

Table S1. Bivariable analysis of the predictors of early National Institute of Health Stroke Scale improvement

Total N=209		delta NIHSS score < 4 points n=130	delta NIHSS score ≥ 4 points n=79	Crude Odds Ratios (95%CI)	P-values
Positioning					
	n-TP	81 (62.3)	38 (48.1)	1	
	TP	49 (37.7)	41 (51.9)	1.78 (1.01-3.14)	0.045
Age					
	31 to 65 years	32 (24.6)	24 (30.4)	1	
	66 to 75 years	30 (23.1)	20 (25.3)	0.89 (0.40-1.93)	0.766
	76 to 85 years	36 (27.7)	18 (22.8)	0.67 (0.30-1.45)	0.305
	86 to 94 years	32 (24.6)	17 (21.5)	0.70 (0.32-1.56)	0.393
Gender					
	Female	71 (54.6)	35 (44.3)	1	
	Male	59 (45.4)	44 (55.7)	1.51 (0.86-2.65)	0.149
Diabetes mellitus					
	No	109 (81.5)	70 (88.6)	1	
	Yes	24 (18.5)	9 (11.4)	1.76 (0.77-4.01)	0.178
Heart rate					
	43 to 70 ppm	41 (31.5)	35 (44.3)	1.73 (0.96-3.08)	0.064
	71 to 140 ppm	89 (68.5)	44 (55.7)	1	
Mean arterial BP					
	59 to 103 mmHg	57 (43.8)	44 (55.7)	1.61 (0.91-2.82)	0.097
	104 to 180 mmHg	73 (56.2)	35 (44.3)	1	
Haemoglobine rate					
	8.7 to 14.0 g.dL ⁻¹	75 (57.7)	32 (40.5)	1	0.017
	14.1 to 18.6 g.dL ⁻¹	55 (42.3)	47 (59.5)	2.00 (1.13-3.53)	
Collateral vessel network					
	"Poor"	46 (35.4)	31 (39.2)	1	
	"Good"	84 (64.6)	48 (60.8)	0.85 (0.47-1.51)	0.575
Thrombolysis with IV rt-PA					
	No	67 (51.5)	32 (40.5)	1	
	Yes	63 (48.5)	47 (59.5)	1.56 (0.88-2.75)	0.122
Recanalization					
	Non effective	54 (41.5)	20 (25.3)	1	
	Effective	28 (21.5)	31 (39.2)	2.99 (1.44-6.17)	0.003
	Missing	48 (36.9)	28 (35.4)	1.57 (0.78-3.15)	0.199

TP: Trendelenburg Positioning ; nTP: non-Trendelenburg Positioning

NIHSS: National Institute of Health Stroke Scale

BP: blood pressure ; IV rt-PA : intravenous recombinant tissue plasminogen activator

Data are numbers and percentages (brackets), crude (unadjusted) odds ratios and 95% confidence intervals

Table S2. Multiple logistic regression models of the predictors of early National Institute of Health Stroke Scale improvement according to the level of NIHSS admission score

		delta NIHSS score < 4 points	delta NIHSS score >= 4 points	Adjusted Odds Ratios (95%CI)	P-values
Admission NIHSS score <=12, n=105		n=76	n=29		
Positioning					
	n-TP	49 (64.5)	13 (44.8)	1	
	TP	27 (35.5)	16 (55.2)	2.95 (1.07-8.11)	0.036
Gender					
	Female	47 (61.8)	11 (37.9)	1	
	Male	29 (38.2)	18 (62.1)	3.02 (1.13-8.02)	0.026
Thrombolysis with IV rt-PA					
	No	50 (65.8)	11 (37.9)	1	
	Yes	26 (34.2)	18 (62.1)	2.90 (1.00-8.39)	0.049
Recanalization					
	Non effective	32 (42.1)	5 (17.2)	1	
	Effective	18 (23.7)	13 (44.8)	2.75 (0.75-10.05)	0.126
	Missing	26 (34.2)	11 (37.9)	3.83 (1.04-14.11)	0.043
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		delta NIHSS score < 4 points	delta NIHSS score >= 4 points	Adjusted Odds Ratios (95%CI)	P-values
Admission NIHSS score >12, n=104		n=54	n=50		
Positioning					
	n-TP	32 (59.3)	25 (50.0)	1	
	TP	22 (40.7)	25 (50.0)	1.57 (0.69-3.53)	0.277
Gender					
	Female	24 (44.4)	24 (48.0)	1	
	Male	30 (55.6)	26 (52.0)	0.85 (0.37-1.91)	0.687
Thrombolysis with IV rt-PA					
	No	17 (31.5)	21 (42.0)	1	
	Yes	37 (68.5)	29 (58.0)	0.48 (0.19-1.18)	0.110
Recanalization					
	Non effective	22 (40.7)	15 (30.0)	1	
	Effective	10 (18.5)	18 (36.0)	3.07 (1.07-8.74)	0.036
	Missing	22 (40.7)	17 (34.0)	0.95 (0.36-2.50)	0.919

