Clinical Profiles and Outcomes of Patients with Neurological Diseases Treated with Stem Cell Therapy: A Single-Center Experience in the Philippines

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ABSTRACT

Background
Neurologic disorders are caused by a either neural cell loss or neurologic cell injury processes. Management of these disorders would therefore be to replace the lost cells, clear the pathological hallmarks or repair cell function. Stem cells offer the possibility of a renewable source of replacement cells and tissues as a form of treatment in neurological regeneration.

Objectives
This study aims to evaluate the clinical profile and outcomes of cellular therapy given to all patients with neurologic disorders enrolled in a center for regenerative medicine in a tertiary hospital in the Philippines which may then aid in the paucity of local data.

Methods
This is a 10 year-retrospective descriptive study of the medical records of patients who completed 6 cycles of mesenchymal stem cells and neural stem cells infusion. Clinical profiles were evaluated and outcome in terms of functional status, subjective effects, and quality of life after the cellular therapy.

Results
Among the 48 cases enrolled, only 29 were included in the study. Majority of the patients have neurodegenerative disease like Parkinson's disease; second has acute spinal cord injury, and least with brain tumor. Other diseases enrolled are stroke, encephalopathy, dementia, multiple sclerosis and motor neuron disease. Majority are male. Clinical outcomes show that functional status of pre and post treatment has no significant difference, however there are subjective reports of multiple improvements among the disease categories on post-treatment.

Conclusion
Most common patients catered are those with neurodegenerative diseases among the aging population. The use of cellular therapy among patients with neurological disorders showed trend towards improvement of signs and symptoms as well as quality of life. Local awareness and more experiences of this therapeutic option may help in the utilization of this form of therapy in the future. This therapy enables clinical application of translational research, give more hope than hype.

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BIOGRAPHY:

Genica Lynne Maylem, has a college degree in Bachelor of Science in Biochemistry from the University of Santo Tomas, Manila, Philippines. Currently, she is a Neurology Resident in The Medical City, a tertiary level and Joint Commission International (JCI) – accredited hospital in the Philippines. She has collaborated with the hospital's Institute of Personalized Molecular Medicine, one of the pioneer centers in regenerative medicine in the country.