

Livin蛋白和STAT3蛋白在支气管肺癌中的表达及临床意义

《现代肿瘤医学》[ISSN:1672-4992/CN:61-1415/R] 期数: 2019年03期 页码: 420-424 栏目: 论著 (胸部肿瘤) 出版日期: 2018-12-29

Title: Expression and clinical significance of Livin protein and STAT3 protein in bronchogenic carcinoma

作者: 柴春艳¹; 刘娅萍¹; 王甜¹; 杜洁²; 李雅莉³; 徐邦强¹; 赵媛¹

1.陕西省人民医院西院一病区; 2.健康体检中心, 陕西 西安 710068; 3.西安交通大学第二附属医院呼吸内科, 陕西 西安 710004

Author(s): Chai Chunyan¹; Liu Yaping¹; Wang Tian¹; Du Jie²; Li Yali³; Xu Bangqiang¹; Zhao Yuan¹

1.1st Impatient Area of West Court; 2.The Health Examination Centre, Shaanxi Provincial People's Hospital, Shaanxi Xi'an 710068, China; 3.Department of Respiratory Medicine, the Second Affiliated Hospital, Medical School of Xi'an Jiaotong University, Shaanxi Xi'an 710004, China.

关键词: 支气管肺癌; Livin蛋白; STAT3蛋白; 免疫组织化学

Keywords: bronchogenic carcinoma; Livin protein; STAT3 protein; immunohistochemistry

分类号: R734.2

DOI: 10.3969/j.issn.1672-4992.2019.03.015

文献标识码: A

摘要: 目的: 探讨Livin蛋白和STAT3蛋白在支气管肺癌组织中的表达, 及蛋白表达与临床病理特征的关系。方法: 采用免疫组化二步法 (SP法) 检测在支气管肺癌组织及癌旁病理证实的正常肺组织和肺部良性病变组织中Livin蛋白和STAT3蛋白的表达情况。结果: 肺癌组的Livin蛋白和STAT3蛋白阳性表达率均高于对照组 (均为 $P<0.05$)。男性肺癌患者肺组织、有淋巴结转移肺组织、吸烟指数 ≥ 400 年支的肺癌患者肺组织中Livin蛋白和STAT3蛋白的阳性表达率均较高, 差异有统计学意义 ($P<0.05$)。肺腺癌组织Livin蛋白的阳性表达率显著高于肺鳞癌组织, 差异有统计学意义 ($P=0.009$)。低分化肺癌组织中STAT3蛋白阳性表达率明显高于中分化肺癌组织, 差异有统计学意义 ($P=0.004$)。支气管肺癌患者的年龄、临床分期对Livin蛋白和STAT3蛋白的阳性表达率的影响均无统计学差异 ($P>0.05$)。Livin蛋白与STAT3蛋白的表达呈正相关。结论: Livin蛋白与STAT3蛋白在支气管肺癌组织中过表达, 有望为肿瘤诊断及基因治疗提供新的靶点。Livin蛋白与STAT3蛋白在支气管肺癌组织中表达呈正相关。

Abstract: Objective: To investigate the expression of Livin protein and STAT3 protein in the tissues of lung cancer and their relationship with clinicopathological features. Methods: The protein expression of Livin and STAT3 gene in paraffin specimens of lung cancer and specimens of normal lung tissues were detected by SP immunohistochemistry. Results: The positive expression rate of Livin protein and STAT3 protein in lung cancer group were higher than that in the control group ($P<0.05$). The positive expression rates of Livin protein and STAT3 protein in lung tissue of male lung cancer patients, lymph node metastasis lung tissue, and lung cancer patients with smoking index ≥ 400 were higher, and the differences were statistically significant ($P<0.05$). The expression of Livin protein in lung adenocarcinoma tissues was significantly higher than that in lung squamous cell carcinoma tissues. The differences were significant ($P=0.009$). The positive rate of STAT3 protein in poorly differentiated lung cancer was significantly higher than that in moderate differentiated lung cancer, and the difference was statistically significant ($P=0.004$). Livin protein and STAT3 protein in lung cancer had no obvious relationship with age and clinical stage ($P>0.05$). Livin protein expression was positively related to STAT3 protein expression in primary lung cancer. Conclusion: The overexpression of Livin protein and STAT3 protein in lung cancer tissue is expected to provide a new target for the diagnosis and gene therapy of tumor. The aberrant expression of Livin and STAT3 may play synergetic roles in process of carcinogenesis of lung cancer.

