

肥胖与结直肠癌的相关性研究

《现代肿瘤医学》[ISSN:1672-4992/CN:61-1415/R] 期数: 2019年07期 页码: 1241-1243 栏目: 综述 出版日期: 2019-02-28

Title: Study on the correlation between obesity and colorectal cancer

作者: 夏天一; 翟宇宵; 吴向欣; 崔滨滨

哈尔滨医科大学附属肿瘤医院结直肠外科, 黑龙江 哈尔滨 150081

Author(s): Xia Tianyi; Zhai Yuxiao; Wu Xiangxin; Cui Binbin

Department of Colorectal Cancer, Harbin Medical University Affiliated Cancer Hospital, Heilongjiang Harbin 150081, China.

关键词: 肥胖; 结直肠癌; 机制; 新辅助治疗

Keywords: obesity; colorectal cancer; mechanism; neoadjuvant therapy

分类号: R735.3

DOI: 10.3969/j.issn.1672-4992.2019.07.036

文献标识码: A

摘要: 现今生活和饮食结构的改变, 导致肥胖在正常人群中的患病比重不断增加, 同时结直肠癌 (colorectal cancer, CRC) 在肥胖患者中又具有高发病率, 虽然现已明确肥胖是结直肠癌发生的重要因素, 但其具体的作用机制尚不明了。对于肥胖患者患结直肠癌的预后尚无定论, 而肥胖悖论的提出引发了我们新的探索, 对于患有结直肠癌的肥胖患者其中是否存在一定特异性相似以及其行新辅助治疗的必要性仍需要进一步研究。本文就肥胖与结直肠癌的临床关系以及一些特异性联系作一综述。

Abstract: With the change of structure for life and diet, leading the prevalence of obese is increasing normal population, and colorectal cancer (CRC) has a high incidence in obese patients. Although it is clear that obesity is an important factor in CRC, but the definite mechanism is not clear. The prognosis for obese patients with colorectal cancer have been inconclusive, however, the appearance of obesity paradox causing us to have a new exploration. There is a need for further studies on whether there is a specific similarity between obese patients with colorectal cancer and the need for neoadjuvant therapy. The relationship between obesity and colorectal cancer is discussed in this paper and some specific connections are reviewed.

参考文献/REFERENCES

- [1] Tannenbaum A. Relationship of body weight to cancer incidence [J]. *Arch Pathol*, 1940, 30: 509-517.
- [2] Jayasekara H, English DR, Haydon A, et al. Associations of alcohol intake, smoking, physical activity and obesity with survival following colorectal cancer diagnosis by stage, anatomic site and tumor molecular subtype [J]. *Int J Cancer*, 2018, 142(2): 238-250.
- [3] Moghaddam AA, Woodward M, Huxley R. Obesity and risk of colorectal cancer: A Meta-analysis of 31 studies with 70 000 events [J]. *Cancer Epidemiol Biomarkers Prev*, 2007, 16(12): 2533-2547.
- [4] Ning Y, Wang L, Giovannucci EL. A quantitative analysis of body mass index and colorectal cancer: Findings from 56 observational studies [J]. *Obes Rev*, 2010, 11(1): 19-30.
- [5] Liu P, Ji Y, Yuen T, et al. Blocking FSH induces thermogenic adipose tissue and reduces body fat [J]. *Nature*, 2017, 546(7656): 107-112.
- [6] Huda S, Jordan F, Bray J, et al. Visceral adipose tissue activated macrophage content and inflammatory adipokine secretion is higher in pre-eclampsia than in healthy pregnancy [J]. *Clin Sci*, 2017, 131(13): 1529-1540.
- [7] Aldhahi W. Identification and importance of brown adipose tissue in adult humans-NEJM [J]. *N Engl J Med*, 2009, 360(15): 1509-1517.
- [8] Torres Stone RA, Waring ME, Cutrona SL, et al. The association of dietary quality with colorectal cancer among normal weight, overweight and obese men and women: A prospective longitudinal study in the USA [J]. *BMJ Open*, 2017, 7(6): e015619.
- [9] Park S, Kim Y, Shin HR, et al. Population-attributable causes of cancer in Korea: Obesity and physical inactivity [J]. *PLoS One*, 2014, 9(4): e90871.
- [10] De PG, Silvestris F. Obesity as a major risk factor for cancer [J]. *J Obes*, 2013, 2013(13): 291546.
- [11] Laake I, Thune I, Selmer R, et al. A prospective study of body mass index, weight change, and risk of cancer in the proximal and distal colon [J]. *Cancer Epidemiology Biomarkers Prev*, 2010, 19(6): 1511-1522.

