Supplemental material

Intra-arterial thrombolytics during endovascular thrombectomy for acute ischemic stroke in the MR CLEAN Registry

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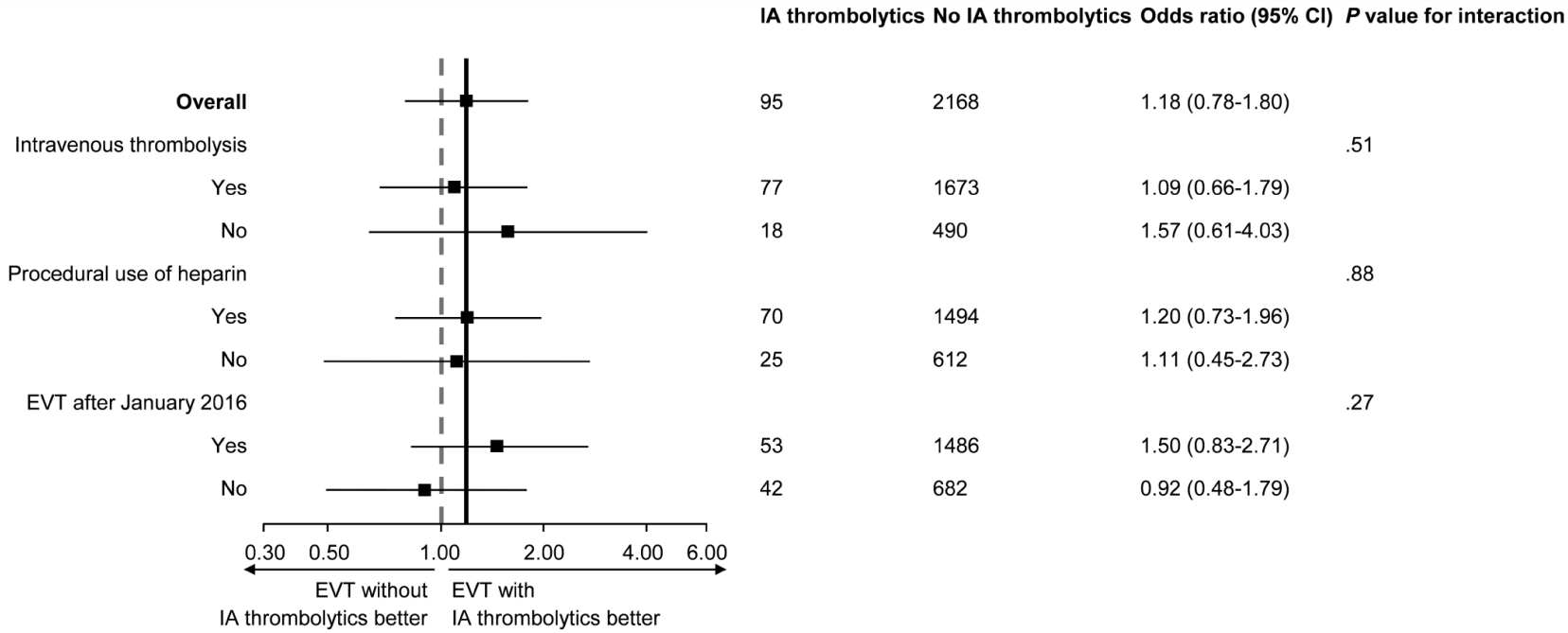
Figure S1. Stratified analyses of the primary outcome



EVT, endovascular thrombectomy; IA, intra-arterial.

CI, confidence interval.

The forest plot shows the odds ratios for favorable functional outcome (defined as modified Rankin Scale score ≤2) at 90 days across the prespecified subgroups. The dashed vertical line indicates no effect. The solid vertical line indicates the overall effect.

