

本期目录 | 下期目录 | 过刊浏览 | 高级检索

[打印本页] [关闭]

论著

瘦素与p-mTOR 在大肠癌中的表达及临床意义

汪砾¹, 陈健¹, 陈辉¹, 段智¹, 许奇美¹, 韦妹艳¹, 王亮华¹, 钟美佐²

1. 湖南省长沙市第一医院病理科, 长沙 410005;

2. 中南大学湘雅医院肿瘤科, 长沙 410008

摘要:

目的: 探讨瘦素和p-mTOR 蛋白表达与大肠癌发生、发展及其临床病理特征之间的关系。方法: 采用免疫组织化学SP 法检测瘦素、p-mTOR 在40 例正常大肠黏膜, 40 例大肠腺瘤性息肉和108 例大肠癌中的表达。结果: 瘦素在正常大肠黏膜组织、大肠腺瘤性息肉、大肠癌组织中的阳性表达率分别为10%(4/40), 27.5%(11/40), 71.3% (77/108), 各组之间差异有统计学意义($P<0.05$)。p-mTOR 在正常大肠黏膜组织、大肠腺瘤性息肉、大肠癌组织中的阳性表达率分别为2.5%(1/40), 20%(8/40), 61.1%(66/108), 各组之间差异有统计学意义($P<0.05$)。瘦素与p-mTOR 的高表达与大肠癌的浸润深度、临床分期、淋巴结转移、远处转移、分化程度密切相关($P<0.05$), 而与患者的年龄、性别和部位无关($P>0.05$)。大肠癌组织中瘦素与p-mTOR 的表达呈正相关($P<0.01$)。结论: 瘦素与p-mTOR 可能在大肠癌的发生、发展中起相互协同作用, 二者可能作为判断大肠癌预后及指导临床治疗的指标。

关键词: 瘦素 mTOR 大肠癌 免疫组织化学

Expression of leptin and p-mTOR and their clinicopathological significance in human colon carcinoma

WANG Di¹, CHEN Jian¹, CHEN Hui¹, DUAN Zhi¹, XU Qimei¹, WEI Meizuo¹, WANG Lianghua¹, ZHONG Meizuo²

1. Department of Pathology, The First Hospital of Changsha City, Changsha 410005;

2. Department of Tumor, Xiangya Hospital, Central South University, Changsha 410008, China

Abstract:

Objective: To investigate the relationship between the expression of leptin, p-mTOR protein and the pathogenesis, development and clinicopathological features in colon carcinoma.

Methods: The expression of leptin and p-mTOR protein was evaluated by immunohistochemical methods in 40 normal colon mucosas, 40 colon adenomatous polyps and 108 cases of colon carcinomas. The relationship between the staining pattern and clinicopathological features was examined. Results: The positive rates of detection of leptin in normal colon mucosa, adenomatous polyps and colon carcinomas were 10% (4/40), 27.5% (11/40), and 71.3% (77/108), respectively; with significant differences among the three groups ($P<0.05$). The positive rates of p-mTOR protein in the normal colon mucosa, the adenomatous polyps, and the colon carcinomas were 2.5% (1/40), 20% (8/40), and 61.1% (66/108), respectively; with significant differences among the three groups ($P<0.05$). The expression of leptin and p-mTOR proteins were related to invasive depth, TNM stages, lymph node metastasis, distant metastasis and tumor differentiation ($P<0.05$), but not to age, sex, or site ($P>0.05$). In colon carcinoma tissues, leptin expression was positively correlated with p-mTOR expression ($P<0.01$).

Conclusion: Leptin and p-mTOR proteins may play important roles in the occurrence and development of colon carcinoma. The detection of leptin and p-mTOR may be helpful for evaluation of the prognosis of the patient with colon carcinoma.

Keywords: leptin mTOR colon carcinoma immunohistochemistry

收稿日期 2011-11-01 修回日期 网络版发布日期

DOI: 10.3969/j.issn.1672-7347.2012.03.004

基金项目:

湖南省科技厅计划项目(2010SK3179)。

通讯作者: 钟美佐, Email: meizuo_zhong@yahoo.com

作者简介: 汪砾, 博士, 主治医师, 主要从事恶性肿瘤的临床及基础研究

扩展功能

本文信息

► Supporting info

► PDF (790KB)

► [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

► 瘦素

► mTOR

► 大肠癌

► 免疫组织化学

本文作者相关文章

PubMed

参考文献:

