Stem Cell Therapy In Stroke

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Abstract

The ultimate aim of any therapeutic strategy is the maximum functional restoration possible and eventual complete normalcy of function. The non – regenerative capability of the injured adult brain has been challenged in recent years and neural plasticity has been observed experimentally in both global and focal brain ischemia in animal models. Whether neuro - genesis increases in response to brain lesions and whether stem cells can be used for transplantation are potential questions to be answered. Functional recovery may occur in a small or localized brain injury using rehabilitation measures, but for large ischaemic strokes, the restoration may require new synaptic connections within and away from the damaged tissue. In an infarcted area, the ischemic core may not respond to any pharmacological or rehabilitative intervention. For these reasons, the prospects of repairing the neuron system, using cell transplantation, seems promising and may offer a unique approach for brain repair and restoration of function. On-going animal and human trials have largely helped in burgeoning our hopes on this method of restorative therapy after stroke.

Key words: stem cells, stroke, neuroregeneration, brain plasticity, restorative therapies