Table S1. Distribution of revascularization attempts and occlusion locations

Location	Primary attempt (n=26)	Adjuvant attempt (n=60)
Proximal occlusion	**18/26 (69.2)**	**47/60 (78.3)**
ICA	0 (0)	2/60 (3.3)
M1	7/26 (26.9)	18/60 (30.0)
M2	11/26 (42.3)	20/60 (33.3)
A1	0 (0)	1/60 (1.7)
A2	0 (0)	5/60 (8.3)
ACOM	0 (0)	1/60 (1.7)
Distal occlusion	**8/26 (30.8)**	**13/60 (21.7)**
M3	5/26 (19.2)	8/60 (13.3)
M4	2/26 (7.7)	1/60 (1.7)
A3	1/26 (3.8)	3/60 (5.0)
PCOM and P1	0 (0)	1/60 (1.7)

A1, anterior cerebral artery, first segment; A2, anterior cerebral artery, second segment; A3, anterior cerebral artery, third segment; ACOM, anterior communicating artery; ICA, internal carotid artery; M1, middle cerebral artery, first segment; M2, middle cerebral artery, second segment; M3, middle cerebral artery, third segment; M4, middle cerebral artery, fourth segment; P1, posterior cerebral artery, first segment; PCOM, posterior communicating artery.

Table S2. Baseline characteristics

Characteristics	**Primary attempt (n=26)**	**Adjuvant attempt (n=65)**	***P* value**
Age, *median (IQR)*, years	66 (53-77)	67 (56-74)	.99
Male, *n (%)*	15/26 (58)	32/65 (50)	.47
Medical history, *n (%)*			
Atrial fibrillation	7/26 (26.9)	6/65 (9.2)	.05
Diabetes mellitus	2/26 (7.7)	7/65 (10.8)	>.99
Hypercholesterolemia	5/26 (19.2)	17/65 (26.2)	.49
Hypertension	11/26 (42.3)	28/65 (43.1)	.95
Myocardial infarction	5/26 (19.2)	6/65 (9.2)	.28
Previous stroke	4/26 (15.4)	4/65 (6.2)	.22
Current smoker, *n (%)*	9/19 (47.4)	16/48 (33.3)	.28
Use of antiplatelet, *n (%)*	9/26 (34.6)	16/65 (24.6)	.33
Use of anticoagulation, *n (%)*	5/26 (19.2)	2/65 (3.1)	.02
Initial location occlusion on CTA, *n (%)*			
Left hemisphere	19/26 (73.1)	37/65 (56.9)	.15
Intracranial ICA	6/26 (23.1)	24/65 (36.9)	.45
M1	14/26 (53.8)	29/65 (44.6)	
M2	6/26 (23.1)	12/65 (18.5)	
A1	0/26 (0)	0/65 (0)	
A2	0/26 (0)	0/65 (0)	
Collateral status, *n (%)*			.64
Absent collaterals	1/25 (4.0)	5/62 (8.1)	
<50% of occluded area	10/25 (40.0)	21/62 (33.9)	
50-99% of occluded area	10/25 (40.0)	20/62 (32.3)	
100% of occluded area	4/25 (16.0)	16/62 (25.8)	
NIHSS score, *median (IQR)*	14 (7-17)	17 (11-20)	.08
Intravenous thrombolysis, *n (%)*	20/26 (76.9)	54/65 (83.1)	.56
Pre-intervention SBP, *mean (SD)*, mm Hg	155 (26)	150 (27)	.44

A1, anterior cerebral artery, first segment; A2, anterior cerebral artery, second segment; CTA, computed tomography angiography; ICA, internal carotid artery; M1, middle cerebral artery, first segment; M2, middle cerebral artery, second segment; NIHSS, National Institutes of Health Stroke Scale; SBP, systolic blood pressure.

IQR, interquartile range; n, number; SD, standard deviation.

