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A study on mutual interaction between cytokine induced killer cells and umbilical cord-derived mesenchymal cells: Implication for their in-vivo use

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Abstract

Recently a number of cellular therapy based-clinical trials have been carried out using mesenchymal stromal cells (MSC) or cytokine-induced-killer (CIK) cells aiming to improve outcome of allogeneic hematopoietic stem cell transplantation. We have isolated MSC from umbilical cord (UC) exploring the interaction between CIK cells and UC-MSC. We found that UC-MSC could suppress CIK cells activity, when co-cultured in a cell-to-cell system. In addition, CIK cells could potentially lyse UC-MSC in a time and ratio dependent manner that could have implications for their in vivo use. Here we provide experimental data on the mutual interaction of CIK cells and UC-MSC, suggesting a negative interference when the two cell types are used in combination. In the light of our observations, when CIK and UC-MSC will be used in clinical trials, timing and sequencing of their infusion should be considered.

Link all'articolo: <https://pubmed.ncbi.nlm.nih.gov/22818859/>