1. Parkin DM, Bray F, Ferlay J, et al. Global cancer statistics, 2002 [J]. CA Cancer J Clin, 2005, 55 (2): 74-108.
2. Pischon T, N?thlings U, Boeing H. Obesity and cancer [J]. Proc Nutr Soc, 2008, 67(2): 128-145.
3. Jaffe T, Schwartz B. Leptin promotes motility and invasiveness in human colon cancer cells by activating multiple signal-transduction pathways [J]. Int J Cancer, 2008, 123(11): 2543-2556.
4. Maya-Monteiro CM, Bozza PT. Leptin and mTOR: Partners in metabolism and inflammation [J]. Cell Cycle, 2008, 7(12): 1713-1717.
5. Calle EE, Kaaks R. Overweight, obesity and cancer: epidemiologicalevidence and proposed mechanisms [J]. Nat Rev Cancer, 2004, 4(8): 579-591.
6. FitzGerald AJ, Mandir N, Goodlad RA. Leptin, cell proliferation and crypt fission in the gastrointestinal tract of intravenously fed rats [J]. Cell Prolif, 2005, 38(1): 25-33.
7. Ratke J, Entschladen F, Niggemann B, et al. Leptin stimulates the migration of colon carcinoma cells by multiple signaling pathways [J]. Endocr Relat Cancer, 2010, 17(1): 179-189.
8. Wiedmann MW, Caca K. Molecularly targeted therapy for gastrointestinal cancer [J]. Curr Cancer Drug Targets, 2005, 5(3): 171-193.
9. Sahin F, Kannangai R, Adegbola O, et al. mTOR and p70S6 kinase expression in primary liver neoplasms [J]. Clin Cancer Res, 2004, 10(24): 8421-8425.
10. Bose S, Chandran S, Mirocha JM, et al. The Akt pathway in human breast cancer: a tissue-array-based analysis [J]. Mod Pathol, 2006, 19(2): 238-245.
11. Saucier C, Papavasiliou V, Palazzo A, et al. Use of signal specific receptor tyrosine kinase oncoproteins reveals that pathwaysdownstream from Grb2 or Shc are sufficient for cell transformation and metastasis [J]. Oncogene, 2002, 21(12): 1800-1811.
12. Saito H, Osaki T, Murakami D, et al. Effect of age on prognosis in patients with gastric cancer [J]. ANZ J Surg, 2006, 76(6): 458-461.
13. Robb VA, Karbowniczek M, Klein-Szanto AJ, et al. Activation of the mTOR signaling pathway in renal clear cell carcinoma [J]. J Urol, 2007, 177(1): 346-352.
14. Lang SA, Gaumann A, Koehl GE, et al. Mammalian target of rapamycin is activated in human gastric cancer and serves as a target for therapy in an experimentalmodel [J]. Int J Cancer, 2007, 120(8): 1803-1810.
15. Shan L, Nguyen TB, Totary-Jain H, et al. Leptin-enhanced neointimal hyperplasia is reduced by mTOR and PI3K inhibitors [J]. Proc Natl Acad Sci USA, 2008, 105(48): 19006-19011.
16. Maya-Monteiro CM, Almeida PE, D'Avila H, et al. Leptin induces macrophage lipid body formation by a phosphatidylinositol 3-kinase and mammalian target of rapamycin-dependent mechanism [J]. J Biol Chem, 2008, 283(4): 2203-2210.

本刊中的类似文章

1. 文路; 陈凌; 刘运生; .碱性成纤维细胞生长因子与垂体腺瘤增殖及侵袭能力的关系[J]. 中南大学学报(医学版), 2001, 26(5): 466-
2. 黄谷香; 程瑞雪; 冯德云; 蒋海鹰; 傅春燕; 沈明; .原发性肝细胞癌中p16和cyclin D1蛋白表达及p16突变研究[J]. 中南大学学报(医学版), 2001, 26(6): 527-
3. 黄垂学; 胡守兴; 陈兵; .脑星形细胞瘤中神经细胞黏附分子与PCNA的表达及其关系[J]. 中南大学学报(医学版), 2001, 26(6): 543-
4. 黄小艳; 吴宜林; 刘凤英; 张志胜; .转化生长因子TGF-β1在卵巢上皮性肿瘤中的表达及意义[J]. 中南大学学报(医学版), 2002, 27(1): 26-
5. 唐涛; 罗团连; 黎杏群; 张花先; 梁清华; .脑溢安对脑出血大鼠脑内含铁血红素氧合酶-1的影响[J]. 中南大学学报(医学版), 2002, 27(1): 35-
6. 张花先; 黎杏群; 唐涛; 梁清华; 刘柏炎; 李霞玲; .脑溢安颗粒对脑出血大鼠脑组织bcl-2表达的影响[J]. 中南大学学报(医学版), 2002, 27(1): 38-
7. 肖嵒; 黎杏群; 张花先; .脑溢安颗粒对脑出血大鼠脑内IL-6表达的影响[J]. 中南大学学报(医学版), 2002, 27(2): 123-
8. 张宁; 肖波; 李静; 吴志国; 李国良; 周文斌; 梁静惠; 谢光洁.实验性自身免疫性肌炎中MMP-

- 2,MMP-9,TIMP-1的表达及甲基强的松龙的影响[J]. 中南大学学报(医学版), 2003,28(1): 5-
9. 赵素萍; .TrKA和p75神经营养因子受体在嗅神经母细胞瘤的表达[J]. 中南大学学报(医学版), 2003,28(1): 50-
10. 黄凤英; 林秋华; 方小玲; 张志胜; 王新; .Bcl-2和Bax蛋白在子宫内膜异位症的表达[J]. 中南大学学报(医学版), 2003,28(2): 102-
11. 赵素萍; 王承龙; .血管内皮生长因子在鼻咽癌中的表达及其临床意义[J]. 中南大学学报(医学版), 2003,28(2): 114-
12. 郑晖; 蒋海鹰; 颜亚晖; 冯德云; .内源性生物素对SP免疫组织化学结果的影响[J]. 中南大学学报(医学版), 2003,28(2): 195-
13. 唐瞻贵; 邹萍; 谢晓莉; 姚志刚; 蒋海鹰; .E-cadherin基因蛋白在口腔疣状癌中的表达[J]. 中南大学学报(医学版), 2003,28(3): 206-
14. 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
15. 彭再梅1, 山长婷2, 王惠芳1.肺癌组织中VHL和HIF-1 α 表达及其临床意义[J]. 中南大学学报(医学版), 2009,34(04): 331-334

Copyright by 中南大学学报(医学版)