

贝伐单抗治疗胶质瘤的疗效及影响细胞糖酵解的机制探讨

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Title: Efficacy of bevacizumab in the treatment of glioma and the mechanism of affecting cell glycolysis

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摘要: 目的: 探讨贝伐单抗治疗胶质瘤的临床疗效及影响胶质瘤细胞糖酵解的机制。方法: 选取2014年4月至2017年8月就诊于本院的胶质瘤患者共96例作为研究对象, 应用随机数表法将其分为实验组和对照组, 每组48例。对照组患者接受常规替莫唑胺(TMZ)化疗方案治疗, 实验组在此基础上加用贝伐单抗治疗, 通过比较两组患者的治疗有效率以及不良反应发生率对两组患者的疗效进行评估; 比较两组患者治疗前后的KPS、QOL评分结果; 对贝伐单抗影响细胞糖酵解的机制进行讨论。结果: 治疗前, 两组KPS、QOL评分结果比较无明显差异($P>0.05$), 治疗后两组KPS、QOL评分结果均明显升高, 且实验组明显高于对照组($P<0.05$); 两组患者治疗有效率比较, 实验组明显优于对照组($P<0.05$); 治疗后实验组不良反应发生率低于对照组($P<0.05$)。结论: 使用贝伐单抗治疗胶质瘤疗效明显, 药物毒副反应小, 安全性高, 主要通过抑制VEGF功能在一定程度上逆转糖酵解, 以加快肿瘤细胞凋亡, 具有临床推广价值。

Abstract: Objective: To investigate the clinical efficacy of bevacizumab in the treatment of glioma and the mechanism of glycolysis in glioma cells. Methods: A total of 96 patients with enhanced glioma were selected from April 2014 to August 2017. They were divided into experimental group and control group with 48 cases in each group. Patients in the control group were treated with TMZ chemotherapy regimen, while those in the experimental group were treated with bevacizumab on the basis of control group. The efficacy, safety and specific mechanism of bevacizumab were evaluated. Results: Before treatment, there were no significant differences in KPS and QOL scores between the two groups ($P>0.05$). The KPS and QOL scores of the two groups were significantly higher after treatment, and the experimental group was significantly higher than the control group ($P<0.05$). The effective rate of treatment was compared between the two groups, and the experimental group was significantly better than the control group ($P<0.05$). The adverse effect rate in the treatment group was lower than the control group ($P<0.05$). Conclusion: The use of bevacizumab in the treatment of glioma has obvious curative effect, less toxic side effects, high safety and promotion value.

参考文献/REFERENCES

- [1] SHAO W, ZHAO YH, LI W, et al. Effects of Wnt signaling pathway on apoptosis of glioma and its mechanism [J]. Chinese Journal of Endemiology and Prevention, 2017, 9(6): 712-713. [邵伟, 赵玉红, 李勤, 等. Wnt信号通路对脑胶质瘤凋亡的影响及其机制 [J]. 中国地方病防治杂志, 2017, 9(6): 712-713.]
- [2] MA GT, ZHANG Y, LI CL, et al. Experimental study of curcumin regulating proliferation and apoptosis of glioma cells through Wnt/ β -catenin signaling pathway [J]. Chinese Journal of Neurosurgery, 2015, 31(6): 625-630. [马光涛, 张燕, 李晨龙, 等. 姜黄素通过Wnt/ β -catenin信号通路调控胶质瘤细胞增殖和凋亡的实验研究 [J]. 中华神经外科杂志, 2015, 31(6): 625-630.]
- [3] ZHANG JY, ZHANG LN, ZHENG YH, et al. Inhibitory effect of Wnt signaling pathway inhibitor on proliferation of glioma cells and its mechanism of action [J]. Journal of Practical Cardiopulmonary and Pulmonary Disease, 2016, 24(3): 49-52. [张惊宇, 张力娜, 郑永慧, 等. Wnt信号通路抑制剂对脑胶质瘤细胞增

