

血吸虫肠病相关性结直肠癌的研究进展

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Title: Research progress of colorectal cancer with schistosomiasis

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摘要: 日本血吸虫感染曾经是中国较为严重的流行病, 同时也是引起结直肠癌(colorectal cancer, CRC)发生的原因之一。CRC的患者若有血吸虫病感染史, 术前肠道具有血吸虫感染相关的影像学表现, 术后病理证实肿瘤附近有虫卵沉积, 则可定义为血吸虫肠病相关性CRC (colorectal cancer with schistosomiasis, CRCS)。探究血吸虫肠病到CRCS之间演变的炎癌转化机制, 对于改善CRCS预后尤为重要。笔者结合国内外的最新研究报道, 对CRCS发病机制、病理特征以及临床研究进展进行综述, 以期对CRCS防治提供帮助, 亦为炎癌转化研究提供新的思路。

Abstract: Schistosomiasis was once an extremely serious epidemic in China, at the same time, it was also one of the causes of colorectal cancer (CRC). Colorectal cancer patients who had a history of schistosomiasis infection, preoperative imaging findings, the deposit of eggs near the tumor in postoperative pathology, can be defined as colorectal cancer with schistosomiasis (CRCS). It is great important to explore the mechanism of the evolution from schistosomiasis intestinal disease to CRCS and to improve the prognosis of CRCS. In this paper, the authors summarized the up-to-date research progresses on the pathogenesis, pathological characteristics and clinical research progress of CRCS in China and overseas to provide the preventions and treatments of CRCS, and to provide new ideas for the transformation of inflammatory cancer.

参考文献/REFERENCES

- [1] Wang M, Zhang YC, Yang XY, et al. Prognostic analysis of schistosomal rectal cancer [J]. *Asian Pac J Cancer Prev*, 2014, 15(21):9271-9275.
- [2] Feng H, Lu AG, Zhao XW, et al. Comparison of non-schistosomal rectosigmoid cancer and schistosomal rectosigmoid cancer [J]. *World J Gastroenterol*, 2015, 21(23):7225-7232.
- [3] Cao J, Liu WJ, Xu XY, et al. Endoscopic findings and clinicopathologic characteristics of colonic schistosomiasis: A report of 46 cases [J]. *World J Gastroenterol*, 2010, 16(6):723-727.
- [4] Li WC, Pan ZG, Sun YH. Sigmoid colonic carcinoma associated with deposited ova of *Schistosoma japonicum*: A case report [J]. *World J Gastroenterol*, 2006, 12(37):6077-6079.
- [5] Biswas B, Vedant D, Kaushal V, et al. Cases of bowel schistosomiasis presenting as carcinoma colon [J]. *Indian J Pathol Microbiol*, 2015, 58(4):566-567.
- [6] de Laval F, Savini H, Bianche-Valero E, et al. Human schistosomiasis: An emerging threat for Europe [J]. *Lancet*, 2014, 384(9948):1094-1095.
- [7] Williams CD, Grady WM, Zullig LL. Use of NCCN guidelines, other guidelines, and biomarkers for colorectal cancer screening [J]. *J Natl Compr Canc Netw*, 2016, 14(11):1479-1485.
- [8] Siegel RL, Miller KD, Jemal A. Cancer statistics, 2018 [J]. *CA Cancer J Clin*, 2018, 68(1):7-30.
- [9] Nakatani K, Kato T, Okada S, et al. Ascending colon cancer associated with deposited ova of *Schistosoma japonicum* in non-endemic area [J]. *IDCases*, 2016, 6:52-54.
- [10] Wang M, Wu QB, He WB, et al. Clinicopathological characteristics and prognosis of schistosomal colorectal cancer [J]. *Colorectal Dis*, 2016, 18(10):1005-1009.
- [11] H Salim OE, Hamid HK, Mekki SO, et al. Colorectal carcinoma associated with schistosomiasis: A possible causal relationship [J]. *World J Surg Oncol*, 2010, 8:68.
- [12] Gaye AM, Doh K, Thiam I, et al. Schistosomiasis and cancer: A fortuitous association or relationships cause and effect [J]. *Bull Cancer*, 2016, 103(9):806-807.

