

عنوان مقاله:

Combination of Natural Killer Cells and Monoclonal Antibodies: A Suitable Targeted therapy for Cancers

محل انتشار:

سومین کنگره بین المللی پزشکی شخصی ایران (سال: 1397)

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خلاصه مقاله:

Introduction Natural killer (NK) cells have an important role in killing the tumor cells. Specified monoclonal antibodies can enhance the function of NK cells against different tumor cells. When the antigen-binding fraction of the antibody binds to the tumor target cell and the constant region of the antibody binds to CD16 on the NK cells, NK cells get activated and ADCC is triggered. Due to the importance of recognition of specified tumor antigens and designing of monoclonal antibodies for enhancing the cytotoxicity of NK cells against the target cancer cell, we have decided to do a comprehensive study in this area. **Methods** Relevant English-language literature were searched and retrieved from PubMed search engine (2008-2018). The following keywords were used: Natural Killer Cells , Monoclonal Anti body and Targeted therapy . **Results** There are many studies showing the combinational use of NK cells and mono-clonal anti bodies in targeted killing the specific kind of cancer cells. For example combinational usage of NK cells and anti-CD20 (rituximab) can increase the cytotoxicity of NK cells for B-cell lymphoma, hairy cell leukemia, B –cell chronic lymphocytic leukemia and melanoma cancer stem cells. Other monoclonal antibodies like anti-CD52 (alemtuzumab) can increase the cytotoxicity of NK cells against chronic lymphocytic leukemia and multiple sclerosis, and anti–epidermal growth factor receptor (cetixumab and panitumumab) for squamous cell carcinoma of the head and neck, and and anti-CD38 (daratumumab) for multiple myeloma. **Conclusion** Despite the use of cytokines for expansion and activation of NK cells, adding mABs can increase the specific targeting of cancer cells and it can be further studied by recognition of more specific cancer markers, designing mABs and combinational usage of these anti bodies. **Conflict of Interest** The authors declare no conflict of interest.

کلمات کلیدی:

Natural Killer Cells, Monoclonal antibody, Personalized Medicine

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