

本期目录 | 下期目录 | 过刊浏览 | 高级检索

[打印本页] [关闭]

论著

Galectin-7和S100A9表达与宫颈鳞癌发生发展的相关性

朱红¹, 刘利¹, 刘欢¹, 吴天聪¹, 伍岳¹, 曾珊¹, 曾亮²

1. 中南大学湘雅医院肿瘤科, 长沙 410008;
2. 湖南省肿瘤医院病理科, 长沙 410013

摘要: 目的: 探讨galectin-7和S100A9表达与宫颈鳞癌发生、发展的关系。方法: 采用免疫组织化学法检测243例宫颈上皮内瘤变(CIN)及宫颈鳞癌标本中galectin-7和S100A9的表达情况, 结合临床病理资料, 分析其与宫颈鳞癌发生、发展的关系。结果: Galectin-7和S100A9在CIN及宫颈鳞癌中表达差异有统计学意义(均P<0.05), galectin-7在正常宫颈组织、CIN I 级、CIN II 级、CIN III 级、宫颈鳞癌中阳性表达率分别为56.7%, 41.9%, 32.0%, 27.3%, 25.0%, 组间比较发现galectin-7在正常宫颈组织与宫颈鳞癌中表达差异有统计学意义(P<0.0045)。S100A9在正常宫颈组织、CIN I 级、CIN II 级、CIN III 级、宫颈鳞癌中阳性表达率分别为80.0%, 77.4%, 48.0%, 27.3%, 20.2%, 组间比较发现S100A9在正常宫颈组织与CIN III 级、正常宫颈组织与宫颈鳞癌、CIN I 级与CIN III 级、CIN I 级与宫颈鳞癌、CIN II 级与宫颈鳞癌中表达差异均有统计学意义(均P<0.0045)。Galectin-7与S100A9在CIN及宫颈鳞癌中表达呈正相关, 但关系较弱($r_s=0.298$, P<0.001)。Galectin-7和S100A9表达均与宫颈鳞癌临床分期、淋巴结转移有关(均P<0.05), 而与年龄、分化程度无关(P≥0.05); galectin-7表达与宫颈鳞癌患者预后有关(P<0.05)。单因素Cox回归分析示国际妇产科联盟(FIGO)分期、淋巴结转移及galectin-7与宫颈鳞癌患者5年生存率有关, 多因素Cox分析进一步验证了这一结果。结论: Galectin-7和S100A9表达与宫颈鳞癌发生、宫颈鳞癌临床分期、淋巴结转移有关, galectin-7表达可能还与宫颈鳞癌患者预后有关。宫颈鳞癌患者长期生存时间与FIGO分期、淋巴结转移及galectin-7的表达有关。

关键词: galectin-7 S100A9 宫颈鳞癌 发展 预后

Expression of galectin-7 and S100A9 and development of cervical squamous carcinoma

ZHU Hong¹, LIU Li¹, LIU Huan¹, WU Tiancong¹, WU Yue¹, ZENG Shan¹, ZENG Liang²

1. Department of Oncology, Xiangya Hospital, Central South University, Changsha 410008;
2. Department of Pathology, Hunan Tumor Hospital, Changsha 410013, China

Abstract: Objective: To observe the correlation between the expression of galectin-7 and S100A9 with the development of cervical squamous carcinoma.

Methods: Immunohistochemical SP staining was used to detect the expression of galectin-7 and S100A9 in 243 patients with cervical intraepithelial neoplasia (CIN) or cervical squamous carcinoma. The association of clinical data with galectin-7 and S100A9 expression was examined.

Results: The expression of galectin-7 and S100A9 in CIN and cervical squamous carcinoma was significantly different (P<0.05). The positive rates of galectin-7 in normal cervical tissues, CIN I, CIN II, CIN III, and cervical squamous carcinoma were 56.7%, 41.9%, 32.0%, 27.3%, and 25.0%, respectively. Statistic analysis found significant difference between the normal cervical tissues and cervical squamous carcinoma (P<0.0045). The positive rates of S100A9 in CIN I, CIN II, CIN III, and cervical squamous carcinoma were 80.0%, 77.4%, 48.0%, 27.3%, and 20.2%. Statistic analysis showed significant difference between the normal tissues and CIN III, the normal cervical tissues and cervical squamous carcinoma, CIN I and CIN III, CIN I and cervical squamous carcinoma, CIN II and cervical squamous carcinoma (P<0.0045). A positive correlation was found between galectin-7 and S100A9 expression in CIN and cervical squamous carcinoma ($r_s=0.298$, P<0.001). Expressions of both galectin-7 and S100A9 in cervical squamous carcinoma were associated with the clinical stage and lymph nodes (P<0.05), but not with patient's age and degree of differentiation (P>0.05). Expression of galectin-7 was associated with the survival rate of patients with cervical squamous carcinoma (P<0.05). Univariate analysis of Cox proportional hazards regression model revealed that the FIGO stage, lymph nodes metastasis, and the expression of galectin-7 were relevant to the 5 year survival rate of patients with cervical squamous carcinoma, which was confirmed by multiple analysis of Cox proportional hazards regression model. Conclusion: Expression of galectin-7 and S100A9 is related with cervical the tumorigenesis of carcinoma, clinical stage, and lymph nodes of cervical squamous carcinoma. Galectin-7 is probably associated with the prognosis. The long-term survival of patients with cervical carcinoma may be associated with FIGO stage, lymph node metastasis, and the expression of galectin-7.

