Supplementary Materials

Plasma Concentrations of Extracellular Vesicles are Decreased in Patients with Post-Infarct Cardiac Remodelling

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Table S1. Eligibility criteria for the study.

Inclusion criteria	Exclusion criteria
• Age ≥ 18 years • Informed consent to participate in the study • First ST-elevation myocardial infarction (STEMI) or non-STEMI • PCI with stent implantation • Administration of the loading dose of clopidogrel (600 mg) prior to PCI	• Known coagulopathy • Active pathological bleeding • Known history of bleeding disorder • Suspicion of intracranial haemorrhage • Need for oral anticoagulation therapy • Administration of GP IIb-IIIa antagonists • Cardiogenic shock • Severe chronic renal failure (eGFR < 30 mL/min) • Severe liver insufficiency (Child-Pugh class C) • Infectious disease • Autoimmune disease • Neoplasm • Known pregnancy, breast-feeding, or intention to become pregnant during the study period

Abbreviations: AMI – acute myocardial infarction; CYP3A4 – cytochrome P450 izoenzyme 3A4; eGFR – estimated glomerular filtration rate; GP – glycoprotein; PCI – percutaneous coronary intervention

Table S2. Statistical estimates for prediction of left ventricle remodelling (LVR) by extracellular vesicles EVs from endothelial cells ($CD146^+$), erythrocytes ($CD235a^+$) and platelets ($CD61^+$).

EVs	AUC (95% CI)	p-value	Cut-off (per ml)	Sensitivity	Specificity	PPV	NPV
CD146	0.77 (0.60-0.95)	0.009	3.64×10^5	75%	70%	56%	84%
CD235a	0.75 (0.57-0.92)	0.018	1.67×10^7	83%	74%	63%	90%
CD61	0.76 (0.58-0.94)	0.014	1.68×10^8	83%	67%	59%	89%
Combined	**0.87 (0.73-1.00)**	**0.0004**	**As above combined**	**83%**	**87%**	**77%**	**91%**

Abbreviations: AUC: area under the curve, CI: confidence interval, PPV: positive predictive value, NPV: negative predictive value.

Table S3. Multivariate logistic regression model for prediction of left ventricle remodelling (LVR including extracellular vesicles (EVs) from endothelial cells ($CD146^+$), erythrocytes ($CD235a^+$) and platelets ($CD61^+$) along with clinical variables.

Variable	OR	95% CI		p-value
		Lower	Upper	
Low $CD146^+$ EVs	**8.243**	**1.253**	**54.219**	**0.028**
Age	1.011	0.920	1.111	0.819
Gender	0.265	0.028	2.497	0.246
AMI type	0.209	0.015	2.962	0.247
Peak troponin I	1.001	0.948	1.056	0.979
INR	19.662	0.001	1646212	0.607
Low $CD235a^+$ EVs	**17.854**	**2.300**	**138.561**	**0.006**
Age	0.989	0.902	1.085	0.989
Gender	0.265	0.028	2.497	0.328
AMI type	0.296	0.026	3.397	0.139
Peak troponin I	1.020	0.961	1.082	0.515
Creatinine	15.825	0.064	3914.155	0. 930
Low $CD61^+$ EVs	**21.457**	**0.805**	**572.067**	**0.067**
Age	0.971	0.853	1.105	0.657
Gender	0.239	0.013	4.511	0.339
AMI type	0.277	0.011	7.205	0.440
Peak troponin I	1.003	0.939	1.072	0.921
Platelet count	1.002	0.988	1.018	0.745
Hypertension	0.170	0.008	3.491	0.251

Abbreviations: AUC: area under the curve, CI: confidence interval

Figure S1. Concentrations of extracellular vesicles (EVs) measured with flow cytometry in platelet-depleted plasma prepared from patients with and without left ventricle remodeling (LVR) 6 months after AMI. A, B: EVs from activated platelets. C, D: EVs from leukocytes. E, F: EVs exposing phosphatidylserine (PS).