- [13] Westbrook AM,Szakmary A,Schiestl RH.Mouse models of intestinal inflammation and cancer [J] .Arch Toxicol,2016,90(9):2109-2130.
- [14] Herman AM,Kishe A,Babu H,et al.Colorectal cancer in a patient with intestinal schistosomiasis:A case report from Kilimanjaro Christian Medical Center Northern Zone Tanzania [J] .World J Surg Oncol,2017,15(1):146.
- [15] Witalison EE,Cui X,Causey CP,et al.Molecular targeting of protein arginine deiminases to suppress colitis and prevent colon cancer [J] .Oncotarget,2015,6(34):36053-36062.
- [16] Ye C,Tan S,Jiang L,et al.Endoscopic characteristics and causes of misdiagnosis of intestinal schistosomiasis [J] .Mol Med Rep,2013,8(4):1089-1093.
- [17] Ko DY,Choi SH,Ha SM,et al.The clinical severity score of chronic actinic dermatitis correlates with in vivo photoallergic reactions and the immunologic parameters related to a shift towards Th2 immunity from the Th2/Th1 balanced status in patients with chronic actinic dermatitis [J] .Photodermatol Photoimmunol Photomed,2016,32(4):199-206.
- [18] Zhang M,Gao Y,Du X,et al.Toll-like receptor (TLR) 2 and TLR4 deficiencies exert differential in vivo effects against *Schistosoma japonicum* [J] .Parasite Immunol,2011,33(4):199-209.
- [19] Yang Q,Qiu H,Xie H,et al.A *Schistosoma japonicum* infection promotes the expansion of myeloid-derived suppressor cells by activating the JAK/STAT3 pathway [J] .J Immunol,2017,198(12):4716-4727.
- [20] Pan W,Shen YJ,Liu H,et al.Accumulation of myeloid-derived suppressor cells in the spleen and peripheral blood of *Schistosoma japonicum*-infected mice [J] .Chinese Journal of Parasitology and Parasitic Diseases,2014,32(1):6-11.
- [21] Chen Y,Liu Z,Qian J,et al.Expression difference of DNA mismatch repair gene hMLH1 and hMSH2 between schistosomiasis-associated colorectal cancer and sporadic colorectal cancer [J] .Chinese Journal of Gastrointestinal Surgery,2016,19(1):75-79.
- [22] Koi M,Tseng-Rogenski SS,Carethers JM.Inflammation-associated microsatellite alterations:Mechanisms and significance in the prognosis of patients with colorectal cancer [J] .World J Gastrointest Oncol,2018,10(1):1-14.
- [23] Ruan SL,Wang B,Lu QM,et al.Expression of vascular growth factors in intestinal tissues in colorectal carcinoma patients with schistosomiasis japonica [J] .Chinese Journal of Schistosomiasis Control,2013,25(3):250-254.
- [24] Carja O,MacIsaac JL,Mah SM,et al.Worldwide patterns of human epigenetic variation [J] .Nat Ecol Evol,2017,1(10):1577-1583.
- [25] Liu W.Epigenetics in schistosomes:What we know and what we need know [J] .Front Cell Infect Microbiol,2016,6:149.
- [26] Roquis D,Lepesant JM,Picard MA,et al.The epigenome of *Schistosoma mansoni* provides insight about how cercariae poise transcription until infection [J] .PLoS Negl Trop Dis,2015,9(8):e0003853.
- [27] Roquis D,Rognon A,Chaparro C,et al.Frequency and mitotic heritability of epimutations in *Schistosoma mansoni* [J] .Mol Ecol,2016,25(8):1741-1758.
- [28] Zhang J,Zhu Z,Sheng J,et al.miR-509-3-5P inhibits the invasion and lymphatic metastasis by targeting PODXL and serves as a novel prognostic indicator for gastric cancer [J] .Oncotarget,2017,8(21):34867-34883.
- [29] Slaby O,Laga R,Sedlacek O.Therapeutic targeting of non-coding RNAs in cancer [J] .Biochem J,2017,474(24):4219-4251.
- [30] Banerjee A,Roy JK.Study of bantam miRNA expression in brain tumour resulted due to loss of polarity modules in *Drosophila melanogaster* [J] .J Genet,2017,96(2):365-369.
- [31] Cheng G,Luo R,Hu C,et al.Deep sequencing-based identification of pathogen-specific microRNAs in the plasma of rabbits infected with *Schistosoma japonicum* [J] .Parasitology,2013,140(14):1751-1761.
- [32] Geyer KK,Chalmers IW,Mackintosh N,et al.Cytosine methylation is a conserved epigenetic feature found throughout the phylum Platyhelminthes [J] .BMC Genomics,2013,14:462.
- [33] Zhu L,Liu J,Cheng G.Role of microRNAs in schistosomes and schistosomiasis [J] .Front Cell Infect Microbiol,2014,4:165.
- [34] He X,Sai X,Chen C,et al.Host serum miR-223 is a potential new biomarker for *Schistosoma japonicum* infection and the response to chemotherapy [J] .Parasit Vectors,2013,6:272.
- [35] Cheever AW.Schistosomiasis and colon cancer [J] .Lancet,1981,1(8234):1369-1370.
- [36] Zhang W,Wang PJ,Shen X,et al.CT presentations of colorectal cancer with chronic schistosomiasis:A comparative study with pathological findings [J] .Eur J Radiol,2012,81(8):e835-843.
- [37] Yi Z,Hong-Gang J,Zhi-Heng C,et al.Short-term efficacy of laparoscopic treatment for colorectal cancer in patients with schistosomiasis japonica [J] .Gastroenterol Res Pract,2016,2016:8357025.
- [38] Zanger P,Habscheid W,Kremsner PG,et al.*Schistosoma japonicum* infection and rectal carcinoid tumour:Underreported coincidence or neglected association [J] .Epidemiol Infect,2010,138(9):1289-1291.

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