[1]张瑞,刘羞菲,王慧,等.GLP-1受体激动剂艾塞那肽对肿瘤细胞增殖、迁移的影响[J].第三军医大学学报,2014,36(17):1785-1789.

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GLP-1受体激动剂艾塞那肽对肿瘤细胞增殖、迁移

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Title: GLP-1 agonist exenatide inhibits migration and proliferation in tumor cells

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关键词: 艾塞那肽; 乳腺肿瘤; 结肠肿瘤; 胰腺肿瘤; 肿瘤细胞; 培养的

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摘要:

目的　目的 通过体外细胞实验观察胰高血糖素样肽-1（glucagon-like peptide-1, GLP-1）受体激动剂艾塞那肽对乳腺癌、结肠癌、胰腺癌3种肿瘤细胞增殖、迁移的影响。　方法　选取乳腺癌MDA-MB-231细胞、结肠癌HCT116细胞、胰腺癌HS766T细胞作为研究对象，每种细胞分为对照组、二甲双胍组、艾塞那肽组。利用CCK-8分别检测3种肿瘤细胞艾塞那肽干预72 h后的增殖能力；利用Transwell小室法观察培养12 h后3种肿瘤细胞的迁移能力。　结果　艾塞那肽组与对照组相比，MDA-MB-231细胞、HCT116细胞的增殖受到明显抑制（$P<0.01$，$P<0.05$），而HS766T细胞增殖无影响（$P>0.05$）。Transwell体外细胞迁移实验结果显示，艾塞那肽组与对照组相比， MDA-MB-231细胞、HCT116细胞迁移受到明显抑制（$P<0.01$，$P<0.05$），但HS766T细胞迁移却显著增加（$P<0.01$）。　结论　GLP-1受体激动剂艾塞那肽可以抑制乳腺癌、结肠癌细胞的增殖与迁移，不影响胰腺癌细胞增殖，却促进其迁移，其对不同肿瘤细胞的影响具有差异性。

Abstract: Objective　To determine the effect of glucagon-like peptide-1 (GLP-1) agonist

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exenatide on the proliferation and migration in breast cancer, colon cancer, and pancreatic cancer cells *in vitro*. Methods Breast cancer cell line MDA-MB-231, colon cancer cell line HCT116 and pancreatic cell line HS766T were selected as experimental subjects. Each type of cells was divided into control group, metformin group and exenatide group. After administration of metformin and exenatide respectively, CCK-8 assay was used for the proliferation detection in each group in 72 h after treatment, and the migration of tumor cells was observed using Transwell chamber assay in 12 h after treatment. Results Compared with the control group, the proliferation of MDA-MB-231 cells in exenatide group was significantly inhibited (P<0.01), the proliferation of HCT116 cells were inhibited (P<0.05), and the proliferation of HS766T was not affected (P>0.05). Transwell migration assay showed that MDA-MB-231 cell migration was significantly inhibited by exenatide (P<0.01), HCT116 cell migration was also inhibited (P<0.05), but cell migration in HS766T group was significantly increased by exenatide (P<0.01). Conclusion Exenatide inhibits the proliferation and migration in breast cancer cells and colon cancer cells. It has no effect on the proliferation, but promotes the migration in pancreatic cancer cells. Exenatide exerts different effects on different tumor cells.

参考文献/References:

张瑞，刘羞菲，王慧，等. GLP-1受体激动剂艾塞那肽对肿瘤细胞增殖、迁移的影响[J].第三军医大学学报,2014,36(17):1785-1789.

相似文献/References:

[1]陈庆峰,牛兆河,刘翠翠,等.鼠-人嵌合抗粘蛋白1 IgG1全抗体的构建及其功能初步分析[J].第三军医大学学报,2012,34(17):1771.
Chen Qingfeng,Niu Zhaohe,Liu Cuicui,et al.Construction and characterization of a mouse-human chimeric anti-mucin1 IgG antibody[J].J Third Mil Med Univ,2012,34(17):1771.

[2]张彦,郑晓东,唐鹏,等.Sphk1基因对人乳腺癌MCF-7细胞增殖、凋亡和迁移能力的影响[J].第三军医大学学报,2012,34(21):2141.
Zhang Yan,Zheng Xiaodong,Tang Peng,et al.Sphk1 interference suppresses proliferation, apoptosis and migration in human MCF-7 breast cancer cells[J].J Third Mil Med Univ,2012,34(17):2141.

[3]王杨,陈彬,姜晓梅,等.睾酮对乳腺癌细胞中FEN1表达的影响[J].第三军医大学学报,2013,35(02):95.
Wang Yang,Chen Bin,Jiang Xiaomei,et al.Effect of testosterone on FEN1 expression in breast cancer cells[J].J Third Mil Med Univ,2013,35(17):95.

[4]李昌秀,曹友德.乳腺癌组织COX-2、VEGF-C的表达与淋巴结转移的关系[J].第三军医大学学报,2007,29(20):1964.
LI Chang-xiu,CAO You-de.Correlation of COX-2 and VEGF-C expressions in breast carcinoma with lymph node metastasis[J].J Third Mil Med Univ,2007,29(17):1964.

[5]周艳,姜军,张毅,等.雌激素受体β及其剪切变异体表达与雌激素受体阻滞剂治疗耐药的关系[J].第三军医大学学报,2007,29(20):1999.
ZHOU Yan,JIANG Jun,ZHANG Yi,et al.Relationship of estrogen receptor-beta and its isoform expressions with tamoxifen resistance in human breast cancer[J].J Third Mil Med Univ,2007,29(17):1999.

[6]陈蓉,张伟国,张连阳,等.MRI评价乳腺癌行保乳术的可行性研究[J].第三军医大学学报,2007,29(17):1712.
CHEN Rong,ZHANG Wei-guo,ZHANG Lian-yang,et al.Feasibility of utilizing MRI for assessing breast-conserving surgery of breast cancer[J].J Third Mil Med Univ,2007,29(17):1712.

[7]周艳,张毅,梁燕,等.乳腺癌雌激素受体β表达与临床病理及预后标志物的关系[J].第三军医大学学报,2007,29(11):1090.
ZHOU Yan,ZHANG Yi,LIANG Yan,et al.Association of ERβ expression with the clinical pathologic indexes and prognostic biomarkers of breast cancer[J].J Third Mil Med Univ,2007,29(17):1090.

[8]徐鹰妮,姜军,程鸿,等.ERα和ERβ在不同类型乳腺组织的表达及其意义[J].第三军医大学学报,2007,29(11):1093.
XU Ying-ni,JIANG Jun,CHENG Hong,et al.Expression and significance of estrogen receptor isoforms in different breast tissues[J].J Third Mil Med Univ,2007,29(17):1093.

[9]彭俊华,糜漫天,朱俊东,等.辛基酚和三羟异黄酮对二甲基苯蒽诱发大鼠乳腺肿瘤的影响[J].第三军医大学学报,2005,27(23):2317.

[10]陈庆峰,马中良,王笑峰,等.抗粘蛋白1单链抗体的构建及其功能初步分析[J].第三军医大学学报,2010,32(16):1770.
Chen Qingfeng,Ma Zhongliang,Wang Xiaofeng,et al.Construction and characterization of anti-mucin1 single chain Fv antibody fragment[J].J Third Mil Med Univ,2010,32(17):1770.