



转染pCE质粒的干细胞对肝癌治疗的影响

冯刚¹, 罗利琼², 张丽娟¹, 何柳¹

1. 430033武汉, 华中科技大学同济医学院附属普爱医院肿瘤科; 2. 武汉科技大学附属天佑医院肿瘤科

Effect of Transfected Stem Cells with pCE Plasmid on Therapy for Liver Cancer

FENG Gang¹, LUO Li qiong², ZHANG Li Juan¹, HE Liu¹

1. Department of Oncology, Puai Hospital Affiliated of Huazhong University of Science and Technology, Wuhan 430033, China; 2. Department of Oncology, Tianyou Hospital Affiliated of Wuhan University of Science and Technology

- 摘要
- 参考文献
- 相关文章

全文: PDF (1498 KB) HTML (0 KB) 输出: BibTeX | EndNote (RIS) 背景资料

摘要 目的 观察转染pCE质粒的干细胞对肝癌的治疗作用。方法 采用尾静脉直接注射法治疗大鼠肝脏转移瘤, 设立阴性对照、干细胞、转染pCE质粒的干细胞组和5-Fu组, 通过观察转移瘤在肝脏组织中的生长情况和卫星灶形成, 肝脏组织的病理学改变, 检测基质衍生因子 1(stromal cell derived factor 1, SDF -1) 表达, 比较4组对肝癌的治疗作用。结果 转染pCE质粒的干细胞组对肿瘤细胞的生长抑制率(56%)与阴性对照组(0)、干细胞组(8%)和5-Fu组(78%)比较差异有统计学意义 (P<0.05)。治疗前4组SDF 1的表达差异无统计学意义 (P>0.05)。转染pCE质粒的干细胞组SDF 1在治疗后分泌增加(OD=0.48), 与阴性对照组(OD=0.35)、干细胞组(OD=0.39)和5 Fu组(OD=0.36)比较差异有统计学意义 (P<0.05)。结论 转染pCE质粒的干细胞有抑制肝癌生长的作用, SDF 1表达水平上升是其机制之一。

关键词: 基因治疗 干细胞 肝肿瘤 趋化因子CXCL12

Abstract: Objective To study the effect of rotary magnetic field (RMF) combining 5-Fu on the cycle and apoptosis of mouse cell line SP2/0 in vitro. Methods SP2/0 cells were randomly divided into four groups: control group (N), 5-Fu group (C), magnetic group (M) and magnetic combining 5-Fu group (M+C). The M and M+C groups were treated with a RMF for two hours once a day. On day 4, the C and M+C groups were treated with 5-Fu 20 µg/ml. On day 5, cell cycle and apoptosis were measured by the flow cytometric (FCM). Results The S phase proportion of the M group and the G1 phase proportion of the C group were higher than that of the other three groups (P<0.05). The S phase proportion of the M+C group decreased and lower than that of the M group, but was still higher than that of the N and C groups (P<0.05). There was no significant difference in apoptosis rates between the N and M groups (P>0.05). The apoptosis rates of the C and M+C groups were remarkably higher than those of the N and M groups and the M+C group had the highest apoptosis rate. Conclusion The RMF can't induce the apoptosis. But it can enhance the cytotoxicity of 5-Fu and promote the cell apoptosis. The mechanism of the apoptosis may be related to SP2/0 cell line arrested at S phase. Objective To observe stem cells with pCE plasmid therapy for liver cancer, and explore its related mechanism. Methods After injection of stem cells into tail vein, inhibiting tumor ratio was calculated, satellite lesions in the liver, change of tumor mass in pathology, expression of SDF 1 were studied. The difference among control group, group of stem cells, group of stem cells with pCE plasmid, and group of 5 Fu were compared. Results Stem cells with pCE plasmid could inhibit proliferation of cancer cells (56%) in the following 10 day (P<0.05), compared with control group (0%), group of stem cells (8%) and group of 5 Fu (78%), respectively. Expression of SDF 1 from group of stem cells with pCE plasmid after treatment was increased (OD=0.48), different from control group (OD=0.35), group of stem cells (OD=0.39) and group of 5 Fu (OD=0.36) (P<0.05). Expression of SDF 1 from all groups before treatment did not have difference (P>0.05). Conclusion Stem cells with pCE plasmid could inhibit proliferation of cancer cells through the help of SDF 1.

Key words: Gene therapy Stem cells Liver neoplasms Chemokine CXCL12

服务

- 把本文推荐给朋友
- 加入我的书架
- 加入引用管理器
- E-mail Alert
- RSS

作者相关文章

- 冯刚
- 罗利琼
- 张丽娟
- 何柳

引用本文:

冯刚, 罗利琼, 张丽娟等. 转染pCE质粒的干细胞对肝癌治疗的影响[J]. 肿瘤防治研究, 2010, 37(12): 1370-1373.

