

Supplemental Digital Content 2

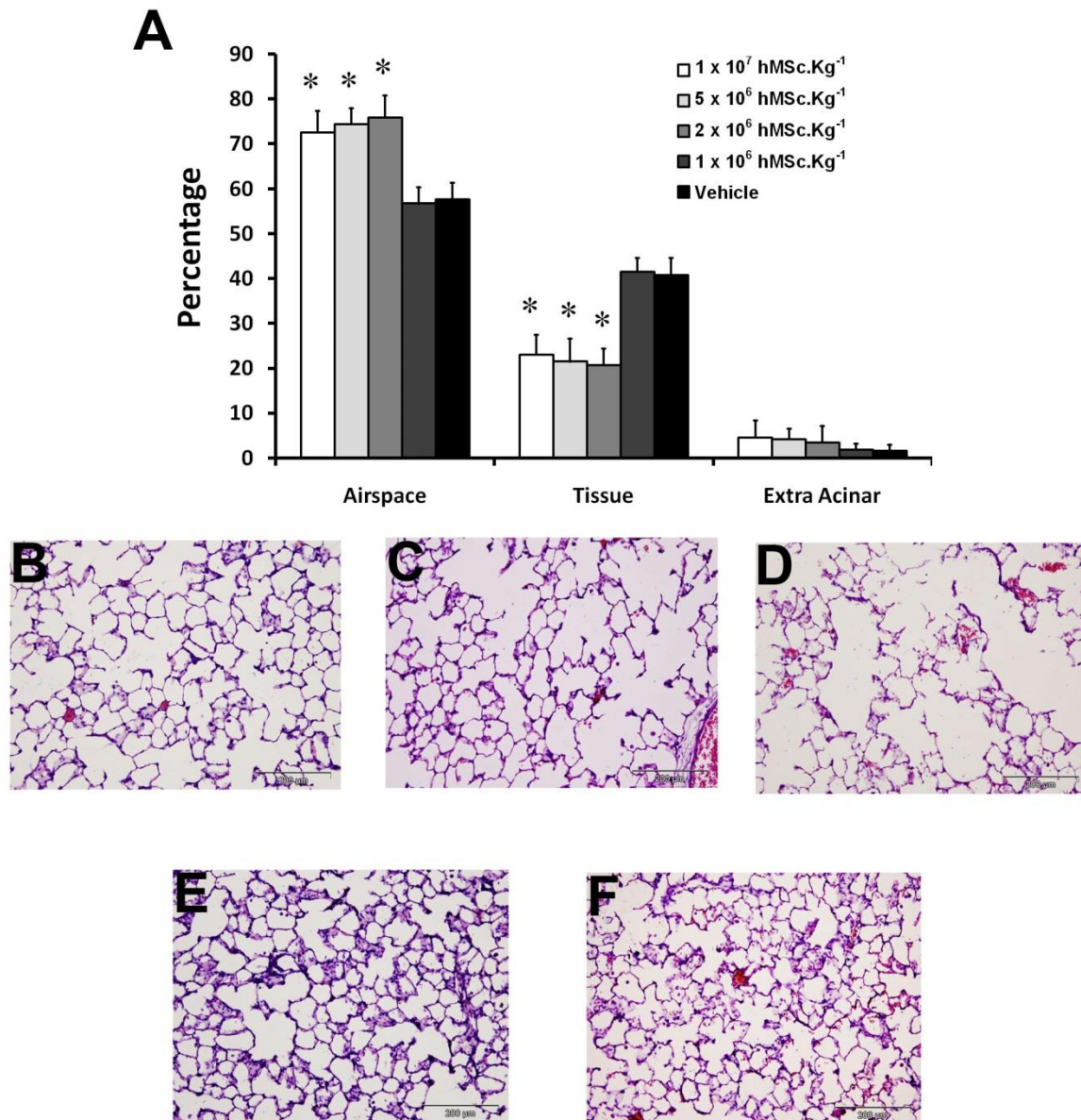


Fig. 1. Dose response effects of hMSC's therapy to enhance resolution of structural lung injury following VILI. Doses of hMSCs as low as 2×10^6 per kg restored enhanced resolution of histologic injury as evidenced by decreased alveolar lung tissue and increased alveolar airspace fractions (A). Representative photomicrographs of lung from animals

treated with 1×10^7 per kg (B) 5×10^6 per kg (C) 2×10^6 per kg (D) and 1×10^6 per kg (E)

hMSCs, and vehicle (F) respectively. Scale bar is 200 μm .

hMSC = human mesenchymal stromal cell. Error bars represent standard deviation.

