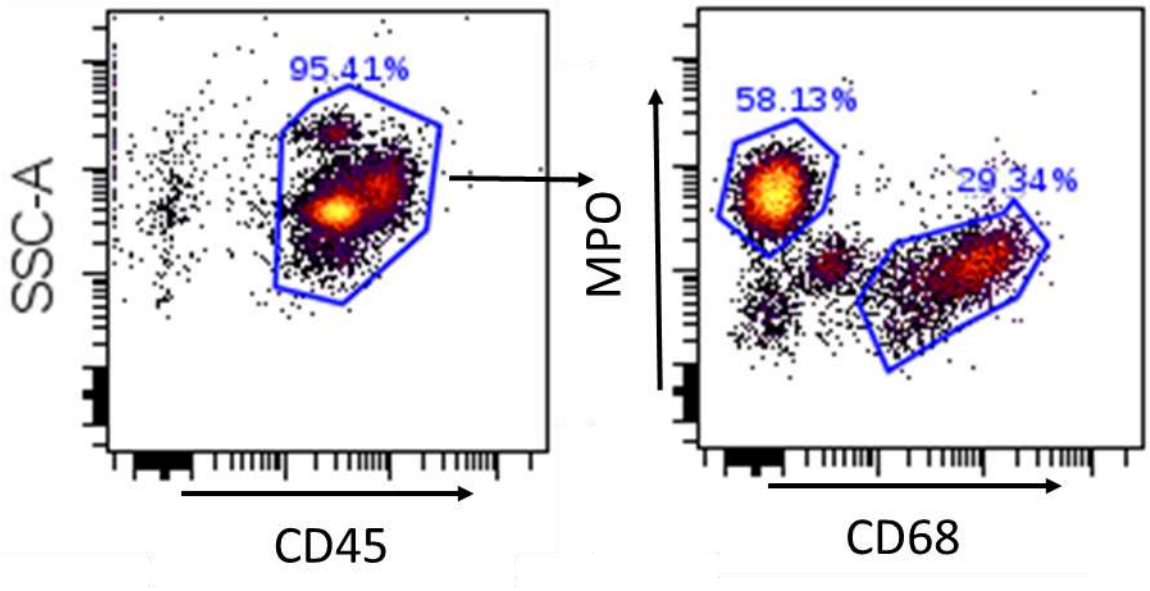
SUPPLEMENTAL MATERIAL

Table S1. Liquid chromatography/mass spectrometry utilized Ascentis column with 0.1% formic acid in water as solvent (A) and acetonitrile as solvent (B).

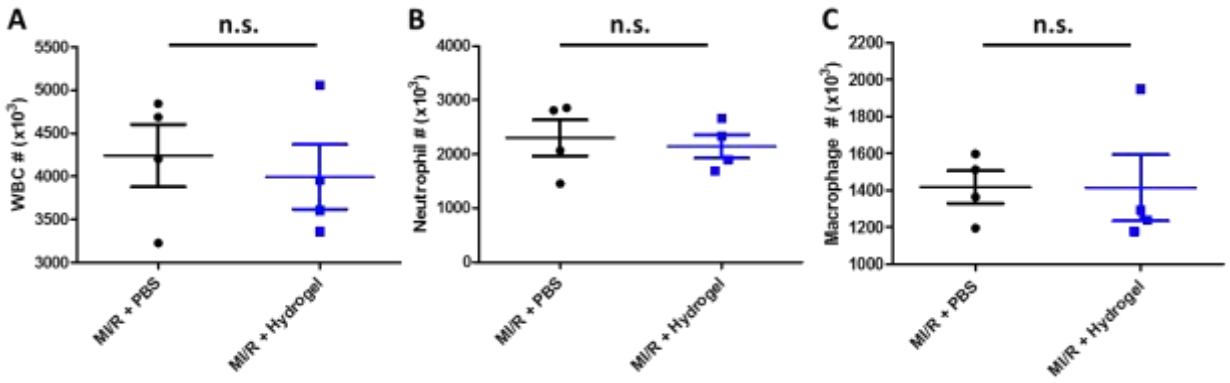
Time (Minutes)	A (Percent by volume)	B (Percent by volume)
0-10	100	0
10-15	100-95	0-5
15-25	95-70	5-30
25-26	70-0	30-100
26-30	0	100
30-31	0-100	100-0
31-50	100	0

Figure S1. Gating strategy to identify cell sub-populations that comprise the innate immune system.



