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顺铂致A549细胞miR-16与bcl-2表达的变化

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Expression Changes of miR-16 and bcl-2 in A549 Cells Treated with Cisplatin

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摘要 目的研究顺铂作用于A549细胞后，miR-16和bcl-2的表达变化，并探讨两者的相关性。方法采用MTT法测定顺铂对A549细胞的抑制率、锥虫蓝拒染法检测细胞凋亡率，倒置显微镜观察细胞形态，确定合适的药物浓度；然后提取细胞中的miRNA，用实时定量PCR技术定量分析miR-16在对照组细胞和加药组细胞中的表达变化；通过microRNA_org等分析软件预测miR-16的下游调控基因；采用Western blot方法分析细胞中bcl-2蛋白的表达变化。结果在顺铂诱导作用下，A549细胞凋亡率明显增加； miR-16在顺铂作用后的细胞中表达显著升高，而bcl-2蛋白显著低表达。结论顺铂可以促使肺癌A549细胞凋亡；miR-16具有抑癌基因活性，能负调控bcl-2蛋白的表达，参与顺铂致A549细胞死亡的作用。

关键词： miR-16 bcl-2 顺铂 肺癌

Abstract： ObjectiveTo explore the expression changes of miR-16 and bcl-2 in the A549 lung cancer cell lines treated with Cisplatin. MethodsThe growth inhibition rate of lung cancer cells was analyzed by MTT assay, the number of dead cells was determined by counting of trypan blue exclusion staining cells and the morphology of A549 cells was observed by the inverted microscope to deter mine the appropriate Cisplatin concentration. Then the miRNA was extracted from the A549 cells, the changes of miR-16 expression in the control group and the dosing group were analyzed by Real-time PCR and miRNA s downstream regulating genes were evaluated by microRNA--org analysis software. The expression of bcl-2 protein in the two groups was detected by Western blot. ResultsAfter Cisplatin treatment, the number of A549 dead cells was significantly increased. The expression of miR-16 in Cisplatin group was significantly higher than that in the control group. However, the expression of bcl-2 protein in Cisplatin group was lower than that in control group. ConclusionCisplatin induced lung cancer A549 cell apoptosis; miR-16 down-regulated the expression of bcl-2 protein as a tumor suppressor genes, involved in the mechanism of A549 cell death induced by Cisplatin.

Key words： miR-16 bcl-2 Cisplatin Lung cancer

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没有本文参考文献

[1] 王小莉;龚兴牡 . Trx-1和COX-2在非小细胞肺癌中的表达及意义[J]. 肿瘤防治研究, 2012, 39(2): 166-168.

[2] 杭晓声;史央;李丽;项方;时宏珍 . 树突状细胞免疫治疗晚期非小细胞肺癌的临床观察[J]. 肿瘤防治研究, 2012, 39(2): 205-209.

[3] 刘磊玉;赵彬佳惠;秦玮;陈媛媛;林锋;邹海峰;于晓光 . 转染PDCD5基因促进顺铂诱导前列腺癌细胞的凋亡作用[J]. 肿瘤防治研究, 2012, 39(1): 32-35.

[4] 张华;冯卫能;邓燕明;冼海兵. 培美曲塞联合顺铂一线治疗晚期非鳞状非小细胞肺癌的疗效观察[J]. 肿瘤防治研究, 2012, 39(1): 88-90.

[5] 王力军;冯济龙. 三维适形放疗联合小剂量顺铂治疗老年非小细胞肺癌的疗效观察[J]. 肿瘤防治研究, 2012, 39(1): 85-87.

[6] 童皖宁;张军;卓安山;曹玉书 . 伽玛刀联合培美曲塞/卡铂同步治疗局部晚期非小细胞肺癌的临床观察[J]. 肿瘤防治研究, 2012, 39(1): 81-84.

[7] 张金标;郑 航;尤长宣;何本夫;罗荣城. 肿瘤标志物CEA和CYFRA21-1在晚期肺癌中的临床价值[J]. 肿瘤防治研究, 2012, 39(1): 98-99.

[8] 刘莹;朱祖安;费素娟;刘磊;孙旻;张秋月 . 神经酰胺促胃癌SGC7901细胞凋亡的实验[J]. 肿瘤防治研究, 2011, 38(9): 991-994.

[9] 刘先领;曾惠爱;马芳;杨农. 吉西他滨联合顺铂治疗复发转移性乳腺癌的疗效观察 [J]. 肿瘤防治研究, 2011, 38(9): 1055-1057.

[10] 阿迪力·萨来;帕提古力·阿尔西丁;刘翼;张国庆;庞作良 . 新辅助化疗对局部晚期非小细胞肺癌术后生存率的影响 [J]. 肿瘤防治研究, 2011, 38(9): 1058-1061.

[11] 杨凯;贺兼斌;张平 . 白藜芦醇对小鼠Lewis肺癌细胞生长的抑制作用及其机制 [J]. 肿瘤防治研究, 2011, 38(8): 871-874.

[12] 靳福鹏;张梅;李平;张锋利;闫安 . 益气养阴解毒方含药血清对Lewis肺癌细胞增殖及凋亡影响的体外实验[J]. 肿瘤防治研究, 2011, 38(8): 866-870.