

An Overview of Paclitaxel as an Anti-Cancer Agent in Avoiding Malignant Metastatic Cancer Therapy

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Abstract : Chemotherapy is the most common procedure in the treatment of advanced cancers but is just soberly operative and toxic. Nevertheless, the efficiency of chemotherapy is restricted owing to multiple drug resistance (MDR). Lately, plentiful preclinical experiments have revealed that Paclitaxel-Curcumin could be an ultimate approach to converse MDR and synergistically increase their efficiency. The connotations amongst B-cell-lymphoma2 (BCL-2) and multi-drug-resistance-associated-P-glycoprotein (MDR1) consequence of patients forecast the efficiency of paclitaxel-built chemoradiotherapy. There are evidences of the efficacy of paclitaxel in the treatment of surface-transmission of bladder-cell-carcinoma by manipulating bio-adhesive microspheres accomplished throughout measured release of drug at urine epithelium. In Genetically-Modified method, muco-adhesive oily construction of tricaprylin, Tween 80, and paclitaxel group showed slighter toxicity than control in therapeutic dose. Postoperative chemotherapy-Paclitaxel might be more advantageous for survival than adjuvant chemo-radiotherapy, and could diminish postoperative complications in cervical cancer patients underwent a radical hysterectomy. HA-Se-PTX (Hyaluronic acid, Selenium, Paclitaxel) nanoparticles could observably constrain the proliferation, transmission, and invasion of metastatic cells and apoptosis. Furthermore, they exhibited vast in vivo anti-tumor effect. Additionally, HA-Se-PTX displayed minor toxicity on mice-chef-organs. Briefly, HA-Se-PTX might progress into a respected nano-scale agent in respiratory cancers. To sum up, Paclitaxel is considered a profitable anti-cancer drug in the treatment and anti-progress symptoms in malignant cancers.

Keywords : cancer, paclitaxel, chemotherapy, tumor

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