肿瘤防治研究 2008, Vol. 35 Issue (10): 694-696 DOI:
基础研究

环磷酰胺联合卡介苗对Lewis肺癌小鼠CD4~+CD25~+Treg细胞及效应细胞功能的影响

李欣; 崔永生; 刘白楠; 李一;

吉林大学基础医学院免疫学教研室; 吉林大学一医院胸外科;

Function of CD4～+CD25～+Treg and Effecter Cells of Mice with Lewis Lung Cancer Were Influenced by CTX and BCG Therapeutic Alliance

LI Xin1; CUI Yong-sheng1; 2; LIU Bai-nan1; LI Yi1

Yi11.Department of Immunology; School of Basic Medical Sciences; Jilin University; Changchun 130021; China; 2.Department of Thoracic Surgery; First Hospital;

- 摘要
- 参考文献
- 相关文章

全文: PDF (287 KB) HTML (0 KB) 输出: BibTeX | EndNote (RIS) 背景资料

摘要 目的探讨环磷酰胺(CTX)联合卡介苗(BCG)治疗对Lewis肺癌小鼠CD4+CD25+Treg细胞和效应细胞功能的影响及CD4+CD25+Treg细胞与肿瘤的相关性。方法将传代培养的Lewis肺癌细胞接种于C57BL/6小鼠右腋皮下,建立Lewis肺癌模型。采用CTX联合BCG治疗,观察各组动物的肿瘤体积、脾脏CD4+CD25+Treg细胞数量和Foxp3 mRNA表达水平、脾脏T淋巴细胞增殖和杀伤功能。结果CTX联合BCG治疗组肿瘤生长较肿瘤组缓慢;联合治疗组小鼠脾脏CD4+CD25+Treg细胞数量明显低于肿瘤组(P<0.05);联合治疗组小鼠脾脏Foxp3 mRNA表达水平明显低于肿瘤组(P<0.05);联合治疗组小鼠脾脏T淋巴细胞增殖功能明显高于肿瘤组(P<0.05);联合治疗组小鼠脾脏CTLs细胞的杀伤活性略高于肿瘤组(P>0.05)。结论CTX联合BCG治疗可明显降低CD4+CD25+Treg细胞数量和Foxp3 mRNA表达水平,并增强机体抗肿瘤免疫应答,使肿瘤生长延缓。

关键词： CTX Treg Foxp3 肿瘤免疫

Abstract： Objective To study the function of CD4+CD25+Treg and effecter cells of mice with Lewis lung cancer were influenced by CTX and BCG therapeutic alliance, investigate the relationship of CD4+CD25+ Treg and the tumor, and provide experiment evidence for the tumor immunotherapy. MethodsThe models were established by injected CTX (25mg/kg) and after 7 days injected subcutaneously to the right axilla of C57BL/6 mice with subculturing Lewis lung cancer cells and BCG (12.5mg/kg). The dynamic changes of tumor volume were observed. The changes of number of CD4+CD25+ Treg and the expression of Foxp3 in spleen were detected by flow cytometer and semi quantitative RT PCR. The changes of T lymphocyte proliferation and killing function spleen were detected. Results The tumor volumes grew more slowly in CTX and BCG therapeutic alliance group than in the tumor group. The number of CD4+CD25+ Treg in spleen of mice was lower in therapeutic alliance group than in the tumor group (P<0.05). The expression of Foxp3 mRNA in spleen lymphocyte was significantly lower in therapeutic alliance group than in the tumor group (P<0.05). The changes of T lymphocyte proliferation in spleen were significantly higher in therapeutic alliance group than in the tumor group(P<0.05). The changes of T lymphocyte killing function in spleen was not significantly lower in therapeutic alliance group than in the tumor group (P>0.05). Conclusion After CTX and BCG therapeutic alliance, the number of CD4+CD25+ Treg and the expression of Foxp3 mRNA in spleen of mice with Lewis lung cancer decreased, and enhanced the immune response to tumor, this may delay the growth of the tumor.

