

Is immunotherapy a suitable treatment modality for cancer?

Editorial

Traditional anticancer therapies for solid tumor include surgery, chemotherapy, and radiotherapy. These therapeutic modalities are successful in treating various cancers which are in their initial phases of development. However, efficacy of these therapies is often disappointing in advanced cancers. Aside from latter problem, radiotherapy and chemotherapy's side effects often rise morbidity and mortality of the patients. In the past two decades, immunotherapy has been presented as a novel therapeutic modality for cancer. The aim of immunotherapy is either augmenting patient body's immune system by activating specific cytotoxic lymphocytes or de-activating immune regulator cells. Several immune cells and their products are involved in the recognition and elimination of malignant cells. Among them dendritic cells (DCs), and T-Cells are most studied for cancer immunotherapy.

In recent years, approval of anti-cytotoxic associated protein4 (CTLA-4) and anti cell death protein1(PD-1) antibodies for human use considered as a significant improvement in overcoming many cancers. Application of personalized vaccine like immunotherapeutic products are even more promising modality for complete remission from malignant tumor. In this modality, after removal of solid tumor, patient DCs or cytotoxic T-cells are stimulated (activated) with patient's tumor lysate then transfused back to patient. It has been shown that this modality works for many types of cancers but not all.

In spite of the significant immunotherapy improvements and success in remission or better to be said prevention of recurrence of the tumor, at the present, immunotherapy should be considered as

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a complementary treatment to chemotherapy or radiotherapy (after surgical removal of the tumor) in order to decrease cytotoxicity side effects of the conventional treatments by lowering the therapeutic dose of them and followed by immunotherapy. Using this modality, any malignant cell remained in patient's body will be destroyed by immunotherapy and also augment patient's immune response for prevention of infection and/or development of new malignant cells. Thus, the answer to my question is yes, immunotherapy is a suitable for treatment of cancer due to reduce morbidity and mortality of patients.

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Conflict of interest

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