Keywords: galectin-7 S100A9 cervical squamous carcinoma development prognosis

收稿日期 2012-11-29 修回日期 网络版发布日期

扩展功能

本文信息

► Supporting info

► PDF(3816KB)

► [HTML全文]

► 参考文献[PDF]

► 参考文献

服务与反馈

► 把本文推荐给朋友

► 加入我的书架

► 加入引用管理器

► 引用本文

► Email Alert

► 文章反馈

► 浏览反馈信息

本文关键词相关文章

► galectin-7

► S100A9

► 宫颈鳞癌

► 发展

► 预后

本文作者相关文章

► 朱红

► 刘利

► 刘欢

► 吴天聪

► 伍岳

► 曾珊

► 曾亮

PubMed

► Article by ZHU Hong

► Article by LIU Li

► Article by LIU Huan

► Article by WU Tiancong

► Article by WU Yue

► Article by ZENG Shan

► Article by ZENG Liang

基金项目：

国家自然科学基金(81172470); 湖南省自然科学基金(11JJ5080); 湖南省科技计划项目(2012SK3195)。

通讯作者：曾珊, Email: zengshan2000@yahoo.com

作者简介：朱红，博士，主任医师，主要从事恶性肿瘤放化疗的研究。

作者Email: zengshan2000@yahoo.com

参考文献：

1. Kuwabara I, Kuwabara Y, Yang RY, et al. Galectin-7(PIG1) exhibits pro-apoptotic function through JNK activation and mitochondrial cytochrome c release [J]. *J Biol Chem*, 2002, 277(5): 3487-3497.
2. Li CS, Chen HY, Ding F, et al. A novel p53 target gene, S100A9, induces p53-dependent cellular apoptosis and mediates the p53 apoptosis pathway [J]. *Biochem J*, 2009, 422(2): 363-372.
3. Inagaki Y, Higashi K, Kushida M, et al. Hepatocyte growth factor suppresses profibrogenic signal transduction via nuclear export of Smad3 with galectin-7 [J]. *Gastroenterology*, 2008, 134(4): 1180-1190.
4. Zhu H, Pei HP, Zeng S, et al. Profiling protein markers associated with the sensitivity to concurrent chemoradiotherapy in human cervical carcinoma [J]. *J Proteome Res*, 2009, 8(8): 3969-3976.
5. Shadeo A, Chari R, Vatcher G, et al. Comprehensive serial analysis of gene expression of the cervical transcriptome [J]. *BMC Genomics*, 2007, 8: 142.
6. Bernerd F, Sarasin A, Magnaldo T. Galectin-7 overexpression is associated with the apoptotic process in UVB-induced sunburn keratinocytes [J]. *Proc Natl Acad Sci USA*, 1999, 96(20): 11329-11334.
7. Ueda S, Kuwabara I, Liu FT. Suppression of tumor growth by galectin-7 gene transfer [J]. *Cancer Res*, 2004, 64(16): 5672-5676.
8. Kopitz J, Andre S, von Reitzenstein C, et al. Homodimeric galectin-7(P53-induced gene 1) is a negative growth regulator for human neuroblastoma cells [J]. *Oncogene*, 2003, 22(40): 6277-6288.
9. Li C, Chen H, Ding F, et al. A novel p53 target gene, S100A9, induces p53-dependent cellular apoptosis and mediates the p53 apoptosis pathway [J]. *Biochem J*, 2009, 422(2): 363-372.
10. Luo AP, Kong JP, Hu GX, et al. Discovery of Ca²⁺-relevant and differentiation-associated genes downregulated in esophageal squamous cell carcinoma using cDNA microarray [J]. *Oncogene*, 2004, 23(6): 1291-1299.
11. Srinivas P, Gopinath G, Banerji A, et al. Plumbagin induces reactive oxygen species, which mediate apoptosis in human cervical cancer cells [J]. *Mol Carcinog*, 2004, 40(4): 201-211.
12. Ghavami S, Kerkhoff C, Los M, et al. Mechanism of apoptosis induced by S100A8/A9 in colon cancer cell lines: the role of ROS and the effect of metal ions [J]. *J Leukoc Biol*, 2004, 76(1): 169-175.
13. Ghavami S, Kerkhoff C, Chazin WJ, et al. S100A8/9 induces cell death via a novel, RAGE-independent pathway that involves selective release of Smac/DIABLO and Omi/HtrA2 [J]. *Biochim Biophys Acta*, 2008, 1783(2): 297-311.
14. Yui S, Nakatani Y, Mikami M. Calprotectin(S100A8/S100A9), an inflammatory protein complex from neutrophils with a broad apoptosis-inducing activity [J]. *Biol Pharm Bull*, 2003, 26(6): 753-760.
15. Qin FJ, Song Y, Li ZJ, et al. S100A8/A9 induces apoptosis and inhibits metastasis of CasKi human cervical cancer cells [J]. *Pathol Oncol Res*, 2010, 16(3): 353-360.
16. Mulligan KT, Wang H, Shaw JA, et al. The tumour-suppressor function of breast myoepithelial cells is mediated in part through regulation of S100A9 [J]. *Breast Cancer Res Treatment*, 2005, 94(Supple 1): S285.
17. Hoffman B, Liebermann DA. Molecular controls of apoptosis: differentiation/growth arrest primary response genes, proto oncogenes, and tumor suppressor genes as positive & negative modulators [J]. *Oncogene*, 1994, 9(7): 1807-1812.

