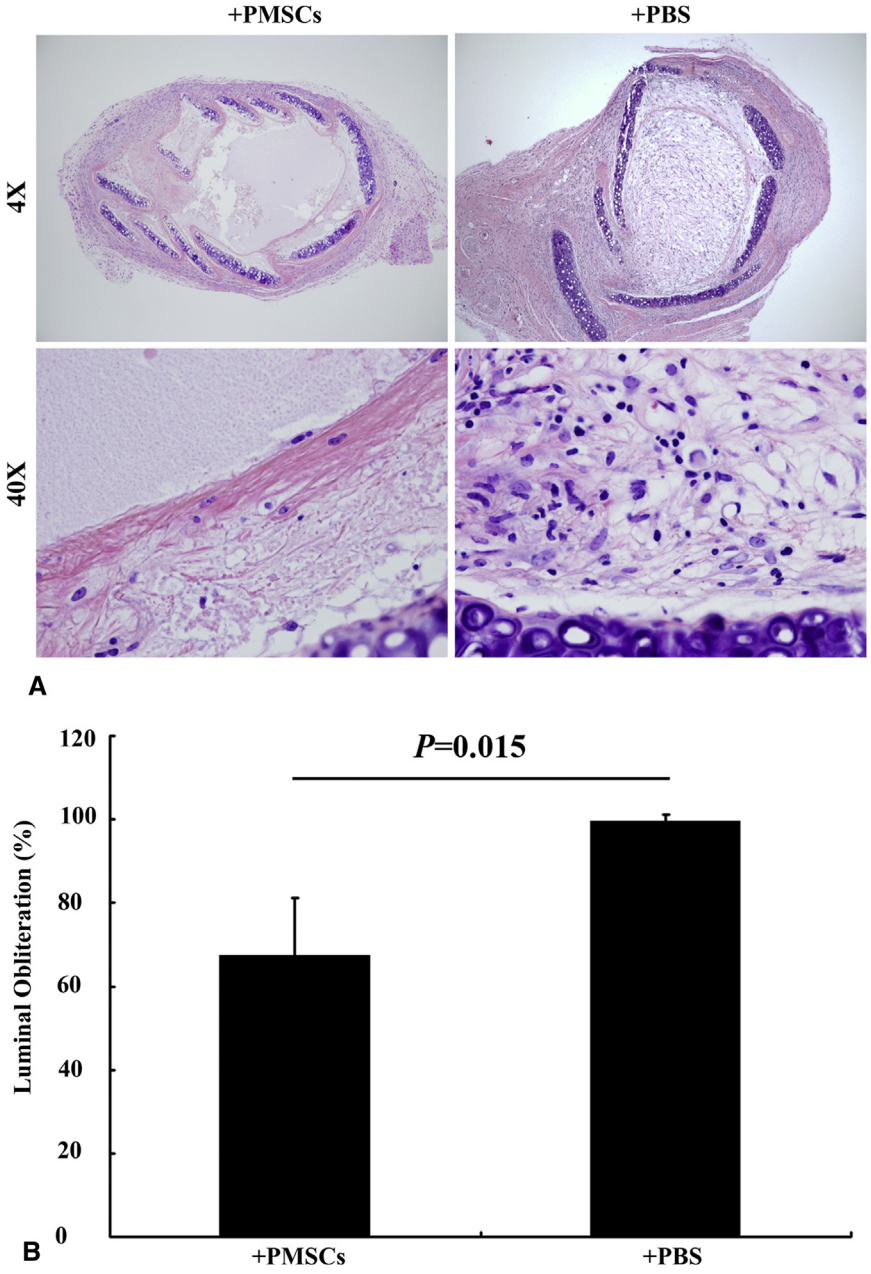

FIGURE E1. Local injection of PMSCs reduced the development of BO on day 28 after tracheal transplantation. A, Representative images of H&E-stained tracheal allografts 28 days after transplantation. The magnification of the images is indicated on the *left*. B, Comparison of luminal obliteration of the allografts with and without PMSC injection on day 28. Data shown are the mean ± standard deviation. n = 8. *+PMSCs*, Treated with PMSCs (1×10^6); *+PBS*, treated with 1× PBS as control. *PMSC*, Placenta-derived human mesenchymal stem cells; *PBS*, phosphate-buffered saline.

