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基础研究

# VEGF-C反义核酸对结直肠癌LoVo细胞体内生长的影响

许天文1|陈道达2|傅德强1|吴春林3

（福建医科大学附属第二医院 1. 肿瘤科 3. 病理科|福建 泉州 362000；2. 华中科技大学附属协和医院 普通外科|湖北 武汉 430022）

摘要：

目的：探讨VEGF-C反义核酸对结直肠癌LoVo细胞体内生长的影响。方法：20只裸鼠随机均分为实验组与对照组，实验组接种转染反义VEGF-C核酸的LoVo细胞，而对照组接种转染空白质粒的LoVo细胞。观察两组肿瘤的生长情况，21 d后处死动物取移植瘤标本，用免疫组化法检测移植瘤组织中的微淋巴管密度（MLD）和微血管密度（MVD）。结果： 两组的成瘤率均为100%；实验组与对照组接种14 d后的肿瘤体积分别为（382.0±152.8）mm3和（454.2±148.7）mm3，21 d后为（745.0±250.9）mm3和（1 574.4±506.2）mm3，差异均有统计学意义（均P<0.05）；实验组肿瘤组织中MLD与MVD计数均较对照组明显减少[（11.75±2.22）/0.72 mm2 vs.（28.50±2.65）/0.72mm2，（47.75±2.99）/0.72 mm2 vs.（53.73±3.50）/0.72 mm2]（均P<0.05）。结论：转染VEGF-C反义核酸可抑制结直肠癌LoVo细胞移植瘤在裸鼠的体内生长，并抑制移植瘤淋巴管与血管的生成。

关键词： 结直肠肿瘤；血管内皮生长因子C；RNA 反义；移植瘤模型

# Inhibitory effect of VEGF-C antisense RNA on growth of colorectal carcinoma LoVo cells in vivo

XU Tianwen1, CHEN Daoda2, FU Deqiang1, WU Chunlin3

(1. Department of Oncology 3. Department of Pathology, the Second Affiliated Hospital, Fujian Medical University, Quanzhou, Fujian 362000 China|2. Department of General Surgery, the Union Hospital, Huazhong University of Science and Technology|Wuhan 430022, China)

Abstract:

Objective: To investigate the effects of VEGF-C antisense RNA on the in vivo growth of colorectal carcinoma LoVo cells. Methods: Twenty nude mice were equally randomized into experimental group and control group. Mice in experimental group were inoculated with anti-sense VEGF-C transfected LoVo cells, and those in control group were inoculated with empty plasmid transfected LoVo cells. The growth of the tumor xenografts in mice was observed. Finally, mice were sacrificed at 21 d after inoculation, and the microlymphatic density (MLD) and microvessel density (MVD) in tumor xenograft tissues were measured through immunohistochemical staining. Results: There was no difference in tumor formation rates between the two groups (both were 100%). The volumes of the implanted tumor in experimental group and control group were (382.0±152.8) mm3 and (454.2±148.7) mm3 at 14 d post-inoculation, and were (745.0±250.9) mm3 and (1 574.4±506.2) mm3 at 21 d post-inoculation respectively, and the differences between them had statistical significance (both P<0.05). Both MLD and MVD in the tumor tissues from experimental group were significantly lower than those from control group [(11.75±2.22)/0.72 mm2 vs. (28.50±2.65)/0.72mm2, (47.75±2.99)/0.72 mm2 vs. (53.73±3.50)/0.72 mm2] (both P<0.05). Conclusion: The growth of colorectal carcinoma LoVo cell xenografts in nude mice can be suppressed by VEGF-C antisense RNA transfection and that may also inhibit the lymphangiogenesis and angiogenesis in tumor xenografts.

Keywords: Colorectal Neoplasms, Vascular Endothelial Growth Factor C, RNA, Antisense

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通讯作者: 许天文， Email: xutianwen53@163.com

作者简介: 许天文|福建医科大学附属第二医院副主任医师|主要从事胃肠肿瘤学方面的研究。

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