*Significantly ($P < 0.05$) different from Vehicle group.

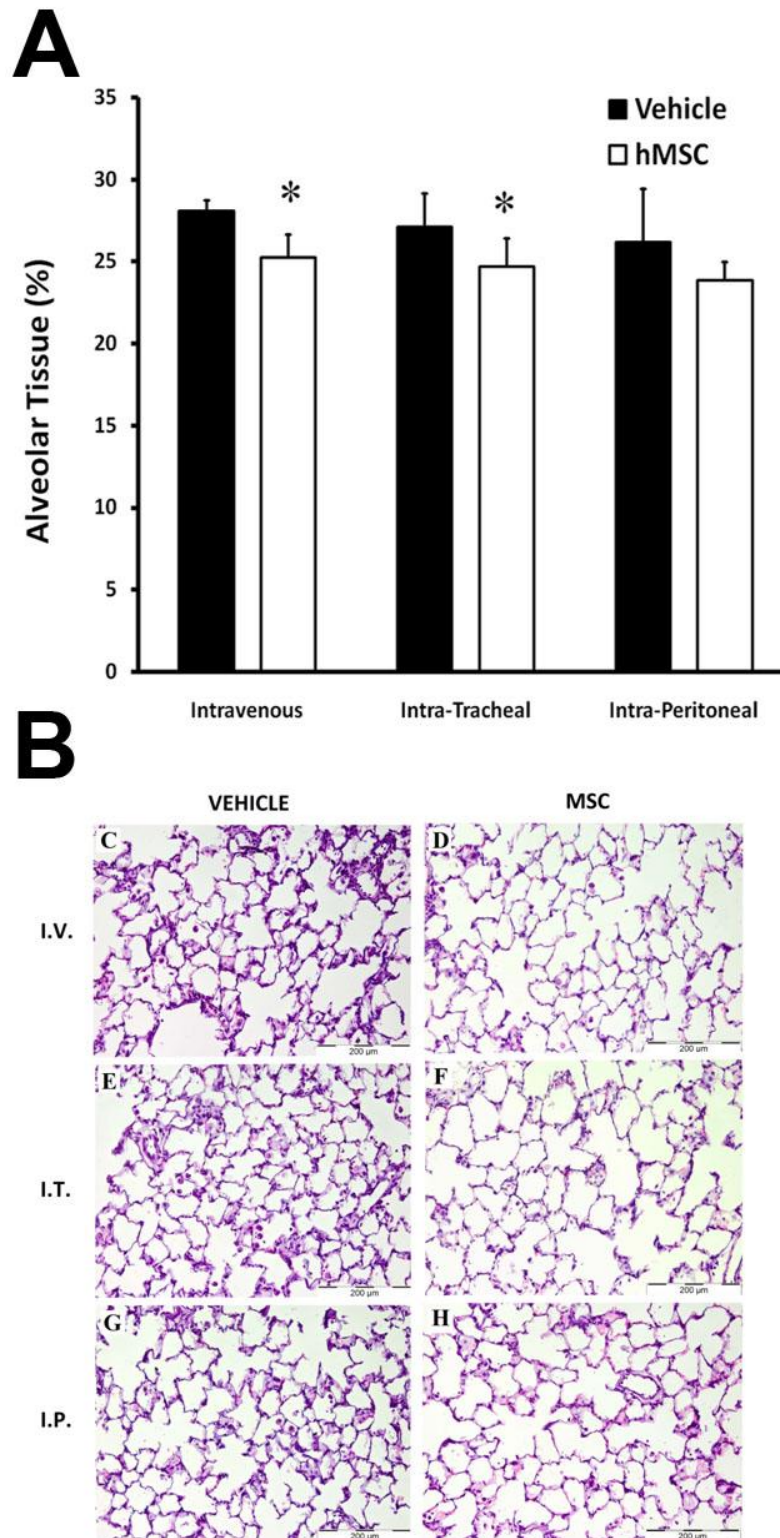


Fig. 2. Effect of route of hMSC administration on resolution of structural lung injury following VILI. Delivery of hMSCs by the intravenous and intratracheal routes enhanced

resolution of histologic injury as evidenced by decreased alveolar lung tissue and increased alveolar airspace fractions (A). Panel B comprises representative photomicrographs of lung sections from vehicle and hMSC treated animals using the intravenous, intratracheal and intraperitoneal routes respectively. Scale bar is 200 μm .

hMSC = human mesenchymal stromal cell; IP = intraperitoneal; IT = intratracheal; IV = intravenous; Vehicle = treatment with vehicle alone. Error bars represent standard deviation.

