

RNA结合蛋白QKI-5在肾透明细胞癌中的表达及临床意义

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Title: Expression and clinical significance of QKI-5 in clear cell renal cell carcinoma

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关键词: RNA 结合蛋白QKI-5; 肾透明细胞癌; 预后

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摘要: 目的: 比较QKI-5在肾透明细胞癌 (clear cell renal cell carcinoma, ccRCC) 及癌旁组织中的表达水平, 并分析其表达水平与临床病理特征及预后之间的关系。方法: 收集68例经手术切除的肾透明细胞癌及相应的癌旁组织标本, 提取标本的总RNA, 经反转录获得cDNA, 并通过实时荧光定量PCR(qRT-PCR)方法检测QKI-5的表达水平, 利用统计学方法分析其表达量与患者临床病理特征及预后之间的关系。结果: 68例组织标本中有49例 (72.06%) 癌组织的QKI-5表达水平降低, 统计学分析表明QKI-5表达水平的降低和肿瘤的T分期及病理G分级升高相关。Kaplan-Meier生存分析显示, QKI-5高表达的肾癌患者总生存期优于低表达者 (P=0.009)。Cox多因素分析显示QKI-5表达水平降低是影响患者预后的独立不良因子。结论: QKI-5在肾透明细胞癌组织中低表达, QKI-5低表达和肿瘤的T分期及病理G分级升高相关, 与肾透明细胞癌不良预后有关。

Abstract: Objective: To compare the expression level of QKI-5 between clear cell renal cell carcinoma (ccRCC) and adjacent tissues and to analyze the relationship between the expression level of QKI-5 and the clinicopathology, and to investigate the association of QKI-5 and prognosis in patients with ccRCC. Methods: Through quantitative real-time polymerase chain reaction (qRT-PCR), we determined the expression of QKI-5 in 68 cases of ccRCC tissues and adjacent tissues and we analysed the relationship between QKI-5 expression and clinicopathology by paired t test. Kaplan-Meier method and multivariate survival analyses were performed to identify the relationship between QKI-5 expression and prognosis. Results: QKI-5 was down-regulated in ccRCC tissues (72.06%) and the QKI-5 expression in ccRCC tissues was correlated with T stage and G grade. Patients with higher QKI-5 expression exhibited better prognosis than those with lower QKI-5 expression (P=0.009). In multivariate analysis, QKI-5 expression was positively associated with improved survival. Conclusion: QKI-5 was inhibited in ccRCC, and low QKI-5 expression was associated with poor prognosis.

参考文献/REFERENCES

- [1] Scelo G, Hofmann JN, Banks RE, et al. International cancer seminars: A focus on kidney cancer [J]. *Annals of Oncology*, 2016, 27(8): 1382-1385.
- [2] Znaor A, Lortet-Tieulent J, Laversanne M, et al. International variations and trends in renal cell carcinoma incidence and mortality [J]. *European Urology*, 2015, 67(3): 519-530.
- [3] Lu Shiyang, Zhan Yunhong, Chen Xiaonan, et al. Diagnosis and prognosis of renal cell carcinoma with venous tumor thrombus [J]. *Modern Oncology*, 2017, 25(24): 4022-4026. [芦诗洋, 詹运洪, 陈小楠, 等. 肾癌伴静脉癌栓的诊治与预后分析 [J]. *现代肿瘤医学*, 2017, 25(24): 4022-4026.]
- [4] Belsante M, Darwish O, Youssef R, et al. Lymphovascular invasion in clear cell renal cell carcinoma-association with disease-free and cancer-specific survival [J]. *Urologic Oncology*, 2014, 32(1): 23-28.
- [5] Wurth L, Gebauer F. RNA-binding proteins, multifaceted translational regulators in cancer [J]. *Biochimica*

et Biophysica Acta, 2015, 1849(7): 881-886.

[6]Feracci M, Foot J, Dominguez C.Structural investigations of the RNA-binding properties of STAR proteins [J] .Biochemical Society Transactions, 2014, 42(4): 1141-1146.

[7]Darbelli L, Richard S.Emerging functions of the Quaking RNA-binding proteins and link to human diseases [J] .Wiley Interdisciplinary Reviews RNA, 2016, 7(3): 399-412.

[8]Bai Y, Li S, Jia Z, et al.Adjuvant therapy for locally advanced renal cell carcinoma: A meta-analysis and systematic review [J] .Urologic Oncology, 2018, 36(2): 79.e1-79.e10.

[9]Pierorazio PM, Johnson MH, Patel HD, et al.Management of renal masses and localized renal cancer: Systematic review and meta-analysis [J] .The Journal of Urology, 2016, 196(4): 989-999.

[10]Hayakawa-Yano Y, Suyama S, Nogami M, et al.An RNA-binding protein, Qki5, regulates embryonic neural stem cells through pre-mRNA processing in cell adhesion signaling [J] .Genes Dev, 2017: 1910-1925.

[11]Zong FY, Fu X, Wei WJ, et al.The RNA-binding protein QKI suppresses cancer-associated aberrant splicing [J] .PLoS Genetics, 2014, 10(4): e1004289.

[12]Li F, Yi P, Pi J, et al.QKI5-mediated alternative splicing of the histone variant macroH2A1 regulates gastric carcinogenesis [J] .Oncotarget, 2016, 7(22): 32821-32834.

[13]Zhao Y, Zhao QL, Ma J, et al.Effect of RNA binding protein of QKI-5 on breast cancer cell MCF-7 of proliferation [J] .Progress in Modern Biomedicine, 2017, 17(25): 4816-4819. [赵易, 赵庆丽, 马骥, 等.RNA结合蛋白QKI-5对乳腺癌细胞MCF-7增殖的影响研究 [J] .现代生物医学进展, 2017, 17(25): 4816-4819.]

[14]Zhao Y, Zhang G, Wei M, et al.The tumor suppressing effects of QKI-5 in prostate cancer: A novel diagnostic and prognostic protein [J] .Cancer Biology & Therapy, 2014, 15(1): 108-118.

[15]Cancer Genome Atlas Research N.Comprehensive molecular characterization of clear cell renal cell carcinoma [J] .Nature, 2013, 499(7456): 43-49.

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