

## Study examines role of intraventricular transplantation of bone marrow mesenchymal stem cell in stroke patients

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Winner of the American Association of Neurological Surgeons (AANS) International Travel Scholarship, Asra Al Fauzi, MD, IFAANS, presented his research, Intraventricular Transplantation of Autologous Bone Marrow Mesenchymal Stem Cell in Hemorrhagic Stroke, during the 2016 AANS Annual Scientific Meeting.

This research investigates the role of intraventricular transplantation using bone marrow mesenchymal stem cell in stroke patients.

This study was one group (eight patients) pre- and post-test design. Subjects were selected from supratentorial hemorrhagic stroke patients after six months of treatment with stable neurological deficits with NIHSS of 5-25. Clinical outcomes were measured using the NIHSS scale six months after transplantation. Bone marrow was aspirated, taken from the same patient under aseptic conditions, and expansion of MSC took three to four weeks. All patients were administered a mean of  $20 \times 10^6$  cells intraventricularly.

The result showed improvement of the NIHSS score in five patients after treatment, and the rest were in the same condition. No important adverse events derived from transplant or surgery was observed during a six-month follow up.

The study demonstrates that bone marrow mesenchymal stem cell can be transplanted intraventricularly with excellent tolerance and without complications. Stem cell transplantation aiming to restore function in stroke is both safe and feasible. Further randomized controlled trials are needed to evaluate efficacy.

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Source:

American Association of Neurological Surgeons (AANS)

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