

Predictors for good functional outcome after mechanical thrombectomy in acute cerebral artery occlusion

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Introduction: Acute occlusion of a major cerebral artery is associated with high mortality and morbidity. Few data about prognostic factors for a good outcome are available, although mechanical thrombectomy has significantly advanced over the last 5 years. The aim of this study is to investigate good prognostic factors for an acute occlusion of a major cerebral artery using mechanical thrombectomy.

Materials & Methods: A single centre retrospective analysis of 37 consecutive patients with acute occlusion of a major cerebral artery treated by mechanical thrombectomy with stent retrievers was conducted. Collaterals were assessed by the Thrombolysis in Myocardial Infarction (TIMI) and recanalization was assessed by the Thrombolysis in Cerebral Infarction (TICI) score. Outcome was assessed by National Institutes of Health Stroke Scale (NIHSS) and modified Rankin Scale (mRS) at 90 days.

Results: Most patients (27/37) demonstrated good recanalization (TICI 2b or 3) after thrombectomy. At the 90-day follow up, 19 patients had well (mRS, 0-2), 14 had moderate (mRS, 3-4) and four had poor outcomes (mRS, 5-6). Early recanalization, high TIMI and low baseline NIHSS were closely related to 90-day mRS whereas high TICI was related to both mRS and the decrease in the NIHSS.

Conclusions: NIHSS decreased markedly when recanalization was successful. A good mRS was related to low initial NIHSS and good collateral and early and successful recanalization.