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bFGF表达对裸鼠白血病移植瘤血管新生影响的研究*

张志华①，刘 鹏②，王丽红①，王陶然①，薛 倩①，郝长来①

作者单位：①承德医学院附属医院血液科（河北省承德市067000）；②河北省石家庄市第一医院

Effects of bFGF expression on the angiogenesis of a leukemia cell line transplanted into nude mice

Zhihua ZHANG1,Peng LIU2,Lihong WANG1,Taoran WANG1,Qian XUE1,Changlai HAO1

1Department of Hematology, Affiliated Hospital of Chengde Medical College, Chengde 067000, China
2Department of Hematology, First Hospital of Shijiazhuang, Shijiazhuang050000, China.

摘要 图/表 参考文献 相关文章 (15)

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摘要 目的：研究丙戊酸钠（VPA）对裸鼠白血病细胞移植瘤血管新生的影响，并探讨其作用机制。方法：使用白血病细胞株Kasumi-1细胞接种于裸鼠皮下，建立裸鼠白血病细胞移植瘤模型，分为对照组和VPA治疗组进行研究，免疫组织化学标记肿瘤组织血管内皮细胞的CD34，计算微血管密度。RT-PCR、蛋白印迹和免疫组织化学检测碱性成纤维细胞生长因子（bFGF）mRNA表达水平及蛋白含量水平。结果：对裸鼠白血病移植瘤研究发现，VPA治疗14d后，裸鼠瘤组织CD34+血管内皮细胞明显减少，微血管密度（MVD）为32.59±5.76较对照组12.23± 4.11明显减少（P<0.01）；VPA治疗组bFGFmRNA的表达0.321 ± 0.046 较对照组0.151 ± 0.036 明显降低（P<0.01），bFGF蛋白表达为0.493 ± 0.026 较对照组0.298 ± 0.011 明显下降。结论：VPA可以抑制裸鼠白血病细胞移植瘤的血管新生，其发生的机制与抑制血管新生相关因子bFGF的表达有关。

关键词 ： 丙戊酸钠，裸鼠移植瘤，白血病，bFGF

Abstract : Objective: This study aimed to investigate the antiangiogenesis of valproic acid (VPA) in leukemia cell line-trans -planted tumor in nude mice and to explore the mechanisms of VPA. Methods:A nude mice model with xenograft tumor was estab-lished by the subcutaneous inoculation of Kasumi- 1 cells. The mice were randomly assigned to control and VPA-treated groups. CD34 expression was assessed by immunohistochemistry. Basic FGF mRNA and protein levels were quantified by RT-PCR, Western blot anal -ysis, and immunohistochemistry.Results:After2 weeks of treatment with VPA, in the VPA-treated group, CD34expression and the cal -culated MVD markedly decreased (P<0.01). After treatment with VPA, the mRNA (0.321 ± 0.046) and protein (0.493 ± 0.026) levels of bFGF also significantly reduced (P<0.01) compared with the mRNA (0.151 ± 0.136; P<0.01) and protein (0.298 ± 0.011; P<0.01) lev -els of the control group. Conclusion:VPA induced the antiangiogenesis of the leukemia cell line-transplanted tumor in nude mice. The mechanism of action may include the inhibition of bFGF expression.

Key words : VPA transplanted tumor in nude mice leukemia bFGF

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通讯作者: 郝长来 **E-mail:** haochanglai@yahoo.com.cn

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电话/传真：(022)23527053 E-mail: cjco@cjco.cn cjcotj@sina.com 津ICP备09011441号-3