

论著

BRAF基因突变与甲状腺乳头状癌的相关性

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摘要:

目的: 探讨BRAF基因突变与甲状腺乳头状癌的相关性。**方法:** 采用PCR和测序技术,对73例散发的甲状腺乳头状癌患者和16例甲状腺瘤患者组织BRAF基因突变进行筛查。**结果:** 甲状腺乳头状癌组中42例存在突变;而在甲状腺瘤组中未发现突变。BRAF突变与甲状腺乳头状癌的淋巴转移以及临床分期比较,差异有统计学意义($P<0.05$)。**结论:** BRAF基因突变与甲状腺乳头状癌发生及其淋巴结转移、临床分期相关。

关键词: BRAF 基因突变 甲状腺乳头状癌

BRAF mutation and papillary thyroid cancer

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Abstract:

Objective: To explore the association between BRAF mutations and papillary thyroid cancer. **Methods:** BRAF gene mutations in 73 cases of papillary thyroid cancer and 16 cases of thyroid gland benign tumor were detected by PCR and sequencing technology. **Results:** We found 42 instances of BRAF mutations in 73 cases of thyroid cancer. However, no mutation was found in tissues from benign thyroid tumors. There were significant correlations between BRAF mutation and lymph node metastasis, and between BRAF mutation and the clinical stage of papillary thyroid cancer ($P<0.05$). **Conclusion:** The mutation of BRAF is associated with the pathogenesis, lymph node metastasis, and clinical stage of papillary thyroid cancer.

Keywords: BRAF gene mutation papillary thyroid cancer

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参考文献:

1. Davies H, Bignell GR, Cox C, et al. Mutations of the BRAF gene in human cancer [J]. Nature,2002, 417(6892): 949-954.
2. Mebratu Y, Tesfaigzi Y. How ERK1/2 activation controls cell proliferation and cell death: Is subcellular localization the answer? [J]. Cell Cycle,2009, 8(8): 1168-1175.
3. DeLuca AM, Srinivas A, Alani RM. BRAF kinase in melanoma development and progression [J]. Expert Rev Mol Med,2008, 10(1): 3-6.
4. Xing M. BRAF mutation in thyroid cancer [J]. Endocr Relat Cancer,2005, 12(2): 245-262.
5. Towbin H, Staehelin T, Gordon J. Electrophoretic transfer of proteins from polyacrylamide gels to nitrocellulose sheets: procedure and some applications [J]. Biotechnology, 1992, 24(2): 145-149.
6. Witek MA, Llopis SD, Wheatley A, et al. Purification and preconcentration of genomic DNA from whole cell lysates using photoactivated polycarbonate (PPC) microfluidic chips [J]. Nucleic Acids Res,

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- 2006, 34(1): 74-80.
7. Kebebew E, Weng J, Bauer J, et al. The prevalence and prognostic value of BRAF mutation in thyroid cancer [J]. Ann Surg, 2007, 246(3): 466-470.
 8. Garcia-Rostan G, Zhao H, Camp RL, et al. Ras mutations are associated with aggressive tumor phenotypes and poor prognosis in thyroid cancer [J]. J Clin Oncol, 2003, 21(17): 3226-3235.
 9. Lee JH, Lee ES, Kim YS. Clinicopathologic significance of BRAF V600E mutation in papillary carcinomas of the thyroid: a meta-analysis [J]. Cancer, 2007, 110(1): 38-46.
 10. Xing M, Westra WH, Tufano RP, et al. BRAF mutation predicts a poorer clinical prognosis for papillary thyroid cancer [J]. J Clin Endocrinol Metab, 2005, 90(12): 6373-6379.
 11. Costa AM, Herrero A, Fresno MF, et al. BRAF mutation associated with other genetic events identifies a subset of aggressive papillary thyroid carcinoma [J]. Clin Endocrinol, 2008, 68(4): 618-634.
 12. Garcia-Rostan G, Costa AM, Pereira-Castro I, et al. Mutation of the PIK3CA gene in anaplastic thyroid cancer [J]. Cancer Res, 2005, 65(22): 10199-10207.
 13. Sieben NL, Macropoulos P, Roemen GM, et al. In ovarian neoplasms, BRAF, but not KRAS, mutations are restricted to low-grade serous tumours [J]. J Pathol, 2004, 202(3): 336-340.
 14. Fugazzola L, Mannavola D, Cirello V, et al. BRAF mutations in an Italian cohort of thyroid cancers [J]. Clin Endocrinol (Oxf), 2004, 61(2): 239-243.
 15. Fugazzola L, Puxeddu E, Avenia N, et al. Correlation between B-RAFV600E mutation and clinicopathologic parameters in papillary thyroid carcinoma: data from a multicentric Italian study and review of the literature [J]. Endocr Relat Cancer, 2006, 13(2): 455-464.
 16. Kim TY, Kim WB, Song JY, et al. The BRAF mutation is not associated with poor prognostic factors in Korean patients with conventional papillary thyroid microcarcinoma [J]. Clin Endocrinol (Oxf), 2005, 63(5): 588-593.

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[1]. 中南大学学报(医学版), 2006, 31(03): 414-416

3. 吕红斌, 周赟, 胡建中, 雷光华, 朱敏, 李康华. 骨关节炎关节软骨中软骨细胞线粒体DNA缺失突变的分析[J]. 中南大学学报(医学版), 2006, 31(05): 640-644

4. 武明花, 李小玲, 黄琛, 唐运莲, 张祖平, 李桂源. LRRC4基因在脑胶质瘤细胞系中表达缺失[J]. 中南大学学报(医学版), 2007, 32(02): 231-234

5. 王光平, 陈方平, 付敢. 鼻咽癌细胞系IκBα mRNA表达及其DNA序列分析[J]. 中南大学学报(医学版), 2007, 32(05): 758-764

6. 王俊岭¹, 沈璐^{1,2}, 雷立芳^{1,2}, 徐倩¹, 周洁¹, 刘玉涛¹, 关文娟¹, 潘乾³, 夏昆³, 唐北沙^{1,2,3}, 江泓^{1,2}. 中国大陆脊髓小脑性共济失调家系和散发病例的

最新基因突变分析[J]. 中南大学学报(医学版), 2011, 36(6): 482-

7. 罗育林; 程瑞雪; 冯德云; 付春燕; 沈明; .MDM2蛋白过度表达致p53功能失活在原发性肝细胞癌发生中的作用[J]. 中南大学学报(医学版), 2001, 26(1): 13-

8. 邓昊; 唐炜立; 潘乾; 周智广; 雷闽湘; 陈勇; 邓汉湘; 夏家辉; .中国汉族迟发型2型糖尿病与胰高血糖素受体基因Gly40Ser突变的关系[J]. 中南大学学报(医学版), 2001, 26(4): 291-

9. 门美超, 薛晋杰, 蒋璐, 王鸿涵, 潘乾, 冯永. 一种新的高效快速检测遗传性耳聋的方法[J]. 中南大学学报(医学版), 2011, 36(11): 1079-1084