

POSTER PRESENTATION

Open Access

P63. Autologous tumour cells and SW742 allogeneic cell line have comparable stimulating effect on PBMCs of gastrointestinal malignant patients in vitro

A Sheikhi^{1,4*}, K Saadati², R Salmani², N Mousavinasab³

From 1st Immunotherapy of Cancer Conference (ITOC1)
Munich, Germany. 12-14 March 2014

Background

Natural killer activity is believed to be important contributor of a patient's immune system to fight cancer. However, cancer patients have reportedly defective NK activity and the malignant target frequently has developed mechanisms to escape detection of NK cells. Our research is aimed at overcoming this NK cell deficiency.

Materials and methods

Malignant autologous epithelial cells of 10 colorectal carcinoma patients were separated by cell culture procedures. Peripheral blood mononuclear cells (PBMCs) were stimulated with their mitomycin treated autologous tumour cells or allogeneic SW742 colorectal carcinoma cell line. The expression of CD3, CD56, NKG2D and NKp44 were detected with flowcytometry and reverse transcription-PCR. NK activity of PBMCs against K562 target cell line was measured by MTT colorimetric assay.

Results

Stimulation with autologous tumour cells and allogeneic SW742 colorectal carcinoma cell line augmented CD56+ and CD56+CD3+ cells and up-regulated NKG2D and NKp44 expression. NK activity of PBMCs after co-incubation with autologous tumour cells or SW742 was significantly raised.

Conclusions

Our results demonstrated that stimulation of PBMCs by SW742 can significantly improve NK activity as much

as by autologous tumour cells which was confirmed by the higher expression of NKp44 and NKG2D. Since the separation of autologous tumor cells is difficult and time consuming the allogeneic tumour cell line could be a good replacement for large scale short term generation of activated NK cells. These data may help to improve cancer immunotherapy protocols.

Authors' details

¹Dezful University of Medical Sciences, Immunology, Dezful, Iran. ²Zanjan University of Medical Sciences, Surgery, Zanjan, Iran. ³Zanjan University of Medical Sciences, Social Medicine, Zanjan, Iran. ⁴Zanjan University of Medical Sciences, Immunology, Zanjan, Iran.

Published: 12 March 2014

doi:10.1186/2051-1426-2-S2-P37

Cite this article as: Sheikhi et al.: P63. Autologous tumour cells and SW742 allogeneic cell line have comparable stimulating effect on PBMCs of gastrointestinal malignant patients in vitro. *Journal for ImmunoTherapy of Cancer* 2014 **2**(Suppl 2):P37.

**Submit your next manuscript to BioMed Central
and take full advantage of:**

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

Submit your manuscript at
www.biomedcentral.com/submit



¹Dezful University of Medical Sciences, Immunology, Dezful, Iran
Full list of author information is available at the end of the article