

Supplementary Table 4. Relationship between BP/BP excursions during EVT to values exceeding $\pm 20\%$ of the reference value and finding of hemorrhages on post-procedure computed tomography scans

Model	Systolic blood pressure		Mean arterial pressure	
	OR (95% CI)	P	OR (95% CI)	P
Full A: no interactions				
Default independent variables				
Rate of BP >120% of reference (by 1/10 min)	1.07 (0.72–1.52)	0.714	1.14 (0.82–1.57)	0.412
Rate of BP <80% of reference (by 1/10 min)	0.78 (0.55–1.06)	0.118	0.74 (0.49–1.06)	0.101
Reference BP (by 10 mm Hg)	1.56 (1.03–2.45)	0.036	2.00 (1.05–4.10)	0.034
Procedure mean BP (by 10 mm Hg) [†]	0.62 (0.38–0.94)	0.026	0.50 (0.24–0.94)	0.030
Procedure duration (by 10 min)	0.98 (0.67–1.08)	0.794	0.98 (0.67–1.08)	0.814
BP measurements taken (by 10)	1.05 (0.92–1.57)	0.561	1.04 (0.91–1.55)	0.585
On-admission NIHSS score (by 1 point)	1.02 (0.94–1.11)	0.629	1.02 (0.94–1.11)	0.567
TICI grade 2b-3 (vs. 0-2a)	0.76 (0.28–2.10)	0.590	0.74 (0.28–2.04)	0.560
Use of rtPA (vs. no)	0.76 (0.29–2.04)	0.572	0.78 (0.30–2.10)	0.609
Collaterals $\geq 50\%$ as unaffected side (vs. no)	0.65 (0.23–1.92)	0.425	0.61 (0.22–1.79)	0.355
Antihypertensives before EVT (vs. no)	1.52 (0.31–5.87)	0.576	1.59 (0.32–6.14)	0.539
Selected independent variables [‡]				
Cardioembolic/unknown etiology (vs. LAA)	4.15 (0.91–35.1)	0.068	3.94 (0.87–33.9)	0.079
History of coronary artery disease	2.40 (0.92–6.19)	0.074	2.40 (0.91–6.22)	0.075
Model fit statistics (LL, AIC, BIC)	-68.059, 164.11, 207.52		-68.578, 165.15, 208.55	
Full B: with excursions*reference interactions				
Default independent variables				
Rate of BP >120% of reference (by 1/10 min)	1.27 (0.82–1.90)	0.265	1.29 (0.81–1.98)	0.265
Rate of BP <80% of reference (by 1/10 min)	0.94 (0.55–1.53)	0.821	0.97 (0.59–1.49)	0.900
Reference BP (by 10 mm Hg)	1.61 (1.04–2.59)	0.033	2.31 (1.19–4.87)	0.014
Rate of BP excursions >120%*reference BP	1.20 (0.94–1.64)	0.153	1.05 (0.87–1.32)	0.641
Rate of BP excursions <80%*reference BP	0.94 (0.84–1.04)	0.269	0.86 (0.63–1.02)	0.088
Procedure mean BP (by 10 mm Hg) [†]	0.56 (0.33–0.87)	0.009	0.46 (0.21–0.90)	0.023
Procedure duration (by 10 min)	0.99 (0.67–1.08)	0.868	0.99 (0.65–1.08)	0.832
BP measurements taken (by 10)	1.06 (0.92–1.59)	0.467	1.06 (0.92–1.61)	0.474
On-admission NIHSS score (by 1 point)	1.03 (0.95–1.12)	0.528	1.03 (0.95–1.12)	0.489
TICI grade 2b-3 (vs. 0-2a)	0.71 (0.26–2.03)	0.529	0.76 (0.28–2.08)	0.583
Use of rtPA (vs. no)	0.85 (0.32–2.35)	0.748	0.85 (0.33–2.34)	0.748
Collaterals $\geq 50\%$ as unaffected side (vs. no)	0.75 (0.26–2.31)	0.599	0.66 (0.23–1.98)	0.444
Antihypertensives before EVT (vs. no)	1.28 (0.25–5.16)	0.745	1.66 (0.32–6.71)	0.512
Selected independent variables [‡]				
Cardioembolic/unknown etiology (vs. LAA)	4.82 (0.94–47.4)	0.061	5.31 (1.04–53.3)	0.045
History of coronary artery disease	2.45 (0.93–6.42)	0.059	2.70 (1.01–7.21)	0.036
Model fit statistics (LL, AIC, BIC)	-66.167, 164.33, 213.93		-66.931, 165.86, 215.46	
Full C: with excursions*TICI interactions				
Rate of BP >120% of reference*TICI grade	1.69 (0.82–5.34)	0.170	1.41 (0.77–3.70)	0.303
Rate of BP >120% at TICI 0-2a	0.71 (0.30–1.67)	-	0.84 (0.40–1.80)	-
Rate of BP >120% at TICI 2b-3	1.21 (0.82–1.77)	-	1.19 (0.86–1.65)	-
Rate of BP <80% of reference*TICI grade	0.87 (0.54–1.41)	0.558	0.61 (0.25–1.13)	0.122
Rate of BP <80% at TICI 0-2a	0.86 (0.57–1.31)	-	0.96 (0.60–1.52)	-
Rate of BP <80% at TICI 2b-3	0.75 (0.51–1.11)	-	0.59 (0.32–1.09)	-