参考文献/REFERENCES

[1] Shi FT, Wang QF. Expression of the inhibitor of apoptosis protein livin and tumor metastasis associated gene in lung cancer and its relationship with clinical features of lung cancer [J]. *Oncology Progress*, 2017, 15(7):

- 794-797. [史芳涛, 王庆锋. 凋亡抑制蛋白基因Livin及肿瘤转移相关基因在肺癌组织中的表达及其与肺癌临床特征的关系分析 [J]. 癌症进展, 2017, 15(7): 794-797.]
- [2]Lin JH, Deng G, Huang Q, et al.KIAP, a novel member of the inhibitor of apoptosis protein family [J]. Biochem Biophys Res Commun, 2000, 279(3): 820-831.
- [3]Barton BE, Karras JG, Murphy TF, et al.Signal transducer and activator of transcription3(stst3)activation in prostate cancer: Direct Stat3 inhibition induces apoptosis in prostate cancer lines [J]. Mol Cancer Ther, 2013, 13(5): 11-20.
- [4]Garcia R, Bowman TL, Niu G, et al.Constitutive activation of Stat3 by the Sre and JAK tyrosine kinases participates in growth regulation of human breast carcinoma cells [J]. Oncogene, 2001, 20(20): 2499-2513.
- [5]Kasof GM, Gomes BC.Livin, a novel inhibitor of apoptosis protein family member [J]. Biol Chem, 2001, 276(5): 3238-3246.
- [6]Chen YS, Huang LP, Li HR, et al.Expressions and clinical significances of SDF-1, CXCR4 and Livin in lung cancer [J]. International Journal of Respiration, 2013, 33(8): 570-571. [陈愉生, 黄丽萍, 李鸿茹, 等.SDF-1、CXCR4在肺癌组织中的表达及其与凋亡抑制蛋白基因Livin的相关性初步探讨 [J]. 国际呼吸杂志, 2013, 33(8): 570-571.]
- [7]Liu J, Bai X, Li YX, et al.Significance of GPRC5A and STAT3 expression in esophageal squamous cell carcinoma [J]. World Chinese Journal of Digestology, 2014, 22(31): 4810-4815.
- [8]Sun ZG, Wang Z.Research advances of STAT3 and primary esophageal squamous cell cancer [J]. Chinese Journal of Cancer Prevention and Treatment, 2010, 10(17): 786-789. [孙志钢, 王洲.STAT3与原发食管鳞癌关系的研究进展 [J]. 中华肿瘤防治杂志, 2010, 10(17): 786-789.]
- [9]Wang X, Crowe PJ, Goldstein D, et al.STAT3 inhibition, a novel approach to enhancing targeted therapy in human cancers (review) [J]. International Journal of Oncology, 2012, 41(4): 1181-1191.
- [10]Zhang H, Zhao M, Zhou Y, et al.Changes and significance of Stat3 expression in lung cancer [J]. Shandong Medical Journal, 2015, 55(25): 54-55. [张辉, 赵敏, 周颖, 等.肺癌组织中Stat3的表达变化及意义 [J]. 山东医药, 2015, 55(25): 54-55.]
- [11]Zhu PC, Sun ZG, Xiao W.Relationship between STAT3 signaling pathway and its target gene VEGF, VEGF-C in patients with non-small cell lung cancer [J]. Chinese Journal of Cancer Prevention and Treatment, 2016, 23(12): 35-37. [朱鹏冲, 孙志钢, 肖伟.非小细胞肺癌组织STAT3信号与靶基因VEGF及VEGF-C关系的研究 [J]. 中华肿瘤防治杂志, 2016, 23(12): 35-37.]
- [12]Dong Qiuxia, Pan Xianying, Shang Chuanxiang, et al.Expression and significance of PD-L1 and p-STAT3 protein in patients with lung adenocarcinoma [J]. Modern Oncology, 2017, 25(24): 4003-4006. [董秋霞, 潘贤英, 尚春香, 等.PD-L1和P-STAT3蛋白在肺腺癌术后组织中的表达及临床意义 [J]. 现代肿瘤医学, 2017, 25(24): 4003-4006.]
- [13]Han AJ, Zong YS, He JH, et al.Expression characteristic of Stat3 and its relation to the expression of Bcl-2 and LMP1 in nasopharyngeal carcinoma [J]. Chin J Cancer Prev Treat, 2013, 12(2): 81-84.
- [14]Yu GT, Bu LL, Zhao YY, et al.Inhibition of mTOR reduce Stat3 and PAI related angiogenesis in salivary gland adenoid cystic carcinoma [J]. Am J Cancer Res, 2014, 4(6): 764-775.
- [15]Reinecke K, Eminel S, Dierck F, et al.The JNK inhibitor XG-102 protects against TNBS-induced colitis [J]. PLoS One, 2012, 7(3): e30985.
- [16]Nishihara H, Kizaka Kondoh, Insel PA, et al.Inhibition of apoptosis in normal and transformed intestinal epithelial cells by cAMP through induction of inhibitor of apoptosis protein (IAP)-2 [J]. Proc Natl Acad Sci USA, 2003, 100(15): 8921-8926.

备注/Memo: -

更新日期/Last Update: 2018-12-29