Key words： CTX Treg Foxp3 Tumor immunity

收稿日期: 2007-10-15;

通讯作者: 李一

引用本文:

李欣,崔永生,刘白楠等. 环磷酰胺联合卡介苗对Lewis肺癌小鼠CD4～+CD25～+Treg细胞及效应细胞功能的影响 [J]. 肿瘤防治研究, 2008, 35(10): 694-696.

LI Xin,CUI Yong-sheng,$author.xingMing_EN et al. Function of CD4~+CD25~+Treg and Effecter Cells of Mice with Lewis Lung Cancer Were Influenced by CTX and BCG Therapeutic Alliance[J]. CHINA RESEARCH ON PREVENTION AND TREATMENT, 2008, 35(10): 694-696.

没有本文参考文献

[1] 郭净;王菊勇;郑展;王青. 转录因子Foxp3与恶性肿瘤的研究进展 [J]. 肿瘤防治研究, 2011, 38(7): 844-847.

[2] 李 翔;高全立;买 玲 . 氟达拉宾联合瘤苗抗小鼠RMA淋巴瘤的实验[J]. 肿瘤防治研究, 2010, 37(5): 519-521.

[3] 盖晓东;赵丽微;历春. CD4+CD25+调节性T细胞与CD4+T、CD8+T细胞在结直肠癌组织中的分布[J]. 肿瘤防治研究, 2010, 37(12): 1397-1399.

[4] 林 泉;梁 皓;严宇清;何剑峰. 癌-睾丸抗原MAGE-A1、A3、A4在视网膜母细胞瘤中的表达[J]. 肿瘤防治研究, 2010, 37(06): 656-659.

[5] 张洁;林苹;陆燕蓉;王琪;宁其志;. 负载肺癌抗原DC疫苗抗肿瘤免疫实验 [J]. 肿瘤防治研究, 2008, 35(3): 153-156.

[6] 周娓;喻杰;刘莉;刘仲萍;. 健择联合顺铂化疗对非小细胞肺癌患者外周血CD4~+CD25~+Foxp3~+调节T细胞的影响[J]. 肿瘤防治研究, 2008, 35(05): 343-346.

[7] 付泽娴;孟繁杰;李保东;李冬斌;谢绍建;陈小贺;范晓燕;蔡建辉. **FoxP$_3$ mRNA** 在胃癌患者**CD4$^+$ CD25$^+$** 调节性**T** 细胞中的表达及其临床意义[J]. 肿瘤防治研究, 2007, 34(12): 935-936,.

[8] 杨进强;李勇;赵增仁;邝钢;范立侨;焦锟;. 胃癌患者血清VEGF水平与T淋巴细胞嗜银蛋白含量的相关性及临床意义 [J]. 肿瘤防治研究, 2006, 33(7): 499-501.

[9] 张希国;师建国;刘彦仿;阎庆国;. 比较两类树突状细胞激活的肿瘤特异性CTL对肝癌荷瘤裸鼠的治疗作用 [J]. 肿瘤防治研究, 2006, 33(7): 493-495，.

[10] 许涛;张小静;谢小薰;. 癌睾丸抗原基因的表观遗传改变及意义 [J]. 肿瘤防治研究, 2006, 33(3): 204-206.

[11] 邓芝云;郭建巍;张方信. 生存素—肿瘤免疫治疗中的新靶点[J]. 肿瘤防治研究, 2005, 32(5): 321-322.

[12] 王俊祥;王金铠;孟建波;. 慢性髓性白血病来源的树突状细胞诱导的CTL体外作用研究 [J]. 肿瘤防治研究, 2004, 31(12): 739-741.

[13] 陶雁玲;崔永华;. 树突状细胞在喉癌及癌前病变中的表达及意义 [J]. 肿瘤防治研究, 2002, 29(3): 210-211，.

[14] 戴盛明;李桂生;. 树突状细胞与肿瘤免疫治疗 [J]. 肿瘤防治研究, 2002, 29(2): 159-161.

[15] 李明松;袁爱力;陈村龙;张亚历;张振书;周殿元. 树突状细胞诱导抗人肝癌细胞系的肿瘤免疫 [J]. 肿瘤防治研究, 2000, 27(2): 175-176.