ADMISSION TROPONIN-I PREDICTS SUBSEQUENT CARDIAC COMPLICATIONS AND MORTALITY IN ACUTE STROKE PATIENTS

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SUPPLEMENTARY MATERIAL

SUPPLEMENTARY TABLE I. DESCRIPTION OF THE CARDIAC COMPLICATIONS IN THE COHORT

PATIENT	AGE	GENDER	hs-TnI	Complication	Days from stroke onset	ECG features	Outcome of the cardiac complication	Other complications
1	78	F	5022.5*	ACS (MI)	0	ST-segment elevation	Death (cardiac arrest)	-
2	59	M	2.8	ACS (NSTEMI)	3	Normal	Recovered	-
3	85	M	20.5	AHF (PE)	5	AF-RVR	Recovered	Death by pneumonia
4	67	M	3.9	AHF	2	Sinus Tachycardia	Recovered	Mixed dysphnea
5	44	F	3.5	AHF	1	Normal	Recovered	Mixed dysphnea
6	88	F	16.5*	AHF	5	-	Recovered	Humeral hemorrhage
7	56	M	176.1*	AHF (PE)	1	LVH	Death	-
8	93	M	21.6	AHF	2	-	Death	Mixed dysphnea
9	82	F	17.3*	AHF (PE)	14	AF-NVR	Recovered	-
10	67	F	21.6*	AHF (PE)	8	AF-NVR	Death	Valve thrombus
11	83	M	181.7*	AHF	6	-	Recovered	-
12	87	F	18.5*	AHF (PE)	2	AF-RVR	Death	-
13	87	F	133*	AHF	1	AF-RVR	Death	-
14	82	M	4.7	AHF (PE)	2	-	Death	Mixed dysphnea

hs-TnI: ultrasensitive troponin I; ECG: electrocardiogram; F: female gender; M: male gender; ACS: acute coronary syndrome; MI: myocardial infarction; NSTEMI: non ST-segment elevation myocardial infarction; AHF: acute heart failure; PE: pulmonary edema; AF-RVR: atrial fibrillation with rapid ventricular response; AF-NVR: atrial fibrillation with normal ventricular response; LVH: left ventricular hypertrophy.

* Denotes elevated hs-TnI according to the reference values of the assay.

SUPPLEMENTARY TABLE II. BASELINE CHARACTERISTICS OF THE PATIENTS WITH 90-DAYS FOLLOW-UP DATA AND UNIVARIATE ANALYSIS FOR 90-DAY ALL-CAUSE MORTALITY

		All (N=151)	Death (N=28)	Alive (N=123)	p
Age		80 (67.5-84)	81 (68.5-87)	79 (67-84)	0.035**
Gender (male)		82 (54.3%)	16 (57.1%)	66 (53.7%)	0.738
Arterial hypertension		107 (70.9%)	20 (71.4%)	87 (70.7%)	0.942
Diabetes mellitus		34 (22.5%)	10 (35.7%)	24 (19.5%)	0.064
Dyslipidemia		69 (46.3%)	13 (48.1%)	56 (45.9%)	0.832
Previous stroke		30 (19.9%)	8 (28.6%)	20 (17.9%)	0.201
Previous disability		26 (17.2%)	9 (32.1%)	17 (13.8%)	0.028**
Atrial fibrillation		41 (28.3%)	9 (22%)	32 (27.1%)	0.518
CAD		22 (14.6%)	7 (25%)	15 (12.3%)	0.133
Previous CHF		13 (8.6%)	6 (46.2%)	22 (15.9%)	0.016**
OCSP	**TACI**	50 (36.5%)	16 (59.3%)	34 (30.9%)	0.010**
	PACI	57 (41.6%)	7 (25.9%)	50 (45.5%)	
	POCI	14 (10.2%)	4 (14.8%)	10 (9.1%)	
	LACI	16 (11.7%)	0 (0%)	16 (14.5%)	
TOAST	**LAA**	29 (19.3%)	5 (17.9%)	24 (19.7%)	0.259
	CE	63 (42%)	12 (42.9%)	51 (41.8%)	
	LAC	13 (8.7%)	0 (0%)	13 (10.7%)	
	UND	42 (28%)	11 (39.3%)	31 (25.4%)	
	Other	3 (2%)	0 (0%)	3 (2.5%)	
Laterality (right)		33 (39.8%)	7 (33.3%)	26 (41.9%)	0.486
Baseline NIHSS score		9 (3-14.5)	15 (8-18)	7 (3-12)	<0.0001**
SBP (mmHg)		151.8 ± 32.4	145.9 ± 31	152.8 ± 32.7	0.431
DBP (mmHg)		78 (70-85.5)	70.5 (56.5-82.5)	79 (70-86.5)	0.076
Glycemia (mg/dL)		124 (106-153)	143 (124-179.5)	120 (104-149)	0.238
Creatinine (mg/dL)		0.97 (0.81-1.25)	1.08 (0.82-1.37)	0.95 (0.77-1.14)	0.063
Elevated hs-TnI		37 (24.5%)	13 (46.6%)	24 (19.5%)	0.003**