Table S3. Procedural variables

Characteristics	**Primary attempt (n=26)**	**Adjuvant attempt (n=65)**	***P* value**
IA thrombolytics, *n (%)*			.62
Urokinase	17/26 (65.4)	46/65 (70.8)	
Alteplase	9/26 (34.6)	19/65 (29.2)	
Dose IA thrombolytics, *median (IQR)*			
Urokinase, IU	250,000 (125,000-375,000)	250,000 (200,000-250,000)	.94
Alteplase, mg	20 (10-20)	20 (16-20)	.75
General anesthesia, *n (%)*	9/25 (36.0)	23/61 (37.7)	.88
Time from stroke onset to groin puncture, *median (IQR)*, minutes	193 (152-245)	205 (158-254)	.56
Time from groin puncture to recanalization or last contrast bolus, *median (IQR)*, minutes	65 (45-75)	80 (65-118)	.01

IA, intra-arterial.

IQR, interquartile range; n, number.

Table S4. Baseline characteristics

Characteristics	**Proximal occlusion (n=67)**	**Distal occlusion (n=21)**	***P* value**
Age, *median (IQR)*, years	69 (56-77)	65 (57-74)	.50
Male, *n (%)*	37/67 (56)	9/21 (43)	.32
Medical history, *n (%)*			
Atrial fibrillation	8/67 (11.9)	5/21 (23.8)	.29
Diabetes mellitus	6/67 (9.0)	3/21 (14.3)	.44
Hypercholesterolemia	19/67 (28.4)	3/21 (14.3)	.19
Hypertension	29/67 (43.3)	11/21 (52.4)	.47
Myocardial infarction	10/67 (14.9)	2/21 (9.5)	.72
Previous stroke	5/67 (7.5)	3/21 (14.3)	.39
Current smoker, *n (%)*	20/50 (40.0)	3/13 (23.1)	.34
Use of antiplatelet, *n (%)*	21/67 (31.3)	4/21 (19.0)	.28
Use of anticoagulation, *n (%)*	7/67 (10.4)	0/21 (0)	.19
Initial location occlusion on CTA, *n (%)*			
Left hemisphere	37/67 (55.2)	16/21 (76.2)	.09
Intracranial ICA	22/67 (32.8)	6/21 (28.6)	.57
M1	33/67 (49.3)	9/21 (42.9)	
M2	12/67 (17.9)	6/21 (28.6)	
A1	0/67 (0)	0/21 (0)	
A2	0/67 (0)	0/21 (0)	
Collateral status, *n (%)*			.57
Absent collaterals	4/65 (6.2)	2/19 (10.5)	
<50% of occluded area	22/65 (33.8)	6/19 (31.6)	
50-99% of occluded area	26/65 (40.0)	5/19 (26.3)	
100% of occluded area	13/65 (20.0)	6/19 (31.6)	
NIHSS score, *median (IQR)*	16 (10-19)	14 (6-19)	.32
Intravenous thrombolysis, *n (%)*	53/67 (79.1)	18/21 (85.7)	.75
Pre-intervention SBP, *mean (SD)*, mm Hg	149 (25)	158 (29)	.17

A1, anterior cerebral artery, first segment; A2, anterior cerebral artery, second segment; CTA, computed tomography angiography; ICA, internal carotid artery; M1, middle cerebral artery, first segment; M2, middle cerebral artery, second segment; NIHSS, National Institutes of Health Stroke Scale; SBP, systolic blood pressure.

IQR, interquartile range; n, number; SD, standard deviation.

Table S5. Procedural variables

Characteristics	**Proximal occlusion (n=67)**	**Distal occlusion (n=21)**	***P* value**
IA thrombolytics, *n (%)*			.48
Urokinase	47/67 (70.1)	13/21 (61.9)	
Alteplase	20/67 (29.9)	8/21 (38.1)	
Dose IA thrombolytics, *median (IQR)*			
Urokinase, IU	250,000 (200,000-375,000)	200,000 (112,500-250,000)	.04
Alteplase, mg	20 (12-20)	20 (15-20)	.77
General anesthesia, *n (%)*	23/63 (36.5)	8/20 (40.0)	.78
Time from stroke onset to groin puncture, *median (IQR)*, minutes	195 (145-242)	225 (193-283)	.04
Time from groin puncture to recanalization or last contrast bolus, *median (IQR)*, minutes	70 (55-108)	78 (64-95)	.58

IA, intra-arterial.

IQR, interquartile range; n, number.

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