

Intraventricular Transplantation Of Stem Cells In Chronic Haemorrhagic Stroke

Asra Al Fauzi¹, Nur Setiawan Suroto¹, Abdul Hafid Bajamal¹

¹Department Of Neurosurgery/ Universitas Airlangga, School Of Medicine - Dr. Soetomo General Hospital Surabaya Neuroscience Institute/ Indonesia

Purpose

Stroke, one of the most devastating diseases, is a leading cause of death and disability throughout the world and is also associated with emotional and economic problems. The main goal of this study was to investigate the clinical outcome of the intraventricular transplantation of bone marrow mesenchymal stem cells (BM-MSCs) in post-haemorrhagic stroke patients.

Materials and Methods

This study was done consisting of eight patients with supratentorial haemorrhagic stroke, who had undergone 24 weeks of standard treatment of stroke with stable neurological deficits. All of patients received stem cell transplantation intraventricularly using autologous BM-MSCs. Six months and Twelve months after stem cells treatment, the clinical outcomes were measured using the National Institute of Health Stroke Scale (NIHSS) and adverse effect also observed.

Results

The results of this study showed improvement of NIHSS score values before and after the treatment in 5 patients. No adverse effects or complications were detected during the 1 years observation.

Conclusion

Intraventricular transplantation of BM-MSCs is showed benefits in improving the functional status of post-haemorrhagic stroke patients with no adverse effect.