

[1] 李晓萍,张志坚,屈纪富.姜黄素对大鼠重症胰腺炎的干预效应研究[J].第三军医大学学报,2013,35(08):759-763.

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Li Xiaoping,Zhang Zhijian,Qu Jifu.Effects of curcumin intervention on chemokine ENA-78 expression in rat severe acute pancreatitis[J].J Third Mil Med Univ,2013,35(08):759-763.

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姜黄素对大鼠重症胰腺炎的干预效应研究(PDF) 分享到:

《第三军医大学学报》 [ISSN:1000-5404/CN:51-1095/R] 卷: 35 期数: 2013年第08期 页码: 759-763 栏目: 论著 出版日期: 2013-04-30

Title: Effects of curcumin intervention on chemokine ENA-78 expression in rat severe acute pancreatitis

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关键词: 重症急性胰腺炎; 姜黄素; 趋化因子ENA-78; 基因表达

Keywords: severe acute pancreatitis; curcumin; epithelial neutrophil activating peptide 78; gene expression

分类号: R282.71;R576;R965

文献标志码: A

摘要: 目的 探讨趋化因子ENA-78(epithelial neutrophil activating peptide 78,ENA-78)在重症急性胰腺炎(acute pancreatitis, SAP)发病过程中的作用及姜黄素(curcumin, CUR)的干预效应。 方法 54只SD大鼠按完全随机法分为SAP组、姜黄素治疗(SAP+CUR)组和对照组,用4%牛磺胆酸钠逆行胆胰管注射建立大鼠模型, SAP+CUR组在建立模型前2 h 腹腔内注射姜黄素溶液(200 mg/kg), 余组注射同等剂量的DMSO溶液。用ELISA法测定3组大鼠不同时点血清中ENA-78水平的变化; Western blot和免疫组化法检测胰腺组织不同时点ENA-78蛋白的表达水平; 病理组织切片检查各时点胰腺的病理变化。 结果 SAP组血清中ENA-78水平随时间的延长逐渐增强, 3 h后各时点血清ENA-78水平均高于对照组及SAP+CUR组($P<0.01$); SAP组及SAP+CUR组术后胰腺组织ENA-78蛋白表达随时间延长逐渐增加, 术后各时间点表达均显著高于对照组, 但同时间点比较SAP+CUR组表达明显低于SAP组($P<0.01$); 病理组织切片检查显示SAP+CUR组各时点与SAP组相比较, 胰腺病理损伤显著减轻。 结论 姜黄素能有效干预SAP, 其机制可能与抑制趋化因子ENA-78的表达有关。

Abstract: Objective To investigate the role of epithelial neutrophil activating peptide 78 (ENA-78) in the pathogenesis of severe acute pancreatitis (SAP) and effects of curcumin intervention on ENA-78 expression in SAP. Methods Fifty-four SD rats were randomized into three groups: a SAP group, a curcumin treatment group (SAP+CUR) and a control group. SAP model was induced by retrograde infusion of 4% sodium taurocholate into the bili-pancreatic duct in rats. Rats in the SAP+CUR group were injected with curcumin (200 mg/kg)

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through abdominal cavity before operation while those in the control and SAP groups were injected with DMSO. ENA-78 in the serum was detected by ELISA at various time points. The expression of ENA-78 in pancreatic tissues was detected by Western blotting and immunohistochemistry. The histopathological changes were observed at the same time.

Results

Serum level of ENA-78 in 3 h after operation in the SAP group was significantly higher than that in the control group and SAP+CUR group ($P<0.01$). Compared with the control group, the expression of ENA-78 in the pancreatic tissues of rats in the SAP group and SAP+CUR group increased significantly in a time-dependent manner. Compared with the SAP group, the expression of ENA-78 in the pancreatic tissues of rats in the SAP+CUR group was decreased ($P<0.01$). Pathological injury of pancreatic tissues was more obvious in the SAP group than in the SAP+CUR group.

Conclusion

Curcumin efficiently interferes SAP and may be related to inhibition of ENA-78 expression.

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