Supplementary Table 4. Continued

Model	Systolic blood pressure		Mean arterial pressure	
	OR (95% CI)	P	OR (95% CI)	P
TICI grade 2b-3 (vs. 0-2a)	0.97 (0.32-2.95)	0.958	0.89 (0.30-2.64)	0.828
Reference BP (by 10 mm Hg)	1.51 (0.99-2.40)	0.053	1.91 (0.99-3.97)	0.052
Procedure mean BP (by 10 mm Hg) [†] (other effects were closely similar to A and B)	0.63 (0.38-0.95)	0.029	0.53 (0.25-0.99)	0.048
Model fit statistics (LL, AIC, BIC)	-66.756, 165.51, 215.11		-66.285, 164.56, 214.17	
Full D: with BP*TICI interactions				
Rate of BP >120% of reference (by 1/10 min)	1.06 (0.71-1.51)	0.763	1.09 (0.78-1.52)	0.582
Rate of BP <80% of reference (by 1/10 min)	0.79 (0.55-1.09)	0.159	0.77 (0.49-1.11)	0.172
TICI grade 2b-3 (vs. 0-2a)	0.87 (0.31-2.45)	0.799	0.91 (0.32-2.58)	0.853
Reference BP*TICI grade	0.77 (0.45-1.26)	0.296	0.62 (0.26-1.37)	0.241
Reference BP at TICI 0-2a	1.78 (1.07-2.95)	-	2.45 (1.07-5.60)	-
Reference at TICI 2b-3	1.36 (0.83-2.23)	-	1.53 (0.69-3.39)	-
Procedure mean BP*TICI grade	1.28 (0.66-2.64)	0.465	2.20 (0.79-7.32)	0.136
Procedure mean BP at TICI 0-2a	0.55 (0.29-1.01)	-	0.32 (0.12-0.87)	-
Procedure mean BP at TICI 2b-3 (other effects were closely similar to A and B)	0.70 (0.42-1.17)	-	0.70 (0.32-1.54)	-
Model fit statistics (LL, AIC, BIC)	-67.499, 166.99, 216.60		-67.439, 166.88, 216.48	
Reduced [§]				
Default independent variables				
Rate of BP >120% of reference (by 1/10 min)	1.03 (0.72-1.48)	0.855	1.10 (0.82-1.50)	0.479
Rate of BP <80% of reference (by 1/10 min)	0.80 (0.58-1.11)	0.183	0.77 (0.53-1.12)	0.178
Reference BP (by 10 mm Hg)	1.48 (0.99-2.28)	0.056	1.86 (1.00-3.47)	0.051
Procedure mean BP (by 10 mm Hg) [†]	0.65 (0.40-0.96)	0.032	0.52 (0.26-0.95)	0.034
TICI grade 2b-3 (vs. 0-2a)	0.62 (0.25-1.53)	0.298	0.61 (0.25-1.50)	0.280
Selected independent variables [‡]				
Cardioembolic/unknown etiology (vs. LAA)	3.61 (0.81-28.8)	0.095	3.51 (0.64-19.4)	0.149
History of coronary heart disease	2.58 (1.04-6.42)	0.041	2.56 (1.03-6.38)	0.043
Model fit statistics (LL, AIC, BIC)	-69.109, 154.22, 179.02		-69.792, 155.58, 180.38	

Two types of models (each separately for systolic and mean arterial pressure) were fitted: "full" (with different interaction terms) and "reduced" (effects based on biological and statistical plausibility). Effects are ORs. ORs for the interaction terms indicate whether the BP excursion effects were conditional on reference BP; or whether BP excursion effects and the effects of reference and procedure mean BP were conditional on the level of reperfusion (TICI grade).

BP, blood pressure; EVT, endovascular thrombectomy; OR, odds ratio; CI, confidence interval; NIHSS, National Institutes of Health Stroke Scale; TICI, Thrombolysis in Cerebral Infarction; rtPA, recombinant tissue plasminogen activator; LAA, large artery atherosclerosis; LL, logarithmic likelihood; AIC, Akaike information criterion; BIC, Bayesian information criterion.

*The asterisk is a part of the interaction term; [†]Weighted mean as area under the BP-time curve divided by the time period covered; [‡]By stepwise selection procedure ($P < 0.200$ to enter/stay) among age, sex, comorbidities, use of sympathomimetics during EVT, stroke etiology, time since symptom onset till the first vessel image, type of affected vessel, pre-index stroke statin, antiplatelet or anticoagulant use; [§]Reduced model excluded interaction terms (no indication of qualitative moderation), use of antihypertensives before EVT (small number of treated patients & highly insignificant), existence of collaterals, use of rtPA, procedure duration and number of BP measurements taken since consistently highly insignificant.