

瘦素对人肺腺癌A549细胞增殖及p-ERK1/2、VEGF表达的影响

李海泉, 朱述阳, 贾晓民, 赵杰, 王海清

221002江苏徐州, 徐州医学院附属医院呼吸科 (*现工作单位: 221006江苏徐州, 徐州医学院第二附属医院呼吸科)

Effects of Leptin on Cell Proliferation and p-ERK1/2, VEGF Expression in Human Lung Adenocarcinoma Cell A549

LI Hai-quan, ZHU Shu-yang, JIA Xiao-min, ZHAO Jie, WANG Hai-qing

Department of Pneumology, Affiliated Hospital of Xuzhou Medical College, Xuzhou 221002, China (*Present: Department of Pneumology, Second Affiliated Hospital of Xuzhou Medical College, Xuzhou 221006)

- 摘要
- 参考文献
- 相关文章

全文: PDF (542 KB) HTML (0 KB) 输出: BibTeX | EndNote (RIS) 背景资料

摘要 目的观察瘦素对人肺腺癌 A549 细胞增殖及p-ERK1/2、VEGF 表达的影响。初步探讨瘦素在促进肿瘤血管生成中的机制。方法 对人肺腺癌 A549 细胞采用细胞培养, MTT 法检测不同浓度瘦素对人肺腺癌A549细胞增殖影响, 免疫组织化学法检测VEGF表达、Western blot 方法检测瘦素对p-ERK1/2、VEGF表达的影响。结果 在一定范围内, 瘦素呈时间、剂量依赖性促进A549细胞的生长($P<0.05$); 与阴性对照组相比, 不同浓度瘦素作用48h 后p-ERK1/2、VEGF 蛋白表达明显增加并具有剂量依赖性 ($P<0.05$); p-ERK1/2和VEGF 之间呈正相关性($r=0.694$, $P<0.05$)。结论 在体外瘦素对人肺腺癌A549 细胞有明显增殖作用, 通过促进p-ERK1/2和VEGF的表达, 瘦素在促进肺癌血管的生长机制中可能具有一定作用。

关键词: 瘦素 人肺腺癌A549细胞 血管内皮生长因子 磷酸化细胞外信号调节激酶

Abstract: Objective To explore the effect and significance of leptin on the expression of p-ERK1/2 and VEGF in A549 cells. Methods A549 cell line was treated with different concentration of leptin for 24, 48 or 72 hours, respectively, and then cellular proliferation was evaluated by MTT method. VEGF expression in tumor cells was detected by immuno-histochemical method, Western blot analysis was used to detect both p-ERK1/2 and VEGF expressions. Results MTT assay showed that Leptin stimulated the proliferation of A549 cells in a dose and time dependent manner in vitro ($P<0.05$). The expression of VEGF was upregulated significantly in A549 cells treated by 80ng/ml or 160ng/ml Leptin ($P<0.05$). Western blot showed that the protein expression of VEGF was significantly increased in a Leptin dose-dependent way. There was a positive correlation between p-ERK1/2 and VEGF ($r=0.694$, $P<0.05$). Conclusion Leptin stimulated proliferation of A549 cells and up-regulated VEGF protein expression partly through ERK1/2 pathway.

Key words: Leptin A549 lung adenocarcinoma cell VEGF p-ERK1/2

收稿日期: 2009-10-12;

通讯作者: 朱述阳

引用本文:

李海泉,朱述阳,贾晓民等. 瘦素对人肺腺癌A549细胞增殖及p-ERK1/2、VEGF表达的影响[J]. 肿瘤防治研究, 2010, 37(11): 1222-1225.

LI Hai-quan, ZHU Shu-yang, JIA Xiao-min et al. Effects of Leptin on Cell Proliferation and p-ERK1/2, VEGF Expression in Human Lung Adenocarcinoma Cell Line A549[J]. CHINA RESEARCH ON PREVENTION AND TREATMENT, 2010, 37(11): 1222-1225.

没有本文参考文献

- [1] 杨素梅,刘可玲;王立敏;高建宏;李华;高玉霞. 血管生成素-2及其受体在卵巢癌组织中的表达及与血管生成的关系[J]. 肿瘤防治研究, 2012, 39(2): 185-188.
- [2] 彭兴春;余明华;骆志国;崔培林. 褪黑素对肺癌A549细胞诱导的血管内皮细胞增殖的影响[J]. 肿瘤防治研究, 2011, 38(9): 1002-1005.

服务	
把本文推荐给朋友	
加入我的书架	
加入引用管理器	
E-mail Alert	
RSS	
作者相关文章	
李海泉	
朱述阳	
贾晓民	
赵杰	
王海清	

- [3] 吴晓慧;王顺祥;杨永江;李建坤 . YC-1对人肝细胞癌裸鼠移植瘤的影响及其机制 [J]. 肿瘤防治研究, 2011, 38(8): 895-898.
- [4] 刘培根;马利林;朱建伟. 氧化应激对大肠癌细胞迁移、血管内皮生长因子表达及细胞间通信的影响[J]. 肿瘤防治研究, 2011, 38(8): 857-860.
- [5] 郭宝平;岑洪;谭晓虹;陆永奎 . 慢病毒介导的siRNA干扰乳腺癌MCF-7细胞VEGF-C表达的实验 [J]. 肿瘤防治研究, 2011, 38(5): 502-504.
- [6] 刘海燕;齐元富;马吉祥;苏军英;徐爱强;李维卡. 培哌普利抗S180肉瘤生长的实验研究[J]. 肿瘤防治研究, 2011, 38(5): 515-518.
- [7] 张梅春;赵子文;曾军;刘朝晖 . 康艾注射液辅助化疗对晚期非小细胞肺癌患者血清VEGF表达的干预作用[J]. 肿瘤防治研究, 2011, 38(5): 545-547.
- [8] 张艳玉;高国兰;高军;王芬 . 不良心理应激对人卵巢癌裸鼠血清sIL-2R、VEGF和CA125的影响[J]. 肿瘤防治研究, 2011, 38(4): 365-368.
- [9] 张雪玉;张咏梅;杨彩虹;刘莉莉;吴蔚 . HGF、c-Met和VEGF-C在宫颈癌中的表达[J]. 肿瘤防治研究, 2011, 38(4): 411-415.
- [10] 廖如奕;牛灵. 基质金属蛋白酶-3和血管内皮生长因子在胃癌组织中的表达及意义[J]. 肿瘤防治研究, 2011, 38(10): 1140-1142.
- [11] 邓晶;蒋永新;寸英丽;陈晓群;万成亮. 人参皂昔CK对胃癌细胞株SGC-7901及其内源性VEGF的影响[J]. 肿瘤防治研究, 2011, 38(1): 17-20.
- [12] 萧淑华;荣福;黄静;张天托. NSCLC患者血清Ang2与VEGF动态变化的关系[J]. 肿瘤防治研究, 2011, 38(1): 83-86.