

A SINGLE CENTER RETROSPECTIVE ANALYSIS OF SAFENESS AND EFFECTIVENESS OF ENDOVASCULAR MECHANICAL RECANALIZATION WITH BRIDGING

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Background: Endovascular mechanical recanalization is a rapidly evolving method for intracranial large vessel flow restoration in acute stroke patients. However, recent studies have shown that it offers no advantage over intravenous thrombolysis. Our four-year results with mechanical recanalization and bridging thrombolysis from Ljubljana University Medical Centre were analysed in order to study an impact on clinical outcome.

Methods: A total of 138 patients with large vessel stroke were treated with mechanical recanalization at a single centre during four years. Recanalization rate, presented as Thrombolysis in cerebral infarction (TICI) score, time to recanalization and periprocedural complications were analyzed. Clinical outcome, presented as National Institutes of Health Stroke Scale (NIHSS) score and modified Rankin Scale (mRS) score was analyzed through studied period.

Results: Successful recanalization (TICI 2b or 3) was achieved in 93% (2009), 65 % (2010), 93% (2011) and 93.5 % (2012) of treated patients. Procedure duration time reduced from average 124, 104, 90 to 43 minutes in the last studied year, while clinically significant procedure-related adverse event rate decreased from 21 %, 5%, 3.3 % to 2 %. A statistically significant decrease in NIHSS and mRS was noticed after the procedure through all four years ($p \leq 0.05$).

Conclusions: Over four years we achieved increasingly higher recanalization rates, lower procedural complications and improved clinical outcome using mechanical recanalization with bridging intravenous thrombolysis in acute stroke patients. Although it is not commonly recommended we can conclude that endovascular mechanical recanalization in our centre is a safe and effective evolving treatment for acute stroke patients.