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基础研究

E838联合γ射线对淋巴瘤荷瘤小鼠的协同抑瘤作用

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Antitumor Effects of Combination Treatment of E838 with γ-ray for Mouse Lymphoma

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- 摘要
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全文: PDF (200 KB) HTML (0 KB) 输出: BibTeX | EndNote (RIS) 背景资料

摘要 目的 本研究主要观察E838对小鼠移植性淋巴瘤的体内抑瘤效果及相关的生物学指标，探讨合用137Cs γ射线是否具有抑瘤增效作用。方法 取2～3mm3淋巴瘤瘤块接种于IRM 2小鼠腋部皮下，24h后将荷瘤小鼠随机分为对照组、单放组、E838低、中、高药物组及药物合用照射组、环磷酰胺组。药物组与药物合用照射组对应性腹腔注射相同剂量E838，每日1次，连续7天，环磷酰胺隔日1次×4。合用照射组于给药的第4天进行全身1Gy照射，每日1次，连续5天。观察各组小鼠骨髓有核细胞数和肿瘤抑制率。结果 E838 3个剂量对小鼠移植性淋巴细胞瘤的抑瘤率分别为(44.14±15.96)%、(70.74±11.17)%和(50.00±18.09)%，与对照组比较差异有统计学意义(P<0.001)，骨髓有核细胞数与对照组相比则明显提高。E838合用137Csγ射线能提高抑瘤效果，抑瘤率分别为(65.43±2.13)%、(77.13±6.38)%和(67.55±11.17)%，(P<0.001)，对肿瘤的杀伤作用高于单放组和单药治疗组。结论 E838对小鼠肿瘤细胞具有良好的抑制作用，E838合用γ射线具有协同抑瘤作用，在适当剂量范围内可以促进荷瘤小鼠放疗后骨髓损伤修复。

关键词： E838 抗肿瘤 IRM-2小鼠 γ射线 协同作用

Abstract: Objective To investigate the tumor inhibitory effects of E838 and the combined antitumor effects of E838 and 137Cs γ ray irradiation. Methods IRM 2 mice transplanted with 2～3mm3 lymphoma(LM) tissue for 24h, were randomized into nine groups: control group, radiation group, high、middle、low E838 dose group, different dose E838 combined with radiation group and cyclophosphamide group. E838 group and combined group administered with same dose E838 daily for 7 days, cyclophosphamide group administered every other day 4 times. Combined group radiated with 1 Gy/day for 5 days after the mice wereadministered with E838 for 4 days.The size of LM tumor and the bone marrow cells of different group were measured. Results The mouse LM tumor inhibitory ratios of three E838 doses groups were (44.14±15.96)%、(70.74±11.17)% and (50.00±18.09)% respectively. There was a significant difference between E838 groups and control group (P<0.001).The level of bone marrow cells counting was markedly elevated. E838 combined with 137Csγ ray could enhance tumor inhibitory effect, the tumor inhibitory ratios of three combined groups were (65.43±2.13)%、(77.13±6.38)% and (67.55±11.17)%, there were obviously increased compare with control and radiation group respectively (P<0.001). Conclusion E838 has good tumor inhibitory effects on lymphoma transplanted mice tumor. The synergistic antitumor effects was found after the mice were treated with E838 and γ ray irradiation, the bone marrow function recovery after irradiation was speed up when the mice were administrate with E838 of some definite doses.

Key words: E838 Tumor inhibitory effects IRM-2 mouse γ-ray Synergistic effects

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