

عنوان مقاله:

Anti-breast cancer property of a novel hydrazide compound in BALB/c mice

محل انتشار:

دوازدهمین کنگره بین المللی سرطان پستان (سال: 1394)

تعداد صفحات اصل مقاله: 1

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خلاصه مقاله:

Introduction & Aim: Breast cancer is the most frequently diagnosed cancer and the leading cause of cancer death among females. Resistance and cytotoxicity of anticancer drugs are the reasons that warrant the search for newer anticancer agents, and researchers from various laboratories are engaged to find a more pleasant solution for treatment of cancer. Hydrazide derivatives have shown various pharmacological activities including anticancer. With this point in mind, a novel hydrazide derivative, compound 1 { N- ((5- nitrothiophen-2-YL) methylene)-2(phenylthio) benzohydrazide } was synthesized and its anticancer activity was evaluated in breast cancer cell line. To further confirm our previous data, we investigated the antibreast cancer activity of this compound in BALB/c mice bearing 4T1 breast cancer cells. **Methods:** 4T1 mammary carcinoma cells were injected into the mammary fat pad of female BALB/c mice to produce breast tumor. Immunohistochemistry and histopathology experiments were performed to demonstrate the metastasis. **Results:** i.p. administration of three doses of compound 1 (1, 10, 50 mg/Kg), significantly retarded growth of tumor after 3 weeks. Regression of tumor growth, which occurred in weeks 3 to 4, was associated with extensive necrosis and infiltration of leukocytes and confirmed by histopathological method. Furthermore, Immunohistochemistry staining showed that the proportion of Ki-67 in the tumors from compound 1-treated group was significantly lower than in the vehicle-fed mice. Importantly, compound 1 (1mg/kg) effectively prevented the lung metastasis, which demonstrated by histopathology and immunohistochemistry experiments. **Conclusion:** Our results collectively revealed the great potential of compound 1 as a promising chemotherapeutic candidate for human breast cancers

کلمات کلیدی:

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