

# 甲状腺乳头状癌组织中LGR5和Cath-D的表达及临床意义

《现代肿瘤医学》[ISSN:1672-4992/CN:61-1415/R] 期数: 2018年23期 页码: 3756-3759 栏目: 论著 (头颈肿瘤) 出版日期: 2018-11-01

**Title:** The expression of LGR5 and Cath-D in thyroid papillary carcinoma and their clinical significance

**作者:** 路俊波

襄阳市中医医院检验科，湖北 襄阳 441000

**Author(s):** Lu Junbo

Department of Clinical Laboratory, Xiangyang Hospital of Traditional Chinese Medicine, Hubei Xiangyang 441000, China.

**关键词:** 甲状腺乳头状癌; G蛋白偶联受体; 组织蛋白酶-D; 侵袭; 转移

**Keywords:** thyroid papillary carcinoma; G protein-coupled receptor; Cathepsin-D; invasion; metastasis

**分类号:** R736.1

**DOI:** 10.3969/j.issn.1672-4992.2018.23.013

**文献标识码:** A

**摘要:** 目的: 比较甲状腺乳头状癌组织与癌旁组织中G蛋白偶联受体 (G protein-coupled receptor, LGR5) 及组织蛋白酶-D (Cathepsin-D, Cath-D) 的表达差异, 分析它们的表达与各临床病理因素之间的关系。方法: 采用免疫组化的方法检测LGR5和Cath-D在67例甲状腺乳头状癌与癌旁正常甲状腺组织中的表达, 卡方检验分析它们的表达与性别、年龄、肿瘤大小、淋巴结阳性、局部包膜侵犯、TNM分期等临床病理因素的相关性。结果: 甲状腺乳头状癌组织中LGR5和Cath-D阳性表达率均明显高于癌旁正常组织, 差异具有统计学意义 ( $P<0.05$ ) ; 在有淋巴结转移和局部包膜侵犯组织中, LGR5、Cath-D阳性表达率明显高于无淋巴结转移者和无局部侵犯者 ( $P<0.05$ ) ; 不同肿瘤大小、不同TNM分期的患者甲状腺乳头状癌组织中LGR5及Cath-D的阳性表达率均有显著差异 ( $P<0.05$ ), 同时不同性别甲状腺乳头状癌组织中LGR5阳性表达率也有显著差异, 而不同年龄LGR5及Cath-D的阳性表达率比较却无显著差异 ( $P>0.05$ ) ; 相关分析显示LGR5及Cath-D的表达无明显相关性。结论: 甲状腺乳头状癌组织中LGR5和Cath-D的高表达与肿瘤的侵袭和转移密切相关, 通过检测它们的表达, 对甲状腺乳头状癌的生物学行为及预后的判断可能具有一定的临床意义。

**Abstract:** Objective: To study the relationship between the expression of LGR5 and Cath-D in papillary thyroid carcinoma and clinicopathological parameters. Methods: The expression of LGR5 and Cath-D was detected in 67 cases of thyroid papillary carcinoma and paired adjacent normal thyroid tissues by immunohistochemical staining. In different clinicopathological parameters such as gender, age, tumor size, lymph node metastasis(LNM), local invasion, TNM staging, LGR5 and Cath-D positive expression rate were analyzed. Results: The positive expression rates of LGR5 and Cath-D in papillary thyroid carcinoma were significantly higher than those in adjacent normal tissues ( $P<0.05$ ). The positive expression rate of LGR5 and Cath-D in patients with local invasion and LNM was significantly higher than those without local invasion and LNM ( $P<0.05$ ). There was also a significant difference in the positive expression rates of LGR5 between female and male patients, but there was no significant difference in expression of LGR5 and Cath-D at different ages ( $P>0.05$ ). Conclusion: The expression of LGR5 and Cath-D in thyroid papillary carcinoma is closely associated with local invasion and LNM, The LGR5 and Cath-D may be good marker for poor prognosis of papillary thyroid carcinoma.

## 参考文献/REFERENCES

- [1] Haugen BR, Alexander EK, Bible KC, et al. 2015 American thyroid association management guidelines for adult patients with thyroid nodules and differentiated thyroid cancer: The american thyroid Association guidelines task force on thyroid nodules and differentiated thyroid cancer [J]. Thyroid, 2016, 26(1): 1-133.
- [2] Feng Hongfang, Chen Chuang, Sun Shengrong, et al. 1 585 cases of thyroid cancer clinical and pathological characteristics and summary analysis [J]. Chinese Journal of Clinical Oncology, 2015, 42(2): 77-81. [冯红芳, 陈创, 孙圣荣, 等. 1 585例甲状腺癌的临床病理特点及总结分析 [J]. 中国肿瘤临床, 2015,