- [12] Samanic C, Chow WH, Gridley G, et al. Relation of body mass index to cancer risk in 362 552 Swedish men [J]. *Cancer Causes Control*, 2006, 17(7): 901-909.
- [13] Hanahan D, Weinberg RA. Hallmarks of cancer: The next generation [J]. *Cell*, 2011, 144(5): 646-674.
- [14] Campbell PT, Newton C, Newcomb PA, et al. Abstract LB-276: Prospective study of body mass index and adult weight change with colorectal cancer survival, overall and by tumor microsatellite instability status [J]. *Cancer Res*, 2014, 74(19 Suppl): LB-276.
- [15] Watanabe T, Kobunai T, Toda E, et al. Distal colorectal cancers with microsatellite instability (MSI) display distinct gene expression profiles that are different from proximal MSI cancers [J]. *Cancer Res*, 2006, 66(20): 9804-9808.
- [16] Ouchi N, Parker JL, Lugus JJ, et al. Adipokines in inflammation and metabolic disease [J]. *Nat Rev Immunol*, 2011, 11(2): 85-97.
- [17] Healy LA, Howard JM, Ryan AM, et al. Metabolic syndrome and leptin are associated with adverse pathological features in male colorectal cancer patients [J]. *Colorectal Dis*, 2012, 14(2): 157-165.
- [18] Yoon KW, Park SY, Kim JY, et al. Leptin-induced adhesion and invasion in colorectal cancer cell lines [J]. *Oncol Rep*, 2014, 31(6): 2493-2498.
- [19] Quintás-Cardama A, Verstovsek S. Molecular pathways: Jak/STAT pathway: Mutations, inhibitors, and resistance [J]. *Clin Cancer Res*, 2013, 19(8): 1933-1940.
- [20] Nigro E, Schettino P, Polito R, et al. Adiponectin and colon cancer: Evidence for inhibitory effects on viability and migration of human colorectal cell lines [J]. *Mol Cell Biochem*, 2018(2): 1-11.
- [21] Sugiyama M, Takahashi H, K Endo H, et al. Adiponectin inhibits colorectal cancer cell growth through the AMPK/mTOR pathway [J]. *Int J Oncol*, 2009, 34(2): 339-344.
- [22] Shehzad A, Iqbal W, Shehzad O, et al. Adiponectin: Regulation of its production and its role in human diseases [J]. *Hormones*, 2012, 11(1): 8-20.
- [23] Dieudonne MN, Bussiere M, Dos SE, et al. Adiponectin mediates antiproliferative and apoptotic responses in human MCF7 breast cancer cells [J]. *Biochem Biophys Res Commun*, 2006, 345(1): 271-279.
- [24] Yamauchi N, Takazawa Y, Maeda D, et al. Expression levels of adiponectin receptors are decreased in human endometrial adenocarcinoma tissues [J]. *Int J Gynecol Pathol*, 2012, 31(4): 352-357.
- [25] Sakellariou S, Fragkou P, Levidou G, et al. Clinical significance of AGE-RAGE axis in colorectal cancer: Associations with glyoxalase-I, adiponectin receptor expression and prognosis [J]. *BMC Cancer*, 2016, 16(1): 174.
- [26] Armstrong H, Bording-Jorgensen M, Dijk S, et al. The complex interplay between chronic inflammation, the microbiome, and cancer: Understanding disease progression and what we can do to prevent it [J]. *Cancers(Basel)*, 2018, 10(3): E83.
- [27] Haywood NJ, Cordell PA, Tang KY, et al. Insulin-like growth factor binding protein 1 could improve glucose regulation and insulin sensitivity through its RGD domain [J]. *Diabetes*, 2017, 66(2): 287-299.
- [28] Yuan J, Yin Z, Tao K, et al. Function of insulin-like growth factor 1 receptor in cancer resistance to chemotherapy [J]. *Oncol Lett*, 2018, 15(1): 41-47.
- [29] Stefano F, Giulietta V, Bob G. Microenvironmental acidosis in carcinogenesis and metastases: New strategies in prevention and therapy [J]. *Cancer Metastasis Rev*, 2014, 33(4): 1095-1108.
- [30] Roberts DL, Dive C, Renehan AG. Biological mechanisms linking obesity and cancer risk: New perspectives [J]. *Annu Rev Med*, 2010, 61: 301-316.
- [31] Roth CL, Kratz M, Ralston MM, et al. Changes in adipose-derived inflammatory cytokines and chemokines after successful lifestyle intervention in obese children [J]. *Metabolism*, 2011, 60(4): 445-452.
- [32] Diaz C, Calderillo G, Marytere H, et al. P-132 the impact of obesity on complete pathologic response to neoadjuvant chemoradiotherapy in rectal cancer patients [J]. *Ann Oncol*, 2016, 27(suppl 2): ii39.
- [33] Park IJ, You YN, Skibber JM, et al. Oncologic and functional hazards of obesity among patients with locally advanced rectal cancer following neoadjuvant chemoradiation therapy [J]. *Am J Clin Oncol*, 2017, 40(3): 277-282.

备注/Memo: -

更新日期/Last Update: 2019-02-28