**Supplementary Tables**

**Supplementary Table I.** Enrollment and exclusions

|  |  |  |  |
| --- | --- | --- | --- |
| **Group** | **Initially Assigned** | **Died after cell infusion** | **Completed protocol** |
| Vehicle | 13 | 0 | 13 |
| MSCs | 16 | 5 | 11 |
| CMCs | 12 | 1 | 11 |
| CPCs | 13 | 0 | 13 |
| **Total** | **54** | **6** | **48** |

**Supplementary Table II.** Body Weight and Gross Measurements

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|   | **Initial body****weight, g** | **Final body****weight, g** | **LV weight, mg** | **LV chamber volume,****mm3** | **Spleen weight index****(mg/g body weight)** |
| Vehicle (n=13) | 160.4±5.7 | 202.8±6.0 | 547.0±21.1 | 197.0±26.0 | 2.54±0.17 |
| MSCs (n=11) | 150.3±2.3 | 190.9±1.2 | 652.4±41.1 | 154.1±27.4 | 2.70±0.20 |
| CMCs (n=11) | 160.4±6.5 | 201.0±5.1 | 537.3±11.9 | 145.2±27.1 | 2.62±0.21 |
| CPCs (n=13) | 154.6±4.8 | 197.7±3.7 | 561.0±27.3 | 176.8±22.0 | 2.27±0.06 |

Data are means ± SEM

Spleen weight index were calculated as organ weight (milligram, mg) per gram (g) of rat body weight.