本刊中的类似文章

1. 洪继东, 廖遇平, 袁君, 魏瑞, 王学伟, 毛海娇. 44例儿童青少年鼻咽癌临床和预后分析 [J]. 中南大学学报(医学版), 2008, 33(08): 723-726
2. 黄晓春, 李晓林, 黄然欣, 金香淑. 73例外周T细胞淋巴瘤患者临床特征及预后分析 [J]. 中南大学学报(医学版), 2008, 33(02): 151-155
3. 万克青; 汪清海; . 重型肝炎继发细菌感染的预后分析[J]. 中南大学学报(医学版), 2002, 27(4): 343-
4. 魏启幼; 吴元清; 范松青; 周金平; .MMP-2,MMP-9,TIMP-1和TIMP-2在肝癌中原位表达[J]. 中南大学学报(医学版), 2003, 28(3): 212-
5. 陈晋湘, 陈子华. 左半大肠癌并急性肠梗阻的外科治疗及预后分析 [J]. 中南大学学报(医学版), 2009, 34(04): 335-339
6. 陈晨1, 尹邦良1, 魏启幼2, 胡建国1, 喻风雷1, 袁运长1, 赵元1. 137例胸腺上皮肿瘤的预后影响因素[J]. 中南大

8. 冯莉娟¹, 张国平², 胡忠良³, 邹益友¹, 陈凤英¹, 张桂英¹, 唐丽安¹. 81例原发性胃肠道淋巴瘤的诊疗分析[J]. 中南大学学报(医学版), 2009, 34(07): 582-588
9. 肖艳华, 易红, 谭潭, 梁婷, 陈主初, 肖志强. 5-杂氮-2'-脱氧胞昔抗白[J]. 中南大学学报(医学版), 2008, 33(04): 344-352
10. 杨杰, 周瑾瑕, 周芝文, 李国良, 杨晓苏. 脑静脉血栓形成的临床特点及预后分析[J]. 中南大学学报(医学版), 2008, 33(04): 365-368
11. James C. M. Chan. 肾病综合征表现的局灶性节段性肾小球硬化的远期预后分析[J]. 中南大学学报(医学版), 2007, 32(06): 931-937
12. 吴芳, 胡春宏, 蒋少艾, 卢放根, 林绵辉, 邓小戈. 赫赛汀联合辅助化疗对人类表皮生长因子受体2阳性早期乳腺癌患者预后影响的Meta分析[J]. 中南大学学报(医学版), 2007, 32(04): 684-689
13. 李萍, 袁盾, 罗万俊. 动态监测动脉血乳酸对心脏手术预后的意义[J]. 中南大学学报(医学版), 2008, 33(12): 1154-1157
14. 陈曙平; 吴登蜀; 赵谢兰; 祝焱; 刘弋; 陈方平. 非霍奇金淋巴瘤282例临床分析[J]. 中南大学学报(医学版), 2003, 28(3): 237-
15. 曹兰琴; 李新国; 黎欣; 张瑜;. 卵巢囊性成熟性畸胎瘤恶变8例分析[J]. 中南大学学报(医学版), 2003, 28(4): 326-