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Table S3. Multiple logistic regression models of the predictors of early National Institute of Health Stroke Scale improvement according to the gender

	delta NIHSS score < 4 points n=71	delta NIHSS score >= 4 points n=35	Adjusted Odds Ratios (95%CI)	P-values
Women, n=106				
Positioning				
n-TP	43 (60.6)	18 (51.4)	1	
TP	28 (39.4)	17 (48.6)	1.41 (0.57-3.43)	0.452
Collateral vessel network				
"Poor"	22 (31.0)	13 (37.1)	1	
"Good"	49 (69.0)	22 (62.9)	0.81 (0.32-2.03)	0.648
Thrombolysis with IV rt-PA				
No	42 (59.1)	14 (40.0)	1	
Yes	29 (40.9)	21 (60.0)	1.20 (0.42-3.43)	0.725
Recanalization				
Non effective	30 (42.2)	8 (22.9)	1	
Effective	10 (14.1)	17 (48.6)	5.95 (1.87-18.90)	0.002
Missing	31 (43.7)	10 (28.6)	1.32 (0.43-4.06)	0.624
Men, n=103				
Positioning				
n-TP	38 (64.4)	20 (45.4)	1	
TP	21 (35.6)	24 (54.6)	2.34 (1.02-5.33)	0.043
Collateral vessel network				
"Poor"	24 (40.7)	18 (40.9)	1	
"Good"	35 (59.3)	26 (59.1)	1.09 (0.47-2.51)	0.834
Thrombolysis with IV rt-PA				
No	25 (42.4)	18 (40.9)	1	
Yes	34 (57.6)	26 (59.1)	0.97 (0.41-2.25)	0.937
Recanalization				
Non effective	24 (40.7)	12 (27.3)	1	
Effective	18 (30.5)	14 (31.8)	1.52 (0.54-4.25)	0.036
Missing	17 (28.8)	18 (40.9)	2.36 (0.87-6.36)	0.090

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Table S4. Bivariable analysis of the distribution of matching criteria of the propensity score

	TP	n-TP	<i>P-values</i>
Total n=203	90 (44.3%)	113 (55.6%)	
Matching criteria			
Age			
years, mean ± SD	71.6 ± 16.0	73.9 ± 13.1	0.607
31 to 65 years	27 (30.0)	28 (24.8)	
66 to 75 years	18 (20.0)	28 (24.8)	
76 to 85 years	24 (26.7)	37 (32.7)	
86 to 94 years	21 (23.3)	20 (17.7)	0.491
Gender			
Female	45 (50.0)	38 (33.6)	
Male	45 (50.0)	75 (66.4)	0.349
Blood hypertension			
No	36 (40.0)	61 (54.0)	
Yes	54 (60.0)	52 (46.0)	0.573
Diabetes mellitus			
No	79 (87.8)	93 (82.3)	
Yes	11 (12.2)	20 (17.0)	0.281
Chronic heart failure			
No	75 (83.3)	90 (79.6)	
Yes	15 (16.7)	23 (20.3)	0.503
Atrial fibrillation			
No	60 (66.7)	66 (58.4)	
Yes	30 (33.3)	47 (41.6)	0.228
Admission NIHSS score			
points, mean ± SD	13.29 ± 7.27	11.89 ± 7.39	0.186
Pre-stroke mRS			
points, mean ± SD	0.83 ± 1.11	0.70 ± 0.99	0.409
Heart rate			
ppm, mean ± SD	79.5 ± 19.3	79.5 ± 16.3	0.678
43 to 70 ppm	33 (36.7)	39 (34.5)	0.750
71 to 140 ppm	57 (63.3)	74 (65.5)	
Mean arterial BP			
mmHg mean ± SD	105.7 ± 18.0	106.8 ± 18.6	0.305
59 to 103 mmHg	49 (54.4)	48 (42.5)	0.090
104 to 180 mmHg	41 (45.6)	65 (57.5)	
Haemoglobine rate			
g.dL ⁻¹ mean ± SD	13.9 ± 1.8	13.8 ± 1.7	0.746
8.7 to 14.0 g.dL ⁻¹	45 (50.0)	60 (53.1)	0.661
14.1 to 18.6 g.dL ⁻¹	45 (50.0)	53 (46.9)	
Collateral vessel network			
"Poor"	34 (37.8)	39 (34.5)	
"Good"	56 (62.2)	74 (65.5)	0.630
Thrombolysis with IV rt-PA			
No	41 (45.6)	52 (46.0)	
Yes	49 (54.4)	61 (54.0)	0.948
Recanalization			
Non effective	33 (36.7)	39 (34.5)	
Effective	29 (32.2)	29 (25.7)	
Missing	28 (31.1)	45 (39.8)	0.391
Length of stay			
days, mean ± SD	11.28 ± 1.07	11.29 ± 1.02	0.182

