

survivin基因沉默对宫颈癌XB1702细胞增殖和对吉非替尼敏感度的影响

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Effect of survivin Gene Silencing on Proliferation of Human Cervical Cancer Cell XB1702 and Their Sensitivity to Gefitinib

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摘要 目的

研究survivin基因沉默对人宫颈癌XB1702细胞增殖和对化疗药物吉非替尼敏感度的影响。方法 设计合成survivin的siRNA序列, LipofectamineTM2000 转染入XB1702细胞。采用RT-PCR和Western blot检测survivin在干扰后mRNA和蛋白的表达情况, 利用流式细胞仪检测细胞周期。通过MTT法和细胞克隆形成试验法观察survivin基因沉默后XB1702细胞对吉非替尼的敏感度。结果 Survivin基因沉默48 h后, XB1702细胞的survivin基因和蛋白表达明显降低, 差异有统计学意义($P<0.05$)。细胞周期被阻滞在G₀/G₁期, S期细胞数减少; 差异有统计学意义($P<0.05$)。survivin基因沉默组细胞对吉非替尼的敏感度显著增强。结论 survivin特异性siRNA能显著沉默XB1702细胞survivin基因, 抑制细胞增殖, 并增强XB1702细胞对吉非替尼的敏感度。

关键词: survivin siRNA 宫颈癌 XB1702细胞 细胞增殖 吉非替尼

Abstract: Objective

To investigate the effect of small interfering RNA-mediated survivin knock-down on proliferation of human Cervical cancer Cell XB1702 and their sensitivity to Gefitinib. Methods The siRNA against survivin was constructed and transfected into XB1702 cells with LipofectamineTM 2000. The expression of survivin was detected by RT-PCR and Western blot. Flow cytometry was used to detect the cell cycle. Sensitivity to Gefitinib after transfection were examined by MTT and clonogenic assay. Results In XB1702 cells, the protein and mRNA levels of survivin were decreased significantly after transfection, and reduction of proliferation was related to an increase in the fraction of G₀/G₁ phase. The sensitivity of XB1702 cells to Gefitinib increased significantly after transfection. Conclusion The survivin special siRNA silenced surviving, decreased XB1702 cells proliferation and enhanced their sensitivity to Gefitinib.

Key words: survivin; siRNA; Cervical cancer XB1702; Cell proliferation Gefitinib

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[1] Valdespino VM, Valdespino VE. Cervical cancer screening: state of the art [J]. Curr Opin Obstet

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- [2] Gynecol,2006,18(1):35-40.
- [3] Lu C,Contreras X,Peterlin BM.P bodies inhibit retrotransposition of endogenous intracisternal a
- [4] particles [J] .J Virol,2011,85(13):6244-51.
- [5] Itoh Y,Ishikawa M,Kitaguchi R,et al.Development of target protein-selective degradation
- [6] inducer for protein knockdown [J] .Bioorg Med Chem,2011,19(10):3229-41.
- [7] Lu YJ,Miao SS,Liu WS,et al.Construction and confirmation of a recombinant adenovirus vector of
- [8] survivin [J] .Zhonghua Zhong Liu Za Zhi,2011,33(1):13-7. [吕元景,苗素生,刘伟松,等.重组survivin腺病
- [9] 毒的构建与鉴定 [J] .中华肿瘤杂志,2011,33(1):13-7.]
- [10] Sarela AI,Macadam RC,Farmery SM,et al.Expression of the antiapoptosis gene,survivin,predicts
- [11] death from recurrent colorectal carcinoma [J] .Gut,2000,46(5):645-50.
- [12] Jin X,Li Q,Wu Q,et al.Radiosensitization by Inhibiting Survivin in Human Hepatoma HepG2 Cells
- [13] to High-LET Radiation [J] .J Radiat Res,2011,52(3):335-41.
- [14] Shfin S,Sung B J,Cho YS,et al.An antiapoptotic protein human survivin is a direct inhibi- tor of
- [15] easpcase 3 and 7 [J] .Biochemistry,2001,40(4):1117-23.
- [16] Wang XH,Fu ZX,Zhao Y,et al.Inflence of the survivin gene on the proliferation and apoptosis of
- [17] colon carcinoma cells [J] .Zhongguo Zhong Liu Lin Chuang,2010,37(9):485-9. [王学虎,傅仲学,赵渝,
- [18] 等.survivin基因的shRNA干扰对结肠癌SW480细胞增殖和凋亡的影响[J].中国肿瘤临床,2010,37(9):485-9.]
- [19] Wang XC,Wen XH.Influence of survivin gene-targeting siRNA on tle biological features of
- [20] coloarectal carcinoma cells [J] .Ke Ji Dao Bao,2011,29(7):22-5
- [21] 王晓春,文贤慧.siRNA干扰Survivin基因对结肠癌生物学特性影响[J].科技导报,2011,29(7):22-5.]
- [22] Song Y,Dong MM,Yang HF.Effects of RNA interference targeting four different genes on the
- [23] growth and proliferation of nasopharyngeal carcinoma CNE-2Z cells [J] .Zhonghua Er Bi Yan Hou Tou
- [24] Jing Wai Ke Za Zhi,2010,45(9):751-8. [宋英,董明敏,杨海峰.RNA同时干扰四个不同基因对鼻咽癌细胞CNE-2Z生
- [25] 长增殖的实验研究 [J] .中华耳鼻咽喉头颈外科杂志,2010,45(9):751-8.]
- [26] [11]
- [27] Gaikwad A,Wolf JK,Brown J,et al.In vitro evaluation of the effects of gefitinib on the cytotoxic
- [28] activity of selected anticancer agents in a panel of human endometrial cancer cell lines [J] .J
- [29] Oncol Pharm Pract,2009,15(1):35-44.
- [30] Goncalves A,Fabbro M,Lhommé C,et al.A phase II trial to evaluate gefitinib as second- or
- [31] third-line treatment in patients with recurring locoregionally advanced or metastatic cervical
- [32] cancer [J] .Gynecol Oncol,2008,108(1):42-6.
- [33] Lu H,Gan M,Zhang G,et al.Expression of survivin,caspase-3 and p53 in cervical cancer assessed
- [34] by tissue microarray:correlation with clinicopathology and prognosis [J] .Eur J Gynaecol
- [35] Oncol,2010,31(6):662-6.
- [36] Motmtzios G,Dimopoulos MA,Papadimltriou C.Excision Repair Cross-Complementation Group 1
- [37] Enzyme as a Molecular Determinant of Responsiveness to Platinum-Based Chemotherapy for non Small-
- [38] Cell Lung Cancer [J].Biomark Insights,2008,3:219-26.
- [39] Xue Y,An R,Zhang D,et al.Detection of survivin expression in cervical cancer cells using
- [40] molecular beacon imaging:new strategy for the diagnosis of cervical cancer [J] .Eur J Obstet Gynecol
- [41] Reprod Biol,2011,159(1):204-8.
- [42] Nakamura M,Tsuji N,Asanuma K,et al.Survivin as a predictor of cis-diamminedichloroplatinum
- [43] sensitivity in gastric cancer patients [J] .Cancer Sci,2004,95(1):44-51.
- [44] Dong JH,Wang ZM,Wang P,et al.Silence of survivin by RNA interference influence the
- [45] proliferation of XB1702 cells and sensitivity of cisplatin [J] .Zhongguo Lin Chuang Yi Xue,2009,16
- [46] :665-8. [董俊红,王振明,王平,等.核糖核酸干扰沉默survivin基因对A549细胞增殖及顺铂敏感性的影响 [J] .

