LASTE Trial

ORIGINAL ARTICLE

Trial of Thrombectomy for Stroke with a Large Infarct of Unrestricted Size

Question: is thrombectomy effective for patients with very low ASPECTS score, presenting within 6.5 hours??

Current Evidence: Thrombectomy for LVO with ASPECTS ≥ 2 and mRS of 0-1

Bottom Line: Thrombectomy for LVO with very low ASPECTS (0-5) within 6.5 hours, was associated with better outcomes. Benefits were seen with ASPECTS 0-2 in patients < 80-year-old & patients with very large volume in DWI/CT (>150ml).

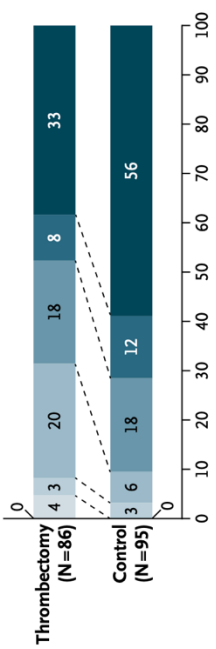
Inclusion Criteria
> 18-year-old
mRS: 0-1
NIHSS ≥ 6
Within 6.5 hours or WAKE-UP stroke with DWI-FLAIR mismatch
ASPECTS: < 80-year: ASPECTS 0-5 > 80-year: ASPECTS 4-5
Intracranial ICA or M1 occlusion

Baseline Characteristics (most patients)	
Age – median	73
mRS 0 - 1	82% - 27 %
NIHSS – median	21
Imaging CT – MRI	17% - 82%
ASPECTS	0-2: 54% 3-5: 45%
Infarct size – median	132 ml (IQR 104-185)
LVO	I-ICA: 44% M1: 55%

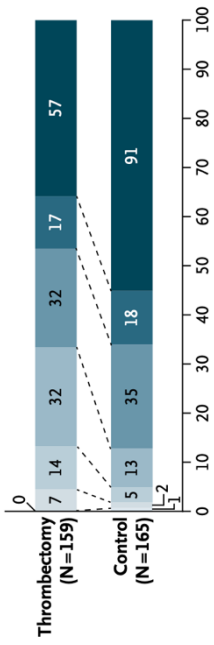
Treatment Arms: 333 patients, randomized for either thrombectomy or standard of care without thrombectomy

	Treatment effect	Thrombectomy	No Intervention
90-d mRS			
Median	1.63	4	6
0-2	2.39	13.3%	4.9%
0-3	2.69	33.5%	12.2%
Craniectomy	0.81 (0.37-1.74)	8.8%	11.5%
sICH (SITS-MOST)	1.29 (0.2-16.4)	3.2%	2.5%
Death	0.65%	36%	55.5%

Subgroup Analysis (Odds of Improved mRS in subgroups)	
< 70-year-old	2.03 (1.36–3.03)
> 70-year-old	1.44 (1.08–1.90)
ASPECTS ≤ 2	1.77 (1.30–2.41)
volume > 150ml	1.58 (1.11–2.23)
Using MRI	1.71 (1.32–2.21)
Using CT	1.34 (0.78–2.30)



ASPECTS ≤ 2



ASPECTS < 5

Caveats: Most patients had MRI (82) rather than CT scan which is not the typical imaging for patients with LVO. Thrombectomy for ASPECTS 0-3 was done only for patients < 80-year-old.

Late Complications: More sICH was seen after 24h in the thrombectomy group (16% vs 8%, Appendix A),