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Poster Presentation

Cell Therapies for Neurological Injury

Sara Abdolahi[1, 2*], Sedigheh Ghasemi[1], Robabeh Jafari1, Zeinab Najmi[1, 3]

[1]Shefa Neuroscience Research Center, Khatam Alanbia Hospital, Tehran, Iran
[2]Department of Pathobiology, School of Veterinary Medicine, Shiraz University, Shiraz, Iran
[3]Microbial biotechnology Group, Faculty of Basic Sciences, Tehran Science and Research Branch, Islamic Azad University, Tehran, Iran

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Abstract

A neurological disorder is any disorder of the nervous system is usually due to cell loss. The ultimate goal of CNS therapy is to replace lost cells and tissue. There is no neuroprotective, pharmacological and effective treatment available that restores the injury-induced loss of function. Recent studies suggest that identification of adult neural stem/progenitor cells indwelling in the neurogenic regions in the adult mammalian brain and spinal cord may play regenerative and reparative roles in response to CNS injuries. Therefore, cell transplantation is a potential strategy to repair and regenerate the injured brain and spinal cord. Different types of stem cells vary in their ability to help restore function, and an ideal treatment protocol remains unclear pending further clinical research. Stem cells derived from adult tissues such as mesenchymal progenitor cells, fetal progenitors, and post-mitotic cells have a limited potential to differentiate into specific cell types. As Brain and spinal cord injury are associated with enormous loss of multiple cell types due to primary mechanical tissue disruption. The choice of stem cell population used in replacement therapies after Brain and spinal cord injury might therefore be critical.

Keywords: Neurological injury, Cell therapies, Neural stem/progenitor cells.

Corresponding Author: Sara Abdolahi
E-mail: *abdolahisara65@gmail.com*

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