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Poster Presentation

Meningioma Stem Like Cells and Self Assembling Nanopeptide Scaffold for Treatment of Traumatic Brain Injury in Animal Model

Pardis Oliazadeh[1], Hasan Abbasian[2], Moniba Bijari[1], Fateme Gholami Zohan[2], Sajad Sahab Negah[2, 3*]

[1]Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran
[2]Neuroscience Department, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran
[3]Shefa Neuroscience Research Center, Khatam Alanbia Hospital, Tehran, Iran

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Abstract

Introduction: Brain injury is an important cause of morbidity and mortality worldwide and so far, there has been no absolute treatment for the damaged brain tissue. Using human stem cells with self-assembling scaffolds can be a promising method for treatment of traumatic brain injury. **Materials and Methods:** Human meningioma stem cells were isolated, cultured and then expanded into in vitro condition. The rat models of TBI were divided into 5 groups as follows: sham, PBS, stem cells, scaffold and stem cell + scaffold. To evaluate movement improvement and physical activity mNSS and EEG were used and to evaluate cell differentiation and inflammation response IHC was done. **Results:** Our results showed that mNSS were significantly improved in cell group. **Conclusion:** Tissue engineering is a new therapeutic method and can be promising in treating damaged parts of brain during traumatic brain injury.

Keywords: Tissue engineering, Human meningioma stem like cells, Traumatic brain injury

Corresponding Author: Sajjad Sahab Negah
Email: *Sahabsajad@yahoo.com*

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