- [1] 熊锐华,任庆,田秀荣,唐新云. 新辅助化疗在宫颈癌治疗中的临床研究[J]. 肿瘤防治研究, 2012, 39(6): 719-721.
- [2] 陈艳丽, 陈昌贤, 阳志军, 李力. 根治性宫颈切除治疗早期宫颈癌临床价值的循证评价[J]. 肿瘤防治研究, 2012, 39(5): 519-525.
- [3] 张敦兰, 蔡鸿宁. 青春期宫颈癌1例误诊分析[J]. 肿瘤防治研究, 2012, 39(5): 611-612.
- [4] 朱燕, 杨其昌, 刘宏斌, 刘曼华, 张晓娟, 沈屹. D2-40和生存素在宫颈癌中的表达及与预后的相关性[J]. 肿瘤防治研究, 2012, 39(3): 307-311.
- [5] 魏洪, 吴建伟, 国果, 付萍. 家蝇幼虫血淋巴蛋白MAC-1诱导人宫颈癌细胞凋亡的实验[J]. 肿瘤防治研究, 2012, 39(3): 260-263.
- [6] 纪术峰;杨华锋;吴爱国. PGRMC1参与调控乳腺癌细胞增殖及化疗敏感度的实验[J]. 肿瘤防治研究, 2012, 39(2): 123-126.
- [7] 刘安文;蔡婧;张树辉. MAP4K4对肝癌细胞生物学活性的影响及机制[J]. 肿瘤防治研究, 2012, 39(2): 140-145.
- [8] 王炜;王志彬;高玉环. 国产雷帕霉素对人淋巴瘤细胞Raji增殖的影响[J]. 肿瘤防治研究, 2012, 39(2): 157-160.
- [9] 孙军;胡俊波;陈洪雷;李蓓芸;夏和顺. 不同宫颈组织中PIK3CA、PTEN和p16蛋白表达及其与HPV16/18感染的关系[J]. 肿瘤防治研究, 2012, 39(2): 189-194.
- [10] 牛国晓;李洁. 半枝莲抗肿瘤机制研究进展[J]. 肿瘤防治研究, 2012, 39(2): 231-233.
- [11] 孙建建;李胜棉;赵松;李光辉;王小玲. Survivin和Caspase-3在胰腺癌组织中的表达及与预后的关系[J]. 肿瘤防治研究, 2012, 39(1): 62-67.
- [12] 沈险华;董丽萍;吴绪峰. 宫颈癌转移至远处胆道系统1例报道[J]. 肿瘤防治研究, 2012, 39(1): 120-120.
- [13] 黄少军;程正江;汪晶晶. 胃肠肿瘤患者手术前后外周血survivin mRNA定量检测的临床意义[J]. 肿瘤防治研究, 2011, 38(9): 1050-1052.
- [14] 王芬综述;高国兰审校. 人乳头瘤病毒及其疫苗的研究进展[J]. 肿瘤防治研究, 2011, 38(8): 968-970.
- [15] 何伶俐;高倩颖;侯亚义;. 灵芝孢子油对人胃腺癌细胞BGC823的抑制作用[J]. 肿瘤防治研究, 2011, 38(7): 761-763.