

mi R-221在结直肠癌中的表达及意义

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Expression Pattern and Significance of microRNA-221 in Colorectal Carcinoma

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- 摘要
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摘要 目的探讨micorRNA-221(miR-221)在结直肠癌与癌旁组织中差异表达状况及其与临床病理特征之间的关系。方法选取南方医院经手术切除的原发性结直肠癌标本30例, 常规抽提肿瘤及对照癌旁组织中总RNA, 应用Real-time RT-PCR检测标本中miR-221表达状况, 并以Northern blot进行验证。结果30例结直肠癌与癌旁组织相比, miR-221表达明显上调(2.041 ± 1.401 vs. 0.806 ± 0.341), 差异具有统计学意义($P < 0.01$), 且Real-time RT-PCR与Northern blot检测结果具有高度相关性($r^2 = 0.948$, $P < 0.01$); miR-221表达水平与肿瘤TNM分期($P = 0.032$)以及浸润深度($P = 0.021$)有关。结论miR-221在结直肠癌中表达上调并可能参与了结直肠癌的发生发展, miR-221有望成为结直肠癌患者预后判断的潜在标志物; Real-time RT-PCR相比较Northern blot是一种较精确的miRNA定量检测方法, 具有样本需求量小、操作流程简化、高效性等优点。

关键词: 结直肠癌 microRNA-221 Real-time RT-PCR Northern blot

Abstract: ObjectiveTo investigate the microRNA-221 (miR-221) expression pattern and relationship with clinicopathological features in colorectal carcinoma. MethodsTotal RNAs of thirty colorectal carcinoma and adjacent non-tumorous specimens, from Nanfang Hospital were isolated. The miR-221 expression was detected by real-time RT-PCR and Northern-blot analysis respectively. The relationship between the expression of miR-221 and clinicopathological features was analyzed. ResultsThe expression of miR-221 was significantly up-regulated in colorectal carcinoma than that in the adjacent non-tumorous tissues (2.041 ± 1.401 vs. 0.806 ± 0.341 , $P < 0.01$). The result was confirmed by Northern blot analysis, and a significant positive correlation between two detective methods was found ($r^2 = 0.948$, $P < 0.01$). Moreover, miR-221 expression was positively related to advanced TNM stage ($P = 0.032$) and local invasion ($P = 0.021$). ConclusionThe over-expressed miR-221 might play a role in the development and progression of colorectal carcinoma, as a biomarker for prognosis. The real-time RT-PCR assay was an accurate, rapid and less-expensive method compared with routine Northern blot analysis.

Key words: Colorectal carcinoma microRNA-221 Real-time RT-PCR Northern blot

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