DENDRITIC CELLS VACCINE :A NEW TREATMENT FOR CANCER

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Abstract Dendritic cells (DCs) are professional antigen (Ag)-presenting cells (APCs) that, upon activation, can initiate and direct Ag-specific immune responses. DCs have become a promising tool for cancer immunotherapydue to considerable advances relatedto their biology and their role in T-cell activation, which has clearly opened avenues for the development of vastly improved clinical protocols. Accordingly, clinical studies have begun in which DCs are generated ex vivo, charged with tumor antigens, exposed to maturation stimuli and reinfused to immunize patients.

Key words: dendritic cells , cancer , vaccine

Cancer is a major health problem worldwide and one of the most important causes of morbidity and mortality in children and adults. The lethality of malignant tumors is due to their uncontrolled growth within normal tissues, causing damage and functional impairment.This approach has the potential to control responses to cancer antigens in a specific and nontoxic manner, in both vaccination and therapeutic settings.DC-based vaccines should present a “mature” state in order to activate an Ag-specific immune response upon T-cell encounter.

Objective In order to improve the effect of cancer treatment, developed DC-based vaccine. DC-based vaccine can promote the proliferation of CD8+T cells, enhanced CTL effect and delay the growth of the tumor.

Materials and methods The ability of the DC vaccine to kill the tumor was verified by tumor-bearing mice.The tumor cells were inoculated into the back of the mice and the tumor volume was measured every two days. When the volume is greater than 3000 mm3, to determine the death of mice. To investigate whether DCs-based vaccine can prolong the survival time of mice and inhibit tumor growth.

Results and discussion The malignant phenotype of cancers reflects defects in regula -tion of cell proliferation, resistance of the tumor cells to apoptotic death, ability of the tumor cells to invade host tissues and metas -asizeto distant sites, and tumor evas -ion of host immune defense mechanisms. The possibility that cancers can be eradi -cated by specific immune responses has been the impetus for a large body of work in the field of tumor immunology.Therapeutic vaccination is currently designed as an adjuvant or neoadjuvant treatment for patients with a high risk of recurrence.

Adequate vaccine design and a better understanding of host–tumor interactions are needed to overcome systemic and local immune tolerance and generate an effective antitumor response.Cancer vaccination efforts are centered on the disruption of the tolerogenic state of the immune systemand direction of an effector T-cell (Teff) response, ultimately leading to cancer regression. One of the first cancer vaccines to significantly advance in the clinic was GVAX, which involves irradiated tumor cells modified to express granulocyte-macro-phage-CSF (GM-CSF), thereby recruiting and maturing DCs at the site of vaccination to promote antigen uptake and delivery. Tumor- associated cDCs are thought to endocytose dead neoplastic cells or cellular debris andtransport cancer-associated antigens to the draining lymph node where T-cell priming and activation can occur. DCs-based vaccine can prolong the survival time of mice and inhibit tumor growth.

DC-based vaccine can improve immunity , control the tumor volume and prolong the survival time of mices. DC-based vaccine is a new way to treatment and prevention the tumor. Cancer vaccination efforts are centered on the disruption of the tolerogenic state of the immune systemand direction of an effector T cell response , ultimately leading to cancer regression. DCs can promote T cell response , enhanced CTL effect.The vaccine can promote CD8+T cell secretory IFN-γ and Grammzy B. DCs are generated ex vivo charged with tumor antigens, exposed to maturation stimuli and reinfused to immunize patients.

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A ROLE OF SCHISANDRA CHINENSIS AND ITS CONSTITUENTS IN THE PROTECTION OF CENTRAL NERVOUS SYSTEM

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Abstract : Schisandra chinensis (Turcz.) Baill. has a medical history for thousands of years as a tonic and obtained obvious effect. In the recent years, the scholars all over the world have finished a lot of researches on Schisandra chinensis, using more advanced methods to discuss its active ingredients and pharmacological effects. The components of Schisandra chinensis were mainly composed of lignans, polysaccharides, volatile oil, organic acids and so on. This herbal medicine can be used in cardiovascular system, central nervous system,