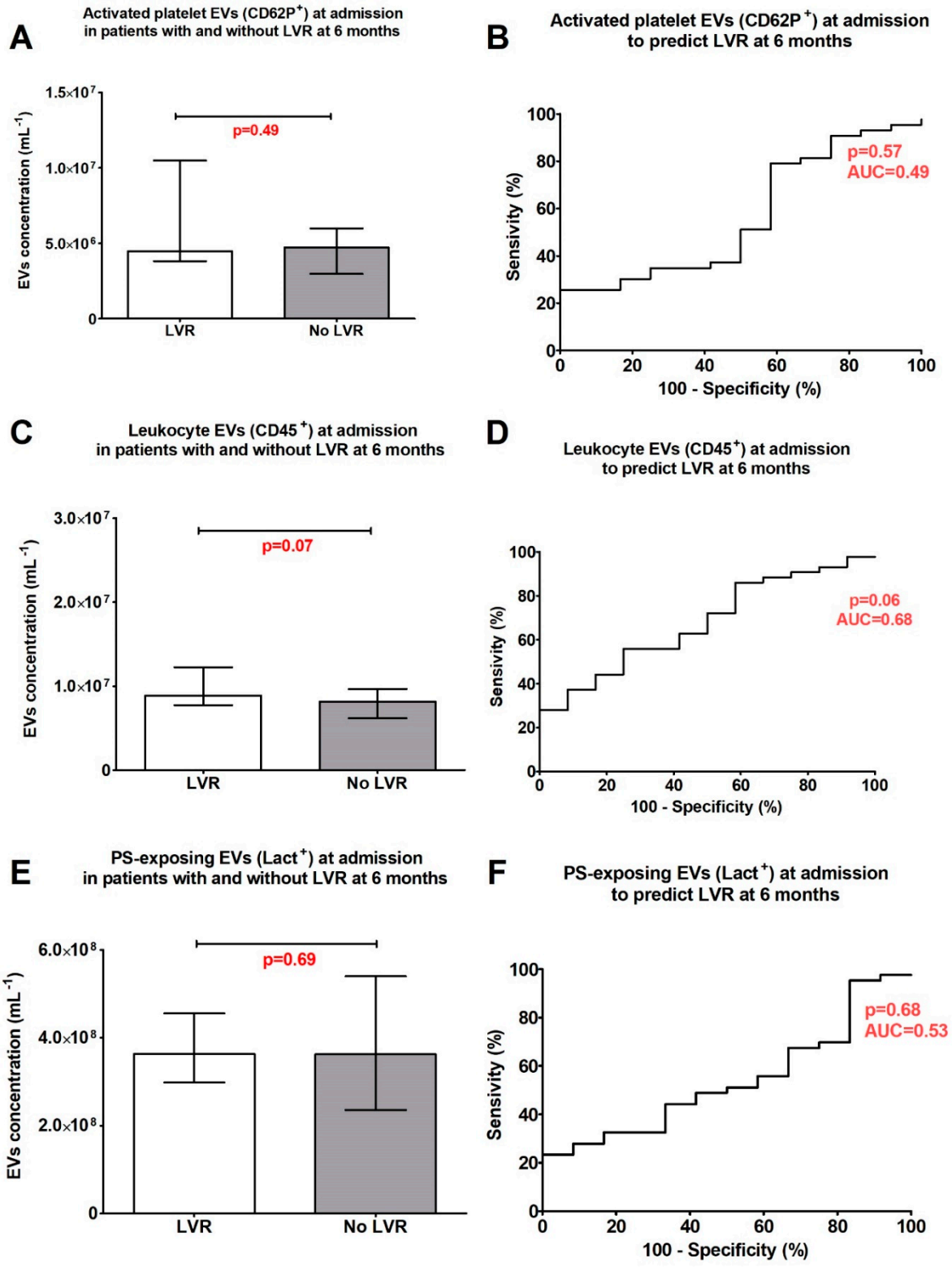

Figure S2. Concentrations of total particles and non-EV particles including chylomicrons (defined based on the differences in refractive index) measured with flow cytometry in platelet-depleted plasma prepared from patients with and without left ventricle remodelling (LVR) 6 months after AMI.