TP: Trendelenburg Positioning ; nTP: non-Trendelenburg Positioning

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The matching was performed using Mahalanobis distance method and yielded to 99 pairs

Data are numbers and percentages (brackets) or means and standard deviations

Table S5. Odds ratios for Trendelenburg positioning in subgroup analyses of early National Institute of Health Stroke Scale improvement (non TP group as reference)

		TP	nTP		Adjusted Odds Ratios (95%CI)		P- values
Total N=209		n=90	n=119	P- values	associated with TP for delta NIHSS score >= 4		
Mean arterial BP at admission							
	59 to 103 mmHg	4.1 ± 5.8	2.9 ± 6.9	0.413	Model 1	1.24 (0.54-2.81)	0.604
	104 to 180 mmHg	3.9 ± 5.6	1.0 ± 5.0	0.015		2.55 (1.07-6.05)	0.034
Haemoglobine rate							
	8.7 to 14.0 g.dL ⁻¹	3.1 ± 5.4	1.2 ± 6.9	0.100	Model 2	1.44 (0.61-3.37)	0.401
	14.1 to 18.6 g.dL ⁻¹	3.9 ± 5.6	2.5 ± 4.7	0.045		2.36 (0.98-5.65)	0.054
Collateral vessel network							
	"Poor"	4.0 ± 6.9	1.5 ± 6.7	0.273	Model 3	1.39 (0.52-3.68)	0.507
	"Good"	4.0 ± 4.9	2.0 ± 5.5	0.012		2.60 (1.05-6.44)	0.039
Thrombolysis with IV rt-PA							
	Yes	4.3 ± 6.6	2.9 ± 6.6	0.253	Model 4	1.62 (0.73-3.56)	0.231
	No	3.6 ± 4.4	0.7 ± 5.0	0.010		2.05 (0.81-5.17)	0.129
Recanalization							
	Non effective	2.7 ± 6.1	0.3 ± 5.0	0.076	Model 5	2.46 (0.73-8.22)	0.143
	Effective	5.3 ± 5.2	4.4 ± 6.7	0.479		7.47 (1.29-43.18)	0.025
	Missing	4.1 ± 5.6	1.5 ± 5.7	0.109		1.58 (0.47-5.23)	0.452

TP: Trendelenburg Positioning ; nTP: non-Trendelenburg Positioning

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Model 1 is adjusted for head positioning and recanalization

Model 2 is adjusted for head positioning and recanalization

Model 3 is adjusted for head positioning, mean arterial blood pressure, haemoglobine rate and recanalization

Model 4 is adjusted for head positioning, haemoglobine rate and recanalization

Model 5 is adjusted for head positioning, age, gender, haemoglobine rate and blood pressure

For each stratum, reference categories associated with the n-TP group are hidden in the model

Data are means and standard deviations, adjusted odds ratios and 95% confidence intervals