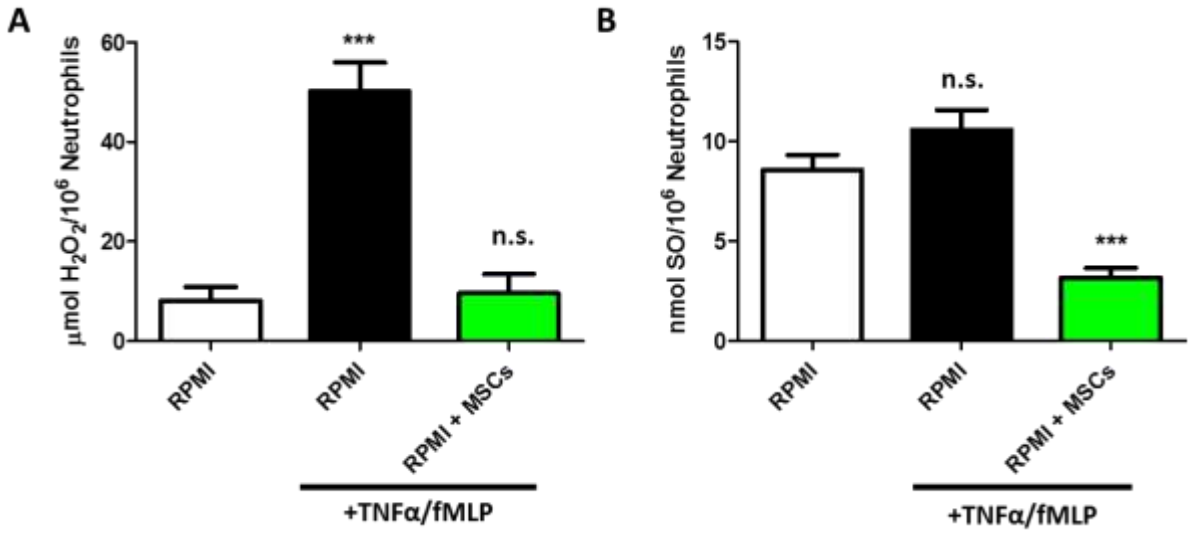
After gating out doublets and dead cells, a highly pure $CD45^{+}$ white blood cell population was further separated into myeloperoxidase $(MPO)^{high}$ neutrophils and $CD68^{high}$ macrophages.

Figure S2. Hydrogel delivery vehicle does not cause reduce innate immune cell infiltration compared to PBS control.



There was no significant difference in (A) total WBC infiltration, (B) MPO^{high} neutrophil infiltration, or (C) $CD68^{high}$ macrophage infiltration 24 hours following MI/R injury in hydrogel vehicle treated animals compared to PBS alone. This suggests that hydrogel vehicle itself has no effect on attenuating the innate immune response during the acute phase of injury. Data are expressed in mean±SEM, n=4, n.s. indicates not significant, unpaired t-test. PBS indicates phosphate buffered saline; WBC, white blood cell; MPO, myeloperoxidase; MI/R, myocardial ischemia/reperfusion.

Figure S3. MSCs inhibit neutrophil-mediated reactive oxygen species formation *in vitro*. Human neutrophils were cultured with RPMI with and without MSC co-culture and stimulated with inflammatory TNFα/fMLP for inflammatory stimulation.



(A) MSC co-culture prevented increase in H_2O_2 following TNFα/fMLP stimulation as measured by Amplex Red assay. (B) MSC co-culture also prevented formation of SO compared to resting and TNFα/fMLP stimulated neutrophils as measured by hydrocyanine-3 assay. Data are expressed as mean±SEM. N=4-6, ***P<0.0005 compared to RPMI only without TNFα/fMLP stimulation, n.s. indicates not significant compared to RPMI only without TNFα/fMLP stimulation. One-way ANOVA, Tukey post hoc test. MSC indicates mesenchymal stromal cell; RPMI, Roswell park memorial institute buffer; TNFα/fMLP, tumor necrosis factor α/N-formyl-methionyl-leucyl-phenylalanine; H_2O_2, hydrogen peroxide; SO, superoxide.