癌变.畸变.突变 ISSN: 1004-616x CN:44-1063/R 2008; 20(4) :303-307

论著

CXCR4表达上调与HER2介导乳腺癌转移的相关性研究

杨清玲1/ 丁勇兴2/ 李成华2/ 陈昌杰1/ 章 菊1/ 王 惠1

1.蚌埠医学院生化与分子生物学教研室，安徽 蚌埠 233000；2.蚌埠市中心医院肿瘤科，安徽蚌埠 233000

收稿日期 2007-9-11 修回日期 2007-10-30 网络版发布日期:

摘要 背景与目的： 检测CXCR4和HER2在乳腺患者的表达水平，观察HER2特异性抗体Herceptin对CXCR4表达和乳腺癌细胞体外转移活性的抑制作用。 材料与方法： 采用免疫组化法，检测临床不同时期乳腺癌组织CXCR4和HER2的表达水平；采用Western blot检测Herceptin作用后CXCR4蛋白表达，RT_PCR技术检测CXCR4 mRNA的表达；采用趋化实验和粘附实验检测Herceptin对HER2不同表达水平的乳腺癌细胞趋化和粘附活性的影响。 结果： CXCR4表达与乳腺癌细胞淋巴结转移状况、乳腺癌组织学分期及HER2的表达呈正相关(P值分别为0.032、0.000和0.015)；在高表达HER2的乳腺癌细胞株SKBR3中，Herceptin可下调CXCR4的蛋白及mRNA的表达(P<0.05)，并抑制其趋化和粘附活性(P<0.05)。 结论： 在HER2介导的肿瘤转移中，CXCR4表达上调可能是关键因素。

关键词 CXCR4； HRE2； 乳腺肿瘤； 转移

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Upregulation of CXCR4 and HER2_mediated Breast Cancer Metastasis

YANG Qing_ling1, DING Yong_xing2, LI Cheng_hua2,CHEN Chang_jie1, ZHANG Ju1, WANG Hui1

1.Department of Biochemistry & Molecular Biology,Bengbu Medical College, Bengbu 233000,Anhui; 2. Branch of Tumor, The Central Hospital of Bengbu, Bengbu 233000, Anhui,China

Abstract BACKGROUND AND AIM: We evaluated the expression of CXCR4 and HER2, the inhibition of Herceptin on CXCR4 expression and the in vitro metastatic action in breast cancer cells. MATERIALS AND METHODS: Biomarker expression levels in paraffin_embedded tissue sections of breast cancer were evaluated using immunohistochemical staining. The protein expression of CXCR4 was studied by Western blot and the mRNA expression was by RT_PCR after treatment with Herceptin . Adhesion and chemotaxis assays were used to evalvate the effect of Herceptin on breast cancer cells with different HER2 expressions. RESULTS: Cytoplasmic CXCR4 was positively correlated with lymph node—positive tumors(P=0.032)and different stage of breast cancer(P=0.000)and the expression of HER2(P=0.015). The protein and mRNA expressions of CXCR4 were decreased after treatment with Herceptin in breast cancer cells with HER2 overexpression(P<0.05)and activity of cell adherence to fibronectin(FN) and migration to SDF_1α were inhibited. CONCLUSION: HER2_mediated homing to metastatic organs and upregulation of CXCR4 may be key factors for HER2_mediated breast cancer metastasis.

Keywords CXCR4 HER2 breast cancer metastasis

DOI

通讯作者 yqlmimi@163.com