- 42 (2) : 77-81. ]
- [3] Yue Changli, Zhang Yong, Xing Li, et al. The relationship between clinicopathological features and lymph node metastasis in papillary thyroid carcinoma [J]. Chinese Journal of Medicine, 2014, 94 (46): 3637-3641. [岳常丽, 张勇, 邢莉, 等. 甲状腺乳头状癌临床病理学特征与淋巴结转移的相关性 [J]. 中华医学杂志, 2014, 94 (46) : 3637-3641. ]
- [4] Al-Kharusi MR, Smartt HJ, Greenhough A, et al. LGR5 promotes survival in human colorectal adenoma cells and is upregulated by PGE2: implications for targeting adenoma stem cells with NSAIDs [J]. Carcinogenesis, 2013, 34(5): 1150-1157.
- [5] Xu Changlong, Chen Huile, Wang Jianzhang, et al. Expression of cathepsin D, H and L in hepatocellular carcinoma [J]. Chinese Journal of Digestion, 2011, 31(2): 77-81. [徐昌隆, 陈辉乐, 王建嶂, 等. 肝细胞肝癌中组织蛋白酶D、H和L的表达 [J]. 中华消化杂志, 2011, 31 (2) : 77-81. ]
- [6] Deng Weiye. Adolescent thyroid cancer prognostic factors [J]. Journal of General Surgery, 2015, 30(2): 115-118. [邓维叶.青少年甲状腺癌患者预后因素分析 [J].中华普通外科杂志, 2015, 30(2): 115-118.]
- [7] Bai Yanhua, Xue Weicheng. Histological features of thyroid papillary carcinoma, the relationship between molecular marker expression and clinical prognosis [J]. Chinese Journal of Pathology, 2014, 43(5): 341-343. [白艳花, 薛卫成. 甲状腺乳头状癌的组织学特点、分子标志物表达与临床预后的关系 [J]. 中华病理学杂志, 2014, 43 (5) : 341-343. ]
- [8] Ruffner H, Sprunger J, Charlat O, et al. R-Spondin potentiates Wnt/β-catenin signaling through orphan receptors LGR4 and LGR5 [J]. PLoS One, 2012, 7: e40976.
- [9] Zheng Xiangqian, Dong Li, Gao Ming. Advances in the treatment of thyroid malignancies [J]. Chinese Journal of General Surgery, 2016, 31(2): 175-176. [郑向前, 董莉, 高明. 甲状腺恶性肿瘤治疗研究进展 [J]. 中华普通外科杂志, 2016, 31 (2) : 175-176. ]
- [10] Li Yueya, Li Kai. Wnt/β-Catenin signaling pathway on tumor stem cells [J]. Shandong Pharmaceutical, 2016, 56(9): 98-100. [李月雅, 李凯. Wnt/β-Catenin信号通路对肿瘤干细胞作用的研究进展 [J]. 山东医药, 2016, 56 (9) : 98-100. ]
- [11] Fu Yan, Liu Zhisu, Jiang Congqing, et al. Expression and significance of intestinal stem cell marker gene Lgr5 in colorectal cancer [J]. Chinese Journal of Experimental Surgery, 2011, 28(7): 1142-1144. [付焱, 刘志苏, 江从庆, 等. 肠道干细胞标记基因Lgr5在结直肠癌中的表达及其意义 [J]. 华实验外科杂志, 2011, 28 (7) : 1142-1144. ]
- [12] Chen Q, Cao HZ, Zheng PS. LGR5 promotes the proliferation and tumor formation of cervical cancer cells through the Wnt/beta-catenin signaling pathway [J]. Oncotarget, 2014, 5(19): 9092-9105.
- [13] Wang Pan, Jiang Zhigang, Zheng Jiashen, et al. Application of serum squamous cell carcinoma antigen, cathepsin D and carbohydrate antigen 125 in the diagnosis and prognosis of cervical squamous cell carcinoma [J]. Chinese Journal of Modern Medicine, 2016, 26(5): 42-47. [王攀, 蒋智钢, 郑家深, 等. 血清鳞状细胞癌抗原、组织蛋白酶D和糖类抗原125检测对宫颈鳞癌诊断及预测转移的应用价值 [J]. 中国现代医学杂志, 2016, 26 (5) : 42-47. ]
- [14] Liu Chi. Expression of cathepsin-D and vascular endothelial growth factor in hepatocellular carcinoma [J]. Chinese Journal of Gerontology, 2012, 32(1): 59-60. [刘驰. 组织蛋白酶-D与血管内皮生长因子在肝细胞癌中的表达 [J]. 中国老年学杂志, 2012, 32 (1) : 59-60. ]

---

**备注/Memo:** -

---

更新日期/Last Update: 1900-01-01