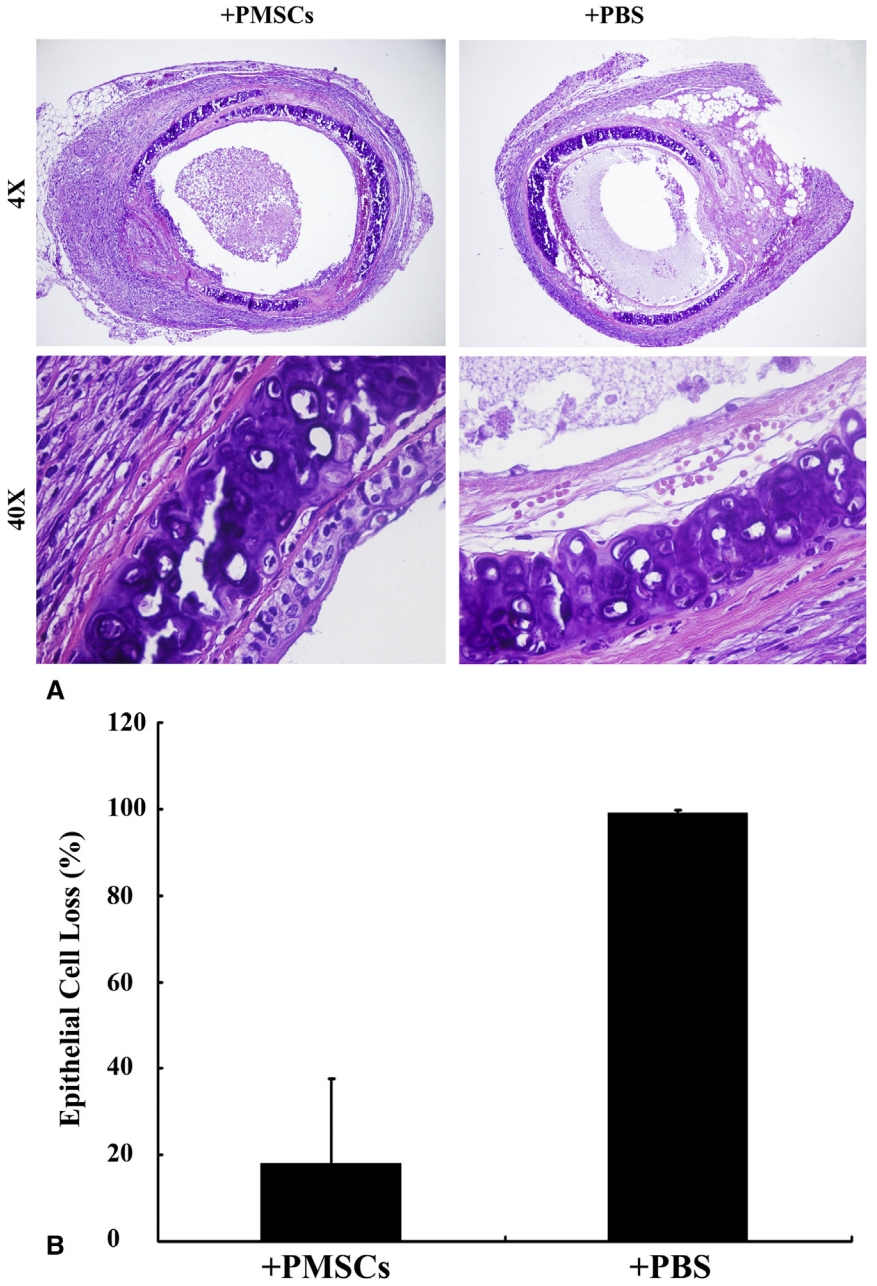

FIGURE E2. Loss of epithelial cells in allografts with and without local PMSC injection on day 14 after transplantation. A, Representative images of H&E-stained histopathologic sections of tracheas treated with PMSCs (*left column*) and PBS (*right column*) at 14 days after transplantation. B, Bar graph of epithelial cell loss in allografts with and without PMSC injection on day 14. Data shown are the mean ± standard deviation. $n = 8$. *+PMSCs*, Intratracheally treated with PMSCs (1×10^6); *+PBS*, treated with 1× PBS as control. *PMSC*, Placenta–derived human mesenchymal stem cells; *PBS*, phosphate-buffered saline.

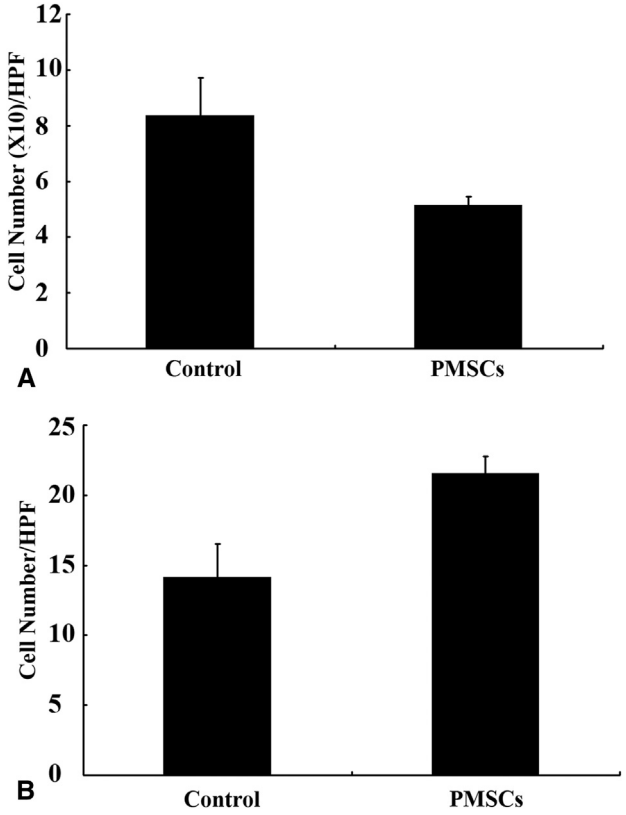

FIGURE E3. Immunohistochemical staining of CD3+ T cells (A) and CD4+ CD25+ Foxp3+ regulatory T cells (B) in the allografts treated with PMSCs and PBS controls on day 14. Data shown are the mean ± standard error of the mean. $n = 8$. *HPF*, High-power field; *PMSC*, placenta–derived human mesenchymal stem cells.

