How bad is a TICI 2?

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Abstract

Background: Successful reperfusion is a predictor of good outcome in acute ischemic stroke (AIS), following mechanical thrombectomy (MT) for large-vessel occlusions. Technical success in endovascular therapy has been defined as TICI score 3 or 2b in several studies, although scarce data is available on clinical outcome in patients in whom a lower TICI (0–2a) was achieved.

Objective: To examine the functional outcome of patients subjected to MT for anterior circulation large-vessel occlusion, with TICI 0–2a recanalization score.

Methods: Single-center retrospective analysis of the subset of TICI 0–2a, from consecutive 177 patients treated with MT for acute anterior circulation large intracranial artery occlusion, from January 2016 to December 2016.

Results: Of 177 patients, 21 were included, with 12 women (57%) and a mean age of 64.2 years (SD 18.4). Mortality rate was 23%. Two groups were defined based on clinical outcome, defined as 3-month modified Rankin Scale (mRS) 0–2 (n=4 – 19) or >2 (n=17 – 81). The group with good clinical outcome (n=4) had younger ages (mean 47 years, SD 17.4 versus 68.2 years, SD 16.6), lower median intervention time (53 minutes versus 98.5 minutes) and no intracranial hemorrhage (versus 11.8 on the worst clinical outcome group). No difference was found on stroke etiology, site of occlusion, previous mRS or onset-reperfusion among the two groups.

Conclusion: Most patients with incomplete or absent reperfusion had an unfavorable clinical outcome, whilst heterogeneity was found among younger patients. Further studies with larger samples are warranted to determine prognostic factors among these patients.