

Stem Cell Therapy in Hypoxic Ischemic Encephalopathy

*Ashraf Mohammadzadeh¹, Ahmadshah Farhat¹

¹ Neonatal Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.

Introduction

there are one million deaths from asphyxia in newborn annually. Management of this newborn is only supportive. Autologuse stem cell therapy may reduce mortality and long term morbidity. Outcome of asphyxiated newborn is related to damage CNS cells. Stem cells prevent Apoptosis and induce repairmen of injured neurons.

Methods

in a review study all article related to three keywords of stem cell, newborn, hypoxic ischemic encephalopathy (HIE) were studied.

Results

in study of Paula et al stem cell by release of trophic factors and inflammatory mediators had supportive effect on HIE. In another experimental study (in mice) the authors observed improvement in sensorial and motors function and decreasing ischemic lesion. Veltron et al in 9 mice with HIE, injection of stem cell from nose 10 days after asphyxia found improvement in gray mater (34%) and white mater (37%). they also found secretion of some growth factor such as FGP2, NGFT in case group. Moa et al in an experimental study observed increasing of neurons and increased IQ in 6 months of age.

Conclusion

Recent studies showed that stem cells will improve CNS function by reducing damaged lesion.

Keywords: Hypoxic Ischemic encephalopathy, Newborn, Stem cell.

Poster Presentation

***Corresponding Author:** Ashraf Mohammadzadeh, Neonatal Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.Email: Mohamadzadeha@mums.ac.ir