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恶性肿瘤的癌变原理研究专栏

miR-149促进鼻咽癌细胞侵袭和上皮-间质转变

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摘要:

目的：探讨miR-149在鼻咽癌中的功能和机制。方法：Real-time PCR和2-△△Ct 计算方法验证miR-149在鼻咽癌细胞系中的表达，分别应用MTT实验、划痕实验和transwell迁移实验分析miR-149对鼻咽癌细胞的增殖、迁移和侵袭功能的影响。 Western印迹检测E-cadherin的变化。结果：相对于正常鼻咽上皮细胞NP69， miR-149在5-8F和6-10B鼻咽癌细胞系中表达增高。MTT实验、划痕实验和transwell实验显示miR-149能够促进鼻咽癌细胞的增殖、迁移和侵袭。Western印迹证实miR-149能够降低E-cadherin的表达；反之，抑制miR-149能抑制鼻咽癌细胞的增殖、迁移和侵袭转移能力。结论：miR-149通过调节细胞上皮-间质转变在鼻咽癌的侵袭转移中发挥重要作用。

关键词： miR-149；鼻咽癌；迁移；侵袭转移；上皮-间质转变

miR-149 promotes epithelial-mesenchymal transition and invasion in nasopharyngeal carcinoma cells

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Abstract:

ObjectiveTo investigate the function and mechanism of miR-149 in nasopharyngeal carcinoma (NPC).MethodsThe expression of miR-149 was examined by real-time PCR and calculated by 2-Ct method. The cell proliferation was analyzed by MTT assay. The cell migration and invasion were shown by the wound healing assay and transwell migration assay, and the expression of E-cadherin was detected by Western blot. ResultsThe expression of miR-149 was higher in NPC cell lines 5-8F and 6-10B than that in normal immortalized nasopharyngeal epithelial NP69. MTT assay showed that miR-149 promoted the proliferation of NPC cell lines. The wound healing assay showed miR-149 promoted the mobility and invasion of NPC cell lines. Inhibition of miR-149 reduced the ability of NPC cell lines to proliferate and invade. miR-149 downregulated the expression of E-cadherin, whereas antagomir which mediated knockdown of miR-149 significantly upregulated the expression of E-cadherin. ConclusionmiR-149 might be involved in the invasion and metastasis of NPC through regulation of epithelial-mesenchymal transition (EMT).

Keywords: miR-149 NPC cell mobility invasion and metastasis epithelial-mesenchymal transition

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