FENG Gang, LUO Li qiong, ZHANG Li juan et al. Effect of Transfected Stem Cells with pCE Plasmid on Therapy for Liver Cancer[J]. CHINA RESEARCH ON PREVENTION AND TREATMENT, 2010, 37(12): 1370-1373.

没有本文参考文献

- [1] 潘翠萍; 范威; 马彪. 乳腺癌干细胞研究进展[J]. 肿瘤防治研究, 2012, 39(2): 234-237.
- [2] 刘振林; 李罡; 苏治国; 王骏飞; 赵玉军; 陈镭; 刘洪良; 姜忠敏; 刘晓智. 叶酸/聚酰胺-胺作为miR-7基因载体的胶质瘤靶向性研究[J]. 肿瘤防治研究, 2012, 39(1): 1-5.
- [3] 张榜硕; 刘林. IL-4及IL-18水平变化与急性移植物抗宿主病的关系[J]. 肿瘤防治研究, 2012, 39(1): 36-40.
- [4] 朱海波综述; 赵明峰审校. 白血病干细胞相关基因研究进展[J]. 肿瘤防治研究, 2011, 38(9): 1089-1092.
- [5] 陆云飞; 黄名威. 肿瘤干细胞的起源与肿瘤的防治策略 [J]. 肿瘤防治研究, 2011, 38(7): 838-839.
- [6] 包俊杰; 吴诚义. 乳腺肿瘤EMT的分子机制及与干细胞相互关系的研究进展 [J]. 肿瘤防治研究, 2011, 38(7): 834-837.
- [7] 孙力超; 赵璇; 孙立新; 遇珑; 杨治华; 冉宇靓. 肝癌干细胞抗体靶向治疗的实验[J]. 肿瘤防治研究, 2011, 38(6): 609-614.
- [8] 邵彬; 余靖; 邸立军; 宋国红; 祝毓琳; 张洁; 梁旭; 车利; 姜晗昉; 贾军; 尤缈宁; 黄晓蕾; 王小利; 周心娜; 任军; 张春荣; 孟松娘; 杨玉琴; 高敏; 黄晓红; 谢嵘. 多西他赛联合重组人粒细胞集落刺激因子动员乳腺癌患者外周血干细胞的效果及影响因素分析[J]. 肿瘤防治研究, 2011, 38(6): 666-670.
- [9] 岳保红; 王园园; 蔚利纳; 付书贞; 阚全程. Nucleostemin基因特异性短发夹状干扰RNA在裸鼠移植瘤模型体内的抗白血病作用[J]. 肿瘤防治研究, 2011, 38(5): 519-523.
- [10] 祝毓琳; 邵彬; 余靖; 邸立军; 宋国红; 张洁; 梁旭; 车利; 姜晗昉; 贾军; 尤缈宁; 张春荣; 孟松娘; 杨玉琴; 高敏; 黄晓红; 谢嵘; 王小利; 周心娜; 任军. 紫杉醇联合重组人粒细胞集落刺激因子动员 乳腺癌患者外周血干细胞的效果及影响因素 [J]. 肿瘤防治研究, 2011, 38(4): 404-407.
- [11] 许新华; 苏进; 鲁明睿; 李道俊; 黄乔; 薛峰; 易芳. CD44⁺鼻咽癌细胞的干细胞生物学特性[J]. 肿瘤防治研究, 2011, 38(12): 1346-1350.
- [12] 屈洪波综述; 吴诚义审校. 低氧与肿瘤干细胞微环境的研究进展 [J]. 肿瘤防治研究, 2011, 38(12): 1451-1454.
- [13] 马玲娣; 刘乾; 王勇; 王仕忠; 鲍永仪; 关乃富; 倪诚; 樊小龙. 非小细胞肺癌中CAR和CD46的表达及临床意义[J]. 肿瘤防治研究, 2011, 38(11): 1268-1271.
- [14] 杨琳; 吕宁; 张海峰; 管考鹏; 刘秀云; 冯晓莉. 多部位血管平滑肌脂肪瘤临床诊治分析 [J]. 肿瘤防治研究, 2011, 38(11): 1288-1291.
- [15] 喻凤宽; 周健; 李玉富; 张龔莉; 房佰俊; 符粤文; 宋永平. BEAC预处理自体造血干细胞移植治疗淋巴瘤的疗效观察[J]. 肿瘤防治研究, 2011, 38(11): 1324-1325.