FAST PROGRESSORS GET THE MOST BENEFIT FROM THROMBECTOMY DESPITE LARGER PRETREATMENT INFARCT CORES

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Background

Recent trials on mechanical thrombectomy (MT) in late time windows have excluded from treatment patients with large baseline infarct cores (IC).

Objective

We aimed to compare the quantitative effectiveness of MT in terms of infarct growth (IG) on clinical outcomes in patients with small, medium or large pre-treatment IC.

Methods

We studied a prospective cohort of 338 acute stroke patients with proximal occlusions in the carotid territory (256 treated with MT, 82 treated with best medical care (BMC) who had pre-treatment computed tomographic perfusion (CTP) and 24h follow-up DWI. According to the IC in CTP, patients were classified into 3 subgroups: small (<10cc: n=81 MT, n=29 BMC), medium (10-50cc: n=138 MT, n=35 BMC) and large (>50cc: n=37 MT, n=17 BMC). We compared baseline characteristics, IG between CTP and DWI, and outcome (mRS) at 3 months.

Results

Increasing pre-treatment IC was associated with greater reduction of IG (IG 5cc with MT versus 35cc with BMC). Yet, the clinical benefit was maximal in patients with IC >50cc (mRS 3 in MT versus mRS 5 in BMC). The clinical benefits were not associated with baseline imbalances between IC groups.

* p < 0.05

Conclusions

MT may be especially effective in patients presenting with large baseline IC (fast-progressors). These results caution against too restrictive criteria for MT in patients with large vessel occlusion.