



Supplementary material

Microparticle Shedding by Erythrocytes, Monocytes and Vascular Smooth Muscular Cells Is Reduced by Aspirin in Diabetic Patients

Gemma Chiva-Blanch^a, Rosa Suades^a, Teresa Padro^a, Gemma Vilahur^a, Esther Peña^a, Juan Ybarra^b, Jose M. Pou^c and Lina Badimon^{a,*}

^a *Institut Català de Ciències Cardiovasculars (ICCC), Barcelona, Spain*

^b *Teknon Medical Center, Barcelona, Spain*

^c *Servicio de Endocrinología, Hospital de la Santa Creu i de Sant Pau, Universitat Autònoma de Barcelona, Barcelona, Spain*

SUPPLEMENTARY MATERIAL**Table 1 of the supplementary material.**

Baseline Characteristics of the 43 Diabetic Patients and the 38 Control Subjects Studied

	PATIENTS	CONTROLS	<i>P</i>
	(n=43)	(n=38)	
Age (years)	55±10	59±13	.133
Males [n (%)]	24 (55.8)	17 (44.7)	.217
Current smokers [n (%)]	9 (20.9)	7 (18.4)	.617
Diabetis Mellitus [n (%)]	43 (100)	0 (0)	<.0001
Dyslipidemia [n (%)]	40 (93.0)	34 (89.5)	.722
Hypertension [n (%)]	40 (90.7)	25 (65.8)	.064
Body Mass Index (kg/m ²)	25.70±3.04	26.89±3.29	.086
Body Mass Index >25 kg/m ² [n (%)]	21 (48.8)	22 (57.9)	.485
Systolic Blood Pressure (mmHg)	138±14	145±22	.072
Diastolic Blood Pressure (mmHg)	81±8	82±10	.510
Statins [n (%)]	33 (76.7)	32 (84.2)	.806
Acetylsalicylic acid [n (%)]	43 (100)	0 (0)	<.0001

P value from one-way ANOVA for quantitative variables and from Chi-square analysis for qualitative variables.

Table 2 of the supplementary material.

Comparison of Circulating Microparticle Levels in the 38 Controls and the 43 Patients Before and After Acetylsalicylic Acid Intervention

DIABETIC PATIENTS					
AV ⁺ MPs/ μ L PFP	Before ASA	After ASA	CONTROLS	P ¹	P ²
Total	500.7 \pm 141.2	479.1 \pm 140.8	336.45 \pm 169.04	<.001	<.001
<i>Platelet-derived cMPs</i>					
CD61 ⁺	150.2 \pm 86.3	140.9 \pm 79.4	103.57 \pm 68.08	.005	.028
CD61 ⁺ /CD142 ⁺	31.4 \pm 25.5	31.0 \pm 27.3	15.26 \pm 11.67	<.001	<.001
PAC1 ⁺	12.2 \pm 11.9	15.1 \pm 13.1	6.8 \pm 3.13	<.001	<.001
CD62P ⁺	32 \pm 26.6	32.8 \pm 26.7	19.07 \pm 17.25	<.001	<.001
PAC1 ⁺ /CD62 ⁺	6.6 \pm 8.1	7.8 \pm 8.7	4.5 \pm 6.8	.002	.010
<i>Endothelial-derived cMPs</i>					
CD146 ⁺	10.3 \pm 7.3	11.5 \pm 9.2	6.07 \pm 7.42	<.001	<.001
CD146 ⁺ /CD62E ⁺	9.7 \pm 7.5	10.1 \pm 8.7	5.07 \pm 5.42	<.001	<.001
CD62E ⁺	6.6 \pm 8.1	7.8 \pm 8.7	4.25 \pm 3.79	<.001	<.001
<i>Erythrocyte-derived cMPs</i>					
CD235a ⁺	78 \pm 48.9	64.5 \pm 28.3*	74.53 \pm 60.29	.424	.594
<i>Leukocyte-derived cMPs</i>					
CD45 ⁺	130.3 \pm 97.5	118.5 \pm 59.8	43.09 \pm 30.39	<.001	<.001
CD3 ⁺ /CD45 ⁺	28.3 \pm 30.9	24.1 \pm 15.7	12.61 \pm 8.21	<.001	<.001

CD14 ⁺	39.5 ± 29.8	30.7 ± 19.8*	4.73 ± 4.9	<.001	<.001
CD11b ⁺ /CD14 ⁺	25.6 ± 25	19.9 ± 15*	17.19 ± 16.7	<.001	<.001
CD45 ⁺ /CD3 ⁺ /CD14 ⁺	64.5 ± 92.9	56.9 ± 44.3	33.67 ± 27.21	.043	.007
CD11b ⁺	70.3 ± 52.4	65.3 ± 37.2	68.57 ± 48.16	.081	.434
CD142 ⁺ /CD14 ⁺	23.1 ± 20.6	16.3 ± 12.6*	9 ± 12.99	<.001	<.001
CD142 ⁺	72.1 ± 53.6	73.1 ± 53.1	68.45 ± 40.49	.275	.240
<i>Smooth muscle cell-derived cMPs</i>					
SMA ⁺	6.5 ± 10.6	3.1 ± 4.6*	2.17 ± 2.85	.014	.270
CD142 ⁺ /SMA-α ⁺	2.8 ± 4.6	1.3 ± 2.4*	0.99 ± 1.85	.025	.456

P values from the Student *t* test for unrelated samples between: *P*¹: controls and patients before the ASA intervention; and *P*²: controls and patients after the ASA intervention. **P*<.05 from the comparison between before and after the intervention (Student's *t* test for paired samples) in diabetic patients.

Used markers were CD61 for platelets, CD146 for endothelial cells, CD235ab for erythrocytes, CD45 for total leukocytes, and CD3 for lymphocytes and CD14 for monocytes origins accounting for agranulocytes. Granulocytes were inferred subtracting agranulocytes subpopulation from leukocytes fraction and smooth muscle actin-α was used for smooth muscle cells. The other CDs were used as biomarkers of cell activation (see Table 1 from the manuscript).

AV, Annexin V; ASA, acetylsalicylic acid; CI, confidence interval, cMPs, circulating microparticles; PFP, platelet free plasma.