

عنوان مقاله:

Breast cancer: a study of the molecular mechanisms related to the HER2 receptor in resistance to Tamoxifen

محل انتشار:

یازدهمین کنگره بین المللی سرطان پستان (سال: 1394)

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خلاصه مقاله:

Background: The use of tamoxifen in patients with estrogen receptor has a great impact in the treatment of the breast cancer. The resistance to tamoxifen in breastcancer hormone therapy is one of the challenges ahead. The HER2 receptor is a tyrosine kinase, which is activated with some of the growth factors such as TGF β , EGF, VEGF. The purpose of this study, is to review the HER2 receptor signaling pathway and development of resistance to the components of the tamoxifen signaling cascade. Results: According to the results, doxorubicin and tamoxifen cause death through apoptosis in tumor cells with inhibition of active-axis RAF / RAS and AKT / mTOR, resulting in the activation of molecules that play a role in resistance to tamoxifen. For example, In the absence estrogen receptors and HER2 overexpression, the HER2 receptor expression leads to the increasing activity of AKT, activation and expression of SRC proteins , including SRC- 1, SRC-2 / TIF-2 , SRC-3 / AIB1 as well as mTOR . Inhibition of PTEN protein expression because of the activity of HER2 signaling pathway is . Furthermore, expression of Hh family genes mechanism to tamoxifen. Changes in gene expression of PI3KCA do not make a difference in tamoxifen resistant cancer cells. Conclusion: Although one of the main tamoxifen therapy is systemic administration and it arrests the proliferation of cancer cells, but sometimes it develops drug resistance and do not respond. Hence, molecular mechanisms related to proliferation of breast cancer cells resistant to tamoxifen can be used as a therapeutic target .which are promising to discover novel therapeutic pathways

کلمات کلیدی:

Tamoxifen resistance, Breast cancer, HER2, Signaling pathway

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