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哮喘大鼠肺组织Toll样受体3和9的表达及布地奈德的影响

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摘要:

目的 观察哮喘大鼠肺组织中Toll样受体3(TLR3)和TLR9的表达及对布地奈德的影响, 探讨TLRs在哮喘炎症机制中的作用。方法 建立大鼠哮喘模型, 随机分成哮喘组、对照组和布地奈德组, 免疫组织化学法检测肺组织TLR3和TLR9的表达。结果 哮喘组(OD值: 0.201 ± 0.034)和布地奈德组(OD值: 0.195 ± 0.043)肺组织TLR3的光密度值显著高于对照组(OD值: 0.144 ± 0.039) ($P < 0.05$), 布地奈德组与哮喘组差异无统计学意义。哮喘组(OD值: 0.236 ± 0.022)和布地奈德组(OD值: 0.231 ± 0.023)肺组织TLR9的光密度值均显著低于对照组(OD值: 0.271 ± 0.025) ($P < 0.05$); 布地奈德组与哮喘组差异无统计学意义; 肺组织TLR3和TLR9蛋白的表达水平显著相关性($n = 26$, $r = -0.153$)。结论 哮喘大鼠肺组织TLR3蛋白表达升高, TLR9蛋白的表达则反之, TLRs的表达过度或不足可能是哮喘气道炎症的重要原因之一。布地奈德的抗炎作用可能不是通过TLR3和TLR9的途径实现。

关键词: [哮喘](#) [Toll样受体](#) [糖皮质激素](#) [免疫组织化学](#)

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Effect of Budesonide on Expression of Toll Like Receptor 3 and 9 in Rat Asthma Model

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Abstract:

OBJECTIVE To investigate the potential roles of Toll like receptor(TLR) in pathogenesis of asthma inflammation, and the expression of TLR 3 and 9 in rat asthma model. **METHODS** The rats were randomly and averagely divided into asthma, control and budesonide-treated group. Expressions of TLR3 and TLR9 protein were detected by immunohistochemical method. **RESULTS** Expressions of TLR3 protein in lung tissue in asthma group(optical density: 0.201 ± 0.034) and in budesonide-treated group(optical density: 0.195 ± 0.043) were significantly higher than that in control group(optical density: 0.144 ± 0.039)(all $P < 0.05$). While there was no significant difference of TLR3 protein expression between budesonide-treated and asthma group. Dramaticly, expressions of TLR9 protein in lung tissue in asthma group(0.236 ± 0.022 optical density) and budesonide-treated group(optical density: 0.231 ± 0.023) were significantly lower than that in control group(optical density: 0.271 ± 0.025)(all $P < 0.05$). Moreover, there was no significant difference of TLR9 protein expression between in budesonide-treated and asthma group. Furthermore, there was no significant correlation between levels of TLR3 and TLR9 in lung tissue($n = 26$, $r = -0.153$, $P > 0.05$). **CONCLUSION** Level of TLR3 increased in asthmatic asthma lung tissue group. On the other hand, level of TLR9 decreased. TLRs may act as an important role in asthma exacerbation, and the anti-inflammation function of TLRs may not mainly work through TLR3 and TLR9 path way.

Key words: [asthma](#) [Toll like receptor](#) [glucocorticoid](#) [immunohistochemistry](#)

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