**Supplementary Table III.** Echocardiographic data

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   | **Vehicle** **(n=13)** | **MSCs****(n=11)** | **CMCs****(n=11)** | **CPCs****(n=13)** |
| **Baseline (before MI)** |
| Heart rate (bpm) | 313.3±6.7 | 329.4±5.8 | 303.4±5.8 | 312.2±5.3 |
| IW Td (mm) | 1.25 ±0.05 | 1.12±0.04 | 1.22±0.03 | 1.19±0.04 |
| IW Ts (mm) | 2.08±0.11 | 1.87±0.07 | 1.96±0.10 | 1.93±0.08 |
| LVEDD (mm) | 5.40±0.09 | 5.21±0.15 | 5.30±0.10 | 5.30±0.16 |
| LVESD (mm) | 2.69±0.08 | 2.56±0.12 | 2.74±0.18 | 2.72±0.12 |
| PWd (mm) | 1.48±0.06 | 1.51±0.05 | 1.40±0.03 | 1.38±0.05 |
| PWs (mm) | 2.41±0.05 | 2.46±0.07 | 2.34±0.06 | 2.23±0.04 |
| IW ThF (%) | 66.8±4.8 | 64.3±5.7 | 62.8±10.8 | 62.4±4.2 |
| PW ThF (%) | 63.6±3.4 | 62.5±3.3 | 67.3±3.0 | 62.8±4.1 |
| LVAd (mm2) | 46±1.1 | 43.8±1.4 | 45.4±1.8 | 42.6±2.0 |
| LVAs (mm2) | 20.4±0.6 | 19.4±0.6 | 19.9±1.0 | 18.4±1.0 |
| CO (ml/min) | 41.3±1.9 | 39.8±2 | 40.5±2.2 | 37.7±2.3 |
| EF (%) | 75.8±0.4 | 75.3±0.2 | 76.2±0.8 | 76.5±0.9 |
| FS (%) | 19.1±0.9 | 20.8±1.1 | 18.5±1.2 | 20.5±0.9 |
| SV (µl) | 133.0±4.7 | 122.0±6.3 | 132.1±7.2 | 120.2±7.2 |
| LVEDV (µl) | 175.8±6.7 | 161.9±8.1 | 173.9±10.5 | 157.8±10.2 |
| LVESV (µl) | 42.8±2.1 | 39.9±1.8 | 41.8±3.5 | 37.66±3.2 |
| FAC (%) | 55.7±0.5 | 55.5±0.4 | 56.3±0.8 | 57.0±1.0 |
| **30 days after MI (Pre-Rx)** |
| Heart rate (bpm) | 315.3±6.8 | 330.3±5.6 | 319.7±8.2 | 324.2±5.1 |
| IW Td (mm) | 0.91±0.04*b* | 0.85±0.04*b* | 0.92±0.04*b* | 0.91±0.05*b* |
| IW Ts (mm) | 1.37±0.07*b* | 1.21±0.06*b* | 1.40±0.09*b* | 1.37±0.09*b* |
| LVEDD (mm) | 6.50±0.22*b* | 6.69±0.16*b* | 6.50±0.21*b* | 6.71±0.19*b* |
| LVESD (mm) | 4.64±0.18*b* | 4.69±0.21*b* | 4.75±0.21*b* | 4.80±0.24*b* |
| PWd (mm) | 1.29±0.05 | 1.36±0.09 | 1.26±0.07 | 1.42±0.09 |
| PWs (mm) | 1.97±0.10 | 2.08±0.08 | 1.90±0.11 | 2.11±0.10 |
| IW ThF (%) | 47.7±4.5 | 43.2±2.2*b* | 52.7±8.2 | 51±6.5 |
| PW ThF (%) | 54.3±3.8 | 56.5±6.5 | 52.4±6.8 | 51.4±6.1 |
| LVAd (mm2) | 54.4±2.0*b* | 51.3±1.4*b* | 51.8±2.5*a* | 53.9±1.5*b* |
| LVAs (mm2) | 34.6±1.2*b* | 32.0±1.0*b* | 33.2±1.6*b* | 34.2±1.0*b* |
| CO (ml/min) | 41.8±2.3 | 39.9±1.8 | 39.7±3.4 | 42.7±2.3 |
| EF (%) | 52.9±0.6*b* | 52.9±0.3*b* | 52.0±0.8*b* | 52.3±0.8*b* |
| FS (%) | 13.4±1.1*b* | 15.8±0.8*b* | 13.7±1.1*b* | 13.5±1.3*b* |
| SV (µl) | 130.8±7 | 118.5±5 | 122.0±9.3 | 128.6±5.8 |
| LVEDV (µl) | 247.3±12.5*b* | 227.0±9.1*b* | 234.5±17.3*b* | 245.8±10.4*b* |
| LVESV (µl) | 116.6±6.0*b* | 105.5±4.3*b* | 112.5±8.4*b* | 117.2±5.2*b* |
| FAC (%) | 36.1±0.6*b* | 37.6±0.6*b* | 35.8±0.8*b* | 36.5±0.8*b* |
| **35 days after treatment** |
| Heart rate (bpm) | 322.0±4.7 | 332±6.1 | 330.3±5.6 | 333.7±4.0 |
| IW Td (mm) | 0.95±0.04 | 0.88±0.04 | 0.93±0.05 | 0.99±0.04 |
| IW Ts (mm) | 1.45±0.05 | 1.33±0.06 | 1.35±0.08 | 1.43±0.06 |
| LVEDD (mm) | 6.96±0.13 | 7.00±0.14 | 6.62±0.22 | 6.77±0.11 |
| LVESD (mm) | 4.66±0.14 | 4.77±0.20 | 4.55±0.20 | 4.70±0.16 |
| PWd (mm) | 1.34±0.04 | 1.22±0.05 | 1.39±0.09 | 1.32±0.07 |
| PWs (mm) | 2.15±0.04 | 1.93±0.07 | 2.10±0.08 | 1.92±0.08 |
| IW ThF (%) | 0.95±0.04 | 0.88±0.04 | 0.93±0.05 | 0.99±0.04 |
| PW ThF (%) | 1.45±0.05 | 1.33±0.06 | 1.35±0.08 | 1.43±0.06 |
| LVAd (mm2) | 56.1±2.1 | 53.3±1.8 | 55.7±1.1 | 56.7±1.4 |
| LVAs (mm2) | 36.7±1.6 | 33.5±1.1 | 34.3±0.8 | 33.2±1.0 |
| CO (ml/min) | 42.4±2.4 | 43.1±2.5 | 45.3±1.8 | 51.3±2.2*e* |
| EF (%) | 50.7±0.6*c* | 53.5±0.5*de* | 54.8±0.8*df* | 58.8±0.8*df* |
| FS (%) | 13.2±1.1 | 15.4±0.8 | 14.8±0.9 | 16.4±1.0 |
| SV (µl) | 129.4±7.4 | 127.3±6.4 | 136.6±5.6 | 156.1±6.2*de* |
| LVEDV (µl) | 256.7±15.3 | 237.9±12.0 | 249.3±9.5 | 265.5±10.2 |
| LVESV (µl) | 127.3±8.4 | 116.6±5.9 | 112.73±4.7 | 109.5±4.7 |
| FAC (%) | 34.7±0.7 | 37.1±0.5 | 38.4±0.7 *f* | 41.5±0.9*df* |

