



ORAL

Effect of human umbilical cord-derived MSCs on the proliferation of peripheral blood T lymphocytes with different level HLA matching

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Abstract

Human umbilical cord-derived MSCs are very attractive sources of stem cells for the non-autologous cell transplantation therapy to treat many kinds of diseases based on their efficiency in treating graft versus host disease (GVHD), a condition that patient might suffer after receive cell-transplantation. However, the immune properties of MSCs are also critical for their efficiency in regenerative medicine applications. Thus, the mechanism of their action is now under intense investigation. A number of researches showed that MSCs exert strong anti-inflammatory and immunosuppressive effects on the main immune cell subsets through their production of various soluble factors. As a result, scientists all over the globe are changing their attention to the immunomodulatory property of MSCs, hence we are not an exception. Our research was carried out in order to strengthen our knowledge about this spectacular aspect of MSCs, especially the effect of cord-derived MSCs on the proliferation of peripheral blood T lymphocytes with different level HLA matching. Our results indicated that at passage 4 of culture, human umbilical cord-derived MSCs had no effect on the proliferation of T cells with all blood sample tested.

Keywords

MSCs, human umbilical cord, cell transplantation, immunogenicity, T cell proliferation

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