

论文

异黄酮genistein对小鼠恶性黑色素瘤转移的实验性治疗

颜春洪;韩锐

中国医学科学院、中国协和医科大学药物研究所,北京100050

摘要:

目的:研究异黄酮genistein 对肿瘤转移的治疗作用。方法:B16-BL6 细胞由尾静脉注入C57BL/6 小鼠体内,于d 15 观察动物肺转移灶。genistein 混悬于2% 卵磷脂中,从接种瘤细胞前1 天开始ip,剂量为100 和200mg·kg⁻¹·d⁻¹。结果:genistein 可抑制肺转移灶形成,200 mg·kg⁻¹ 用药组小鼠转移灶数目明显减少;作为对照,腹腔给予环磷酰胺 100 mg·kg⁻¹ 后,形成的转移灶数目无明显变化,但形成的转移瘤灶体积减小。当genistein 和环磷酰胺合用时,转移小鼠的存活时间明显延长。结论:genistein 可抑制肿瘤转移,其作用与细胞毒药物不同,与细胞毒药物合用可提高其抗肿瘤转移的作用。

关键词: 4',5,7-三羟基异黄酮(genistein) 小鼠黑色素瘤 肿瘤转移 抗肿瘤药物

EFFECTS OF GENI STEIN ON EXPERIMENTAL METASTASIS OF B16-BL6 MOUSE MELANOMA CELLS

Yan Chunhong and Han Rui

Abstract:

AIM: To investigate the effects of genistein, an isoflavone, on mouse experimental metastasis in order to explore the possibility of developing genistein as a novel anti cancer drug. METHODS: B16 BL6 mouse melanoma cells were injected into C57BL/6 mouse via tail lateral vein, which subsequently colonized into the animal lungs to form a large amount of pulmonary metastases after 15 days. Genistein was suspended in 2% lecithin and administered at 100 or 200 mg·kg⁻¹·d⁻¹ by intraperitoneal injection daily from the day before the cell injection. RESULTS: The mean number of metastases in the animal group that were given genistein 200 mg·kg⁻¹ was significantly reduced as compared with that of the control group(P<0.01), suggesting the anti metastasis effect of genistein. In contrast, cyclophosphamide 100 mg·kg⁻¹ ip did not significantly decrease the number of pulmonary metastases, while it was found to dramatically reduce the size of metastases. When genistein was administrated with cyclophosphamide, the survival time of the metastatic mice was significantly prolonged. CONCLUSION: Genistein inhibited experimental metastasis through a mechanism different from that of cyclophosphamide. The stronger life prolonging effect of co administration of genistein with cyclophosphamide suggests that it may be valuable to combine genistein with another cytotoxic drug for cancer metastasis chemotherapy.

Keywords: mouse melanoma tumor metastasis anti tumor drug genistein

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作者简介:

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