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bFGF单抗协同替吉奥抑制肺癌Lewis细胞的增殖及移植瘤血管新生 点此下载全文

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摘要：

目的：探讨碱性成纤维生长因子（basic fibroblast growth factor，bFGF）单抗与替吉奥（gimeracil and oteracil porassium,又称S-1）联合应用体内外抑制小鼠Lewis肺癌细胞增殖、移植瘤生长及转移、肿瘤血管新生的协同作用。方法：CCK-8法检测bFGF单抗及S-1对Lewis细胞增殖的抑制作用。建立C57BL/6小鼠Lewis肺癌自发转移瘤模型，32只小鼠随机分成生理盐水（NS）组、bFGF单抗组、S-1组和bFGF单抗+S-1组，每组8只；测量瘤体，绘制生长曲线，称瘤质量并计算抑瘤率；计数各组肺表面转移瘤结节；CD31标记血管内皮细胞，计数转移瘤微血管密度（microvessel density，MVD）。结果：bFGF单抗、S-1剂量依赖性抑制Lewis细胞增殖（ P <0.05），联合用药组抑制率明显高于单药组（ P <0.05或 P <0.01）。bFGF单抗组、S-1组以及bFGF单抗+S-1组对Lewis转移瘤的抑瘤率分别为37.8%、47.7%、65.9%，联合组抑瘤率明显高于单药组（ P <0.05或 P <0.01）。联合组肺表面转移结节、微血管密度明显低于单药组（2.71±0.76 vs 6.57±0.98、4.71±0.76；21.6 ±2.9 vs 33.4± 4.9、41.9±6.3； P <0.05或 P <0.01）。结论：bFGF单抗联合S-1对Lewis肺癌移植瘤具有协同抑制作用，其机制与抑制细胞增殖及血管新生有关。

关键词：碱性成纤维生长因子 单克隆抗体 替吉奥（S-1） Lewis肺癌细胞 微血管密度 增殖

Synergistic inhibitory effects of bFGF monoclonal antibody and S-1 against proliferation of lung cancer Lewis cells and angiogenesis of transplanted tumors Download Fulltext

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Abstract:

Objective: To study the synergistic inhibitory effects of basic fibroblast growth factor (bFGF) monoclonal antibody (bFGF mAb) and gimeracil and oteracil porassium (S-1) against proliferation of Lewis cells and the growth, metastasis, angiogenesis of the transplanted tumors. Methods: CCK-8 assay was used to assess the effects of bFGF mAb and S-1 on proliferation of Lewis cells. The spontaneous Lewis cell lung metastatic model was established, and thirty-two C57BL /6 mice were randomly divided into 4 groups: normal sodium (NS) group, bFGF mAb group, S-1 group, and bFGF mAb+S-1 group. Tumor volume was measured and tumor growth curve was drawn; tumors were weighed and the inhibitory rate of tumor growth was calculated; metastatic nodules on lung surface were counted; and the vascular endothelial cells were stained with CD31 to examine the microvessel density (MVD) of transplanted tumors. Results:Both bFGF mAb and S-1 inhibited Lewis cell proliferation in a dose-dependent manner (P <0.05). The inhibitory rate in bFGF mAb+ S-1 group was significantly higher than those in the single drug treatment groups (P <0.05 or P <0.01). The inhibitory rates of transplanted tumors in bFGF mAb group, S-1 group, and bFGF mAb+S-1 groups were 37.8%, 47.7%, and 65.9%, respectively, with the combination group being significantly higher than the single treatment groups (P <0.05 or P <0.01). Moreover, the metastatic nodules and MVD in the combination group were significantly lower than those of single treatment groups (2.71± 0.76 vs 6.57±0.98, 4.71±0.76; 21.6±2.9 vs 33.4±4.9, 41.9±6 3; P <0.05 or P <0.01). Conclusion: bFGF mAb and S-1 have synergistic inhibitory effects on Lewis transplanted tumors, which is related to the inhibition of proliferation and angiogenesis.

Keywords:bFGF monoclonal antibody S-1 Lewis lung cancer cell microvessel density proliferation

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