 h after LPS administration by reverse transcribed polymerase chain reaction (RT-PCR) and Western blotting, respectively. Carboxyhemoglobin (HbCO) formation within pulmonary tissue was measured to represent CO content. RESULTS: The results showed that HO-1 mRNA and protein expression as well as CO content in the lung of rats in LPS group were significantly higher than those in control group (P<0.01), while the parameters mentioned above in LPS+curcumin group were markedly lower than that in LPS group. CONCLUSION: The increased HO-1 expression in the lung of rat induced by LPS may be regulated by activating AP-1. </FONT>

Key words Activator protein-1 Lipopolysaccharides Lung Heme oxygenase (decyclizing)

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