

Review of Effect of Storage Time before Freezing on Stem Cells Surveillance, Collected from Cord Blood, Peripheral Blood and Bone Marrow

*M Amirpour¹

¹Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.

Introduction:

The use of cord stem cells, as a cell source for bone marrow reconstruction in patient under hematopoietic stem cell transplantation is enhancing. The amount of CD34⁺ cells collected from cord blood compared to peripheral blood and bone marrow are less, but their collection procedure is easier. Delay in freezing has negative effect on cells surveillance and reduce their ability in transplant acceptance. Therefore collected cells should be used in bone marrow transplantation as soon as possible. The aim of this review is to determine the effect of 72 hours delay on CD34⁺ and CD45⁺ cell crowd in cord samples, and increase this time in cord bank if possible.

Material and method:

Survival rate of CD34⁺ and CD45⁺ cells in cord donated samples in 72 hours consecutive before and after freezing was measured by flow cytometry technique, anksyn V and D-Amino Actinomycin. These claimants were collected from books and research papers.

Results:

Surveillance rate of CD34⁺ remain high before freezing up to 72 hours, whereas survival rate of CD45⁺ reduce during 72 hours.

Conclusion:

Long time storage before freezing has negative effect on cell surveillance rate.

Key words: Stemcell, Storage, Surveillance.

Poster Presentation

***Corresponding Author:** M Amirpour, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.