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蚯蚓纤溶酶对裸鼠人肝癌细胞移植瘤生长及 CD44v6表达的影响

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Effect of Earthworm Fibrinolytic Enzyme on Growth of Xenografted Tumor of Hepatocellular Carcinoma (HCC) and Expression of CD44v6

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全文: PDF (939 KB) HTML (0 KB) 输出: BibTeX | EndNote (RIS) 背景资料

摘要 目的 探讨蚯蚓纤溶酶（earthworm fibrinolytic enzyme, EFE)对裸鼠人肝癌细胞移植瘤生长及CD44v6表达的影响。方法 建立肝癌SMMC-7721细胞裸鼠移植瘤模型，随机分为生理盐水组、EFE组、5-Fu组及联合用药组，计算抑瘤率及两药相互作用系数（coefficient of drug in interaction，CDI），并行血常规检测评价EFE的副反应。同时采用免疫组化SP染色法、RT-PCR及Western blot方法观察EFE组及生理盐水组瘤组织中CD44v6的表达情况。结果 与生理盐水组相比，EFE组和5-Fu组抑瘤率分别为20.53%和23.07%；联合用药组抑瘤率为54.20%，且CDI<1。血常规检测提示EFE对造血系统无明显副反应。免疫组化和Western blot结果显示，EFE组CD44v6蛋白的表达水平较生理盐水组分别下调47.16%、28.37%（P＜0.05）。RT-PCR结果表明，EFE组CD44v6 mRNA的表达水平亦较生理盐水组低，下调16.44%（P＜0.05）。结论 蚯蚓纤溶酶对裸鼠人肝癌移植瘤的生长具有一定的抑制作用，与5-Fu存在一定的协同效应，并可以抑制黏附分子CD44v6的表达。

关键词： 蚯蚓纤溶酶（EFE） 肝癌 移植瘤 黏附分子 CD44v6 转移

Abstract： Objective To investigate the inhibitory effect of EFE on the growth of xenografted tumor of hepatocellular carcinoma (HCC) and the expression of CD44v6. Methods First, tumor bearing models xenografted with SMMC-7721 cells were developed in nude mice, then the mice were divided randomly into saline group, EFE group, 5-Fu group and combined group. Calculating the inhibition ratio of tumor growth and coefficient of drug in interaction. Evaluating the adverse reaction of EFE by blood routine tests. At the same time, the expression of CD44v6 was detected by SP staining of immunohistochemistry, RT-PCR and Western blot in EFE and saline groups. Results Compared with saline group, inhibition ratios of tumor growth in EFE group and 5-Fu group are 20.53%，23.07%respectively. The inhibition ratio of combined group is 54.20%, and CDI<1. Blood routine tests show that EFE has no significant adverse reaction to hematopoietic system. EFE could obviously inhibit the expression of CD44v6 protein by immunohistochemistry and Western blot, the inhibitory rates were 47.16% and 28.37% respectively(P<0.05）. And the result of RT-PCR also showed that EFE could obviously inhibit the expression of CD44v6 mRNA, the inhibitory rate was 16.44% (P<0.05）. Conclusion EFE has inhibitory effect on hepatoma xenografted tumor to some extent and has synergistic anti-tumor activity with 5-Fu. Moreover, EFE could obviously inhibit the expression of CD44v6.

Key words： Earthworm fibrinolytic enzyme（EFE） Hepatocellular carcinoma(HCC) Xenografted tumor Adhesion molecules CD44v6 Metastasis

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