*Significantly ($P < 0.05$) different from Vehicle group.

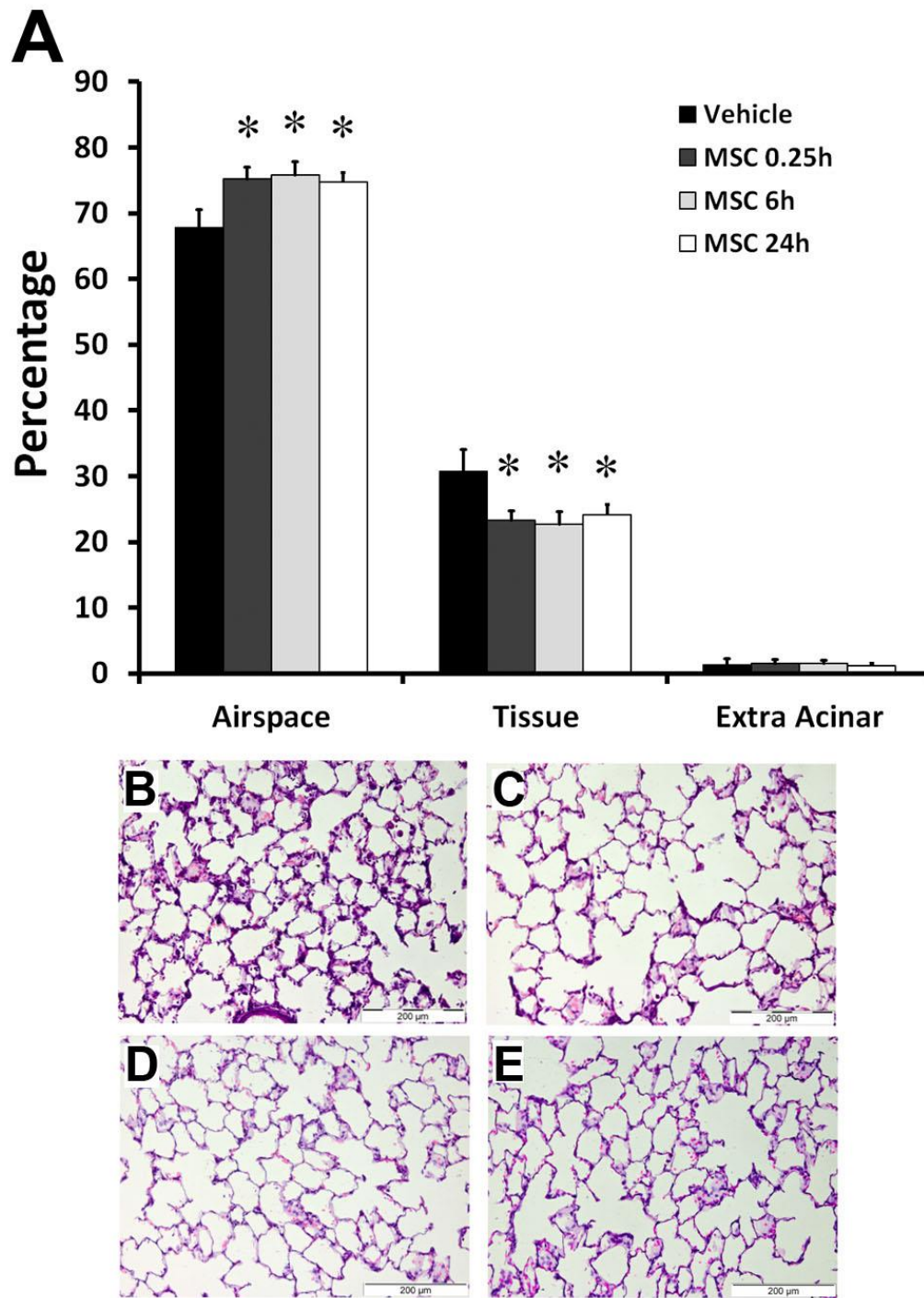


Fig. 3. Effect of delayed hMSC administration on resolution of structural lung injury following VILI. Administration of hMSCs at later time points enhanced resolution of histologic injury (A). Representative photomicrographs of lung from animals treated with

vehicle (B) and with hMSCs at 0.25 h (C) 6 h (D) and 24 h (E) following VILI. Assessments were performed at 48 h following VILI. Scale bar is 200 μ m

hMSC = human mesenchymal stromal cell; Vehicle = treatment with vehicle alone; VILI = ventilation induced lung injury. Error bars represent standard deviation.

*Significantly ($P < 0.05$) different from Vehicle group.