

Supplementary Table 1. Mean and confidence interval in each experimental group for AD (Arterial Density) and relevant statistical test

Groups	n	95% average confidence interval		Mean	Standard deviation	Standard Error
		High limit	Low limit			
Control	10	1.5061	0.6939	1.1	0.1795	0.56765
Vehicle *	10	0.7694	0.0306	0.4	0.1633	0.5164
ASC-MI	10	1.5841	0.4159	1	0.2582	0.8165
AVP-ASC-MI	10	1.0000	1.0000	1	0.0000	0
Total	40	1.0692	0.6808	0.875	0.0960	0.60712

Supplementary Table 2. Mean and confidence interval in each experimental group for PAS (Percentage of Arterial Sections)

Groups	n	95% average confidence interval		Mean	Standard deviation	Standard Error
		High limit	Low limit			
Control	10	0.0737	0.0302	0.05199	0.0094	0.02828
Vehicle *	10	0.0357	0.0161	0.02593	0.0041	0.01174
ASC-MI	10	0.0669	0.0276	0.04724	0.0083	0.02354
AVP-ASC-MI	10	0.0695	0.0272	0.04836	0.0092	0.02747
Total	40	0.0525	0.0350	0.04378	0.0043	0.02506

Supplementary Table 3. Mean and confidence interval in each experimental group for MA (Muscularization Arterial) and related statistical test

Groups	n	95% average confidence interval		Mean	Standard deviation	Standard Error
		High limit	Low limit			
Control	10	0.0064	0.0030	0.0047	0.0007	0.00236
Vehicle *	10	0.0033	-0.0001	0.0016	0.0007	0.00237
ASC-MI	10	0.0047	0.0015	0.0031	0.0007	0.00218
AVP-ASC-MI	10	0.0074	0.0014	0.0044	0.0013	0.00417
Total	40	0.0044	0.0025	0.00345	0.0005	0.00304

Supplementary Table 4 -Mean and confidence interval in each experimental group for CD (Collagen Deposition) and related statistical test

Groups	n	95% average confidence interval		Mean	Standard deviation	Standard Error
		High limit	Low limit			
Control	10	0.0037	0.0001	0.00192	0.0008	0.0025
Vehicle *	10	0.0101	0.0017	0.00591	0.0019	0.005902
ASC-MI	10	0.0054	0.0011	0.00325	0.0009	0.002944
AVP-ASC-MI	10	0.0048	0.0011	0.00296	0.0008	0.002606
Total	40	0.0048	0.0023	0.00351	0.0006	0.003907

Supplementary Table 5. Comparison of MDA (Malondialdehyde) means in experimental groups

Groups	n	95% average confidence interval		Mean	Standard deviation	Standard Error
		High limit	Low limit			
Control	10	0.3056	0.2944	0.3	0.0025	0.00789
Vehicle *	10	0.3208	0.2960	0.3084	0.0055	0.01731
ASC-MI	10	0.3013	0.2897	0.2955	0.0026	0.00813
AVP-ASC-MI	10	0.3142	0.2998	0.307	0.0032	0.01006
Total	40	0.3066	0.2988	0.30273	0.0019	0.01226

Supplementary Table 6 .Mean and confidence interval in each experimental group for (Total Antioxidant Capacity) TAC and relevant statistical test

Groups	n	95% average confidence interval		Mean	Standard deviation	Standard Error
		High limit	Low limit			
Control	10	1.5394	1.4542	1.4968	0.0188	0.0596
Vehicle *	10	1.5599	1.4851	1.5225	0.0166	0.05235
ASC-MI	10	1.5776	1.5133	1.54545	0.0142	0.04493
AVP-ASC-MI	10	1.5311	1.4428	1.48695	0.0195	0.06174
Total	40	1.5314	1.4945	1.51293	0.0091	0.05772

Supplementary Table 7. Mean and confidence interval in each experimental group for CAT (Catalase) and relevant statistical test

Groups	n	95% average confidence interval		Mean	Standard deviation	Standard Error
		High limit	Low limit			
Control	10	278.1167	137.6210	207.869	31.0535	98.1997
Vehicle *	10	334.9444	156.1463	245.545	39.5194	124.971
ASC-MI	10	461.1699	314.4251	387.797	31.8180	95.4539
AVP-ASC-MI	10	259.4282	141.2800	200.354	26.1140	82.5799
Total	40	296.9349	217.3143	257.125	19.6653	122.81
		278.1167	137.6210		31.0535	98.1997

Table supplementary 8. Mean and confidence interval in each experimental group (Glutathione) GSH and relevant statistical test

Groups	n	95% average confidence interval		Mean	Standard deviation	Standard Error
		High limit	Low limit			
Control	10	3.2797	2.2183	2.74898	0.2346	0.74187
Vehicle *	10	3.9833	2.7720	3.37761	0.2677	0.84664
ASC-MI	10	3.9838	2.9179	3.45081	0.2356	0.745
AVP-ASC-MI	10	4.2168	3.1588	3.68779	0.2338	0.73947
Total	40	3.5781	3.0545	3.3163	0.1294	0.81866

Supplementary Table 9- Echocardiographic and anatomical input of the 4 experimental groups at the end of the protocol.

Groups number &Rats Parameters	Control	Vehicle	ASC-MI	AVP-ASC-MI	p-Value
N	10	10	10	10	
Bodyweight (g)	227± 13	206 ± 10	244± 11	245± 15	<0.0001
Heart weight (g)	1.21 ± 0.01	1.41 ± 0.09	1.051 ± 0.04	1.057 ± 0.02	<0.0001
Heart rate (bpm)	231± 24	233.1 ± 5	226.1± 15	231 ± 7	<0.0001
Fractional shortening (%)	32.41± 0.9	34.3 ± 0	15.05± 0.5	13.02± 0	<0.0001
Ejection fraction (%)	49± 0.09	56.98± 0.3	21.07± 0.1	26.11± 2.0	<0.0001
Systolic blood pressure (mmHg)	82.6± 3	86.1± 2	84.7± 0	86.1± 1	<0.0001
Diastolic blood pressure (mmHg)	43.12± 0.8	38.22± 1	38.71± 0	38.22± 0	<0.0001
Left ventricular internal diameter in diastole (mm)	4.27± 0.2	4.438± 0.1	4.9± 1.7	6.09± 0.2	<0.0001
Interventricular septum in diastole (mm)	0.21 ± 0.1	0.84± 0.1	0.63± 0.1	0.7± 0.	0.0006