Data are expressed as N (%), median (interquartile range) or mean ± standard deviation. CAD: coronary artery disease; CHF: congestive heart failure; OCSP: Oxfordshire Stroke Project classification; TACI: total anterior circulation infarct; PACI: partial anterior circulation infarct; POCI: posterior arterial circulation infarct; LACI: lacunar infarct; TOAST: Trial of Org 10172 in Acute Stroke Treatment; LAA: large artery atherothrombotic; CE: cardioembolic; LAC: lacunar; UND: undetermined; NIHSS: National Institutes of Health Stroke Scale; SBP: systolic blood pressure; DBP: diastolic blood pressure; hs-TnI: ultrasensitive Troponin I.

** denotes p<0.05

SUPPLEMENTARY FIGURE I. COMPARISON BETWEEN PREDICTIVE MODELS FOR MORTALITY, INCLUDING OR NOT THE BIOMARKER hs-TnI
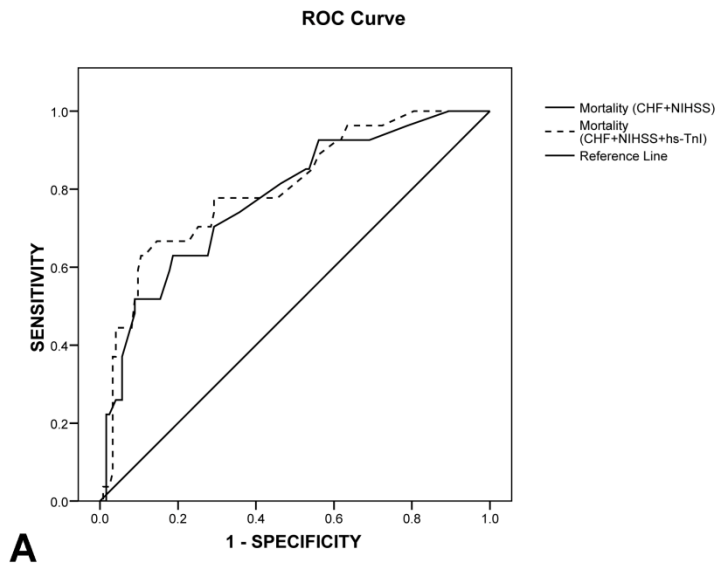
A: comparison of the predictive accuracy (area under the ROC curve) of both models. The continuous line represents the predictive model constructed just with clinical variables (previous congestive heart failure-CHF and baseline National Institutes of Health Stroke Scale-NIHSS), and the discontinuous line represents the predictive model constructed with the previous one plus hs-TnI as a dichotomous variable (normal vs. pathological levels according to manufacturer's instructions, >34.2pg/mL male, >15.6pg/ml female).
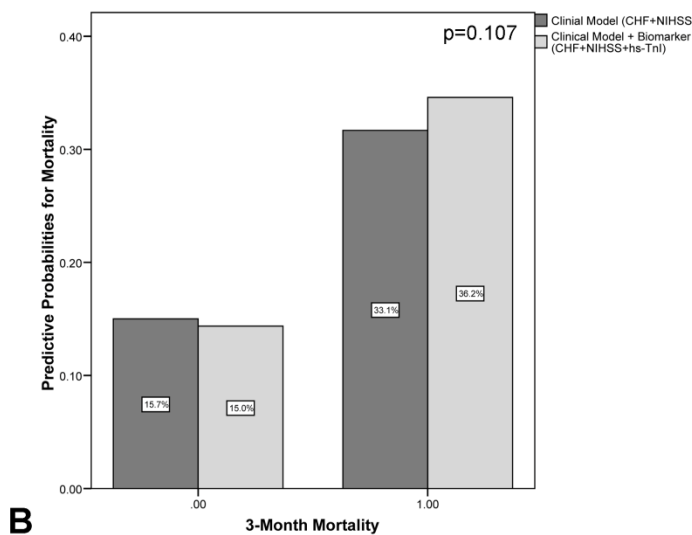
B: integrated discrimination improvement (IDI) index: the bars represent the same models than A (dark bars, clinical model and light bars, the same model plus hs-TnI). The predictive probabilities of events (death within 3 months) or no events for each model are expressed as %. The IDI value [IDI=3.55% (-0.7-7.8), p=0.107] results from the sum of the differences in predictive probabilities for events and no events.