

miR-147对胶质瘤U87细胞增殖、凋亡和侵袭的影响

《现代肿瘤医学》[ISSN:1672-4992/CN:61-1415/R] 期数: 2020年03期 页码: 360-363 栏目: 论著(基础研究) 出版日期: 2019-12-26

Title: Study on the correlation between miR-147 and biological activity of U87 cells in glioma cells

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关键词: miR-147; 胶质瘤; 增殖; 凋亡; 侵袭

Keywords: miR-147; glioma; proliferation; apoptosis; invasion

分类号: R739.41

DOI: 10.3969/j.issn.1672-4992.2020.03.002

文献标识码: A

摘要: 目的: 比较胶质瘤患者胶质瘤组织和瘤旁组织中miR-147表达水平的差异性, 进一步分析miR-147与胶质瘤细胞生物学活性的相关性。方法: 通过实时荧光定量PCR检测65例胶质瘤患者瘤组织和瘤旁组织中miR-147的表达水平; 采用Lipofectamine 2000转染法转染胶质瘤细胞, 分为miR-147 mimics组和NC组, 检测两组转染效率; 进一步通过CCK-8实验、流式细胞实验和Transwell实验比较两组细胞生物活性。结果: 胶质瘤组织中miR-147表达水平显著低于瘤旁组织; 与NC组比较, miR-147 mimics组细胞不论是增殖能力还是侵袭能力都明显降低, 但是, miR-147 mimics组的细胞凋亡率升高。结论: 胶质瘤组织中存在miR-147低表达的现象。miR-147在胶质瘤细胞中表达升高能够抑制细胞的增殖能力、降低其侵袭能力, 并促使更多的细胞发生晚期凋亡。miR-147可能在胶质瘤中扮演着抑癌基因的重要角色。

Abstract: Objective: To compare the difference of miR-147 expression between glioma tissues and adjacent tissues, and to further analyze the correlation between miR-147 and biological activity of glioma cells. Methods: The expression of miR-147 in 65 glioma tissues and adjacent tissues was detected by real-time fluorescence quantitative PCR, and the glioma cells were transfected into miR-147 mimics group and NC group by Lipofectamine 2000 method, and the transfection efficiency of the two groups was detected. Furthermore, CCK-8 assay, flow cytometry test and Transwell assay were used to compare the cell biological activity between the two groups. Results: The expression level of miR-147 in glioma tissue was significantly lower than that in paratumor tissue, and compared with NC group, the proliferation and invasion ability of miR-147 mimics group were decreased, but the apoptosis rate was increased. Conclusion: There is a low expression of miR-147 in glioma tissues. Overexpression of miR-147 can inhibit the proliferation and invasion of glioma cells and induce apoptosis of glioma cells, which plays an anti-cancer role.

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备注/Memo: 山西省基础研究计划项目(自然) (编号: 2015011095)

更新日期/Last Update: 1900-01-01