Data are means ± SEM

**IW Td**, infarcted wall thickness at end-diastole; **IW Ts**, infarcted wall thickness at end-systole; **LVEDD**, left ventricular end-diastolic diameter; **LVESD**, left ventricular end-systolic diameter; **PWd**, posterior wall thickness at end-diastole; **PWs**, posterior wall thickness at end-systole; **IW ThF**, infarcted wall systolic thickening fraction; **PW ThF**, posterior wall systolic thickening fraction; **LVAd,** left ventricular end-diastolic area; **LVAs,** left ventricular end-systolic area; **CO**, cardiac output; **EF**, ejection fraction; **FS**, fractional shortening; **SV**, stroke volume; **LVEDV**, left ventricular end-diastolic volume; **LVESV**, left ventricular end-systolic volume; and **FAC**, fractional area change. *a*, *P*<0.05, and *b*, *P*<0.01 vs. baseline; *c*, *P*<0.05, and *d*, *P*<0.01 vs. Pre-Rx; *e*, *P*<0.05, and *f*, *P*<0.01 vs. vehicle.**Supplementary Table IV.** Hemodynamic data

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Group** | **Vehicle (n=13)** | **MSCs (n=11)** | **CMCs (n=11)** | **CPCs (n=13)** |
| **Heart rate (bpm)** | 328.4 ± 6.2 | 318.9 ± 5.4 | 315.6 ± 4.6 | 335.3 ± 8.9 |
| **End-systolic Volume (µL)** | 148.3 ± 5.0 | 143.8 ± 3.7 | 138.1 ± 5.4 | 124.4 ± 5.1***b*** |
| **End-diastolic Volume (µL)** | 265.8 ± 8.4 | 264.1 ± 6.5 | 260.6 ± 9.8 | 260.6 ± 7.1 |
| **End-diastolic Pressure (mmHg)** | 9.7 ± 0.4 | 8.1 ± 0.4 | 8.4 ± 0.6 | 8.3 ± 0.3 |
| **Stroke Volume (µL)** | 117.6 ± 4.0 | 120.3 ± 4.3 | 122.5 ± 6.2 | 136.2 ± 4.8***a*** |
| **Ejection Fraction (%)** | 49.8 ± 0.7 | 52.1 ± 0.8 | 51.4 ± 0.7 | 54.1 ± 0.5***b*** |
| **Stroke Work (mmHg\*µL)** | 10.7 ± 0.3 | 12.1 ± 0.5 | 12.0 ± 0.5 | 13.5 ± 0.4***b*** |
| **dP/dt*max* (mmHg/sec)** | 7543 ± 95 | 7944 ± 139 | 8337 ± 150***a*** | 7953 ± 90 |
| **dP/dt*min* (mmHg/sec)** | -7066 ± 221 | -7594 ± 176 | -7867 ± 104***b*** | -7934 ± 111***b*** |
| **V@dP/dt*max* (µL)** | 265.3 ± 7.6 | 257.8 ± 7.3 | 244.8 ± 10.6 | 238.7 ± 9.2 |
| **V@dP/dt*min* (µL)** | 148.9 ± 4.2 | 138.0 ± 3.8 | 132.5 ± 5.2 | 122.2 ± 5.6***b*** |
| **dP/dt*max*-EDV (mmHg/sec/µL)** | 27.3 ± 1.0 | 29.8 ± 1.3 | 33.5 ± 1.8***a*** | 32.0 ± 1.2***a*** |
| **End-Systolic Elastance (mmHg/µL)** | 0.73 ± 0.03 | 0.81 ± 0.03 | 0.80 ± 0.03 | 0.86 ± 0.02***a*** |
| **Preload Recruitable Stroke Work (mmHg)** | 56.5 ± 4.3 | 63.4 ± 5.3 | 71.8 ± 6.3 | 70.1 ± 4.0 |
| **Tau\_w (msec)** | 11.7 ± 0.2 | 11.2 ± 0.2 | 10.9 ± 0.3 | 10.7 ± 0.2***a*** |

Data were means ± SEM

**Tau\_w**, Tau-Weiss method; **EDV**, end-diastolic volume. *a*, *P*<0.05, and *b*, *P*<0.01 vs. vehicle