- 殖的抑制作用及其作用机制研究 [J]. 实用心脑血管病杂志, 2016, 24(3): 49-52.]
- [4]FU JH, WANG HD, XU WW, et al.Effects of RNA interference pygo2 gene on biological behavior and wnt pathway of human glioblastoma U251 [J]. Chinese Journal of Laboratory Diagnosis, 2015, 11(3): 349-352. [傅建华, 王海东, 徐伟伟, 等.RNA干扰pygo2基因对人脑胶质母细胞瘤U251生物学行为及wnt通路的影响 [J]. 中国实验诊断学, 2015, 11(3): 349-352.]
- [5]Chinese Central Nervous System Glioma Diagnosis and Treatment Guidelines Compilation Group.Guidelines for the Diagnosis and Treatment of Central Nervous System Gliomas in China Group of guidelines for the diagnosis and treatment of central nervous system gliomas in China (2015) [J]. Chinese Journal of Medicine, 2016, 96(7): 485-509. [《中国中枢神经系统胶质瘤诊断和治疗指南》编写组.中国中枢神经系统胶质瘤诊断与治疗指南(2015) [J]. 中华医学杂志, 2016, 96(7): 485-509.]
- [6]Milstein JM, Cohen ME, Sinks LF.The influence and reliability of neurologic assessment and Karnofsky performance score on prognosis [J]. Cancer, 1985, 56(57): 1834-1836.
- [7]CHEN ZY, TIAN FY, ZHAN M, et al.Meta-analysis of the efficacy and safety of bevacizumab combined with STUPP regimen in the treatment of newly diagnosed gliomas [J]. Chinese Journal of Evidence-based Medicine, 2018, 5(5): 18-25. [陈昭燕, 田方圆, 占美, 等.贝伐单抗联合STUPP方案治疗新诊断胶质瘤有效性和安全性的Meta分析 [J]. 中国循证医学杂志, 2018, 5(5): 18-25.]
- [8]WEI WJ, HAN DF, LI HL, et al.Effects of long-chain non-coding RNA HOTAIR on metabolism and growth of human glioma cells [J]. Chinese Journal of Neurosurgery, 2015, 31(9): 942-947. [魏文金, 韩东风, 李海林, 等.长链非编码RNA HOTAIR对人胶质瘤细胞代谢和生长的影响 [J]. 中华神经外科杂志, 2015, 31(9): 942-947.]
- [9]CHEN XR, DU JM, WU ZT.Expression of PFKFB3 in glioma tissues and its effect on malignant biological behavior of H4 cells [J]. Chinese Journal of Cancer Biotherapy, 2018, 25(4): 363-369. [陈向荣, 杜菊梅, 吴宗涛.PFKFB3在胶质瘤组织中的表达及其对H4细胞恶性生物学行为的影响 [J]. 中国肿瘤生物治疗杂志, 2018, 25(4): 363-369.]
- [10]QUAN JJ, QU JQ, ZHOU L.Expression of hepatocyte regenerative phosphorylation factor-1 in glioma tissue and its effect on apoptosis of glioma cells [J]. Hebei Medical College, 2017, 23 (5): 724-728. [权俊杰, 屈建强, 周乐.肝细胞再生磷酸因子-1在脑胶质瘤组织中的表达及对脑胶质瘤细胞凋亡的影响 [J]. 河北医学, 2017, 23(5): 724-728.]
- [11]WEI GQ, LIAN SZ, ZHENG HX.Expression and significance of glycogen synthase 3B and B-catenin in human glioma in Wnt signaling pathway [J]. Chinese Journal of Drugs and Clinics, 2016, 16(9): 1277-1279. [魏国强, 连世忠, 郑绘霞.Wnt信号通路中糖原合成激酶3B和B-catenin在人脑胶质瘤中的表达及其意义 [J]. 中国药物与临床, 2016, 16(9): 1277-1279.]
- [12]HE DJ, HU J, LIANG J, et al.Effects of Wnt signaling pathway inhibitors on proliferation, growth and migration of human glioma cells [J]. Journal of Neuroanatomy, 2015, 31(3): 303-308. [何东杰, 胡静, 梁军, 等.Wnt信号通路抑制剂对人神经胶质瘤细胞增殖活力和生长迁移的影响 [J]. 神经解剖学杂志, 2015, 31(3): 303-308.]
- [13]XIANG W, QI ST, LIU YW, et al.Inhibition of glioma cell invasion and migration by siRNA interference interacting protein 1 expression [J]. Journal of Southern Medical University, 2016, 36(6): 802-806. [向伟, 漆松涛, 刘亚伟, 等.siRNA干扰相互作用蛋白1表达抑制胶质瘤细胞的侵袭和迁移 [J]. 南方医科大学学报, 2016, 36(6): 802-806.]
- [14]WU WH, QU CC, TIAN YJ, et al.Expression and significance of Wnt/B-catenin signal transduction pathway-related molecules in brainstem glioma [J]. Chinese Journal of Neurosurgery, 2015, 31(2): 124-128. [武文浩, 泮长存, 田永吉, 等.Wnt/B-catenin信号转导途径相关分子在脑干胶质瘤中的表达及其意义 [J]. 中华神经外科杂志, 2015, 31(2): 124-128.]
- [15]Kahlert UD, Cheng M, Koch K, et al.Alterations in cellular metabolome after pharmacological inhibition of Notch in glioblastoma cells [J]. International Journal of Cancer, 2016, 138(5): 1246-1255.
- [16]Vallée A, Lecarpentier Y, Guillevin R, et al.Aerobic glycolysis hypothesis through Wnt/beta-catenin pathway in exudative age-related macular degeneration [J]. Journal of Molecular Neuroscience, 2017, 62(3-4): 1-12.
- [17]Silvestris N, Scartozzi M, Graziano G, et al.Basal and bevacizumab-based therapy-induced changes of lactate dehydrogenases and fibrinogen levels and clinical outcome of previously untreated metastatic colorectal cancer patients: A multicentric retrospective analysis [J]. Expert Opin Biol Ther, 2015, 15(2): 155-162.
- [18]CHEN BS, JIN Q, ZHANG Z, et al.Combined targeted therapy for recurrent malignant glioma [J]. Chinese Journal of Neuromedicine, 2015, 14(7): 740-742. [陈宝师, 晋强, 张忠, 等.联合靶向治疗复发恶性脑胶质瘤的研究 [J]. 中华神经医学杂志, 2015, 14(7): 740-742.]
- [19]WANG P, ZHANG JN, CHEN JH, et al.Effects of survivin on the proliferation and invasion of glioma cells treated with bevacizumab [J]. Chinese Journal of Neuromedicine, 2017, 16(6): 16-20. [王鹏, 张剑宁, 陈金辉, 等.存活蛋白对贝伐单抗治疗的胶质瘤细胞增殖及侵袭能力的影响 [J]. 中华神经医学杂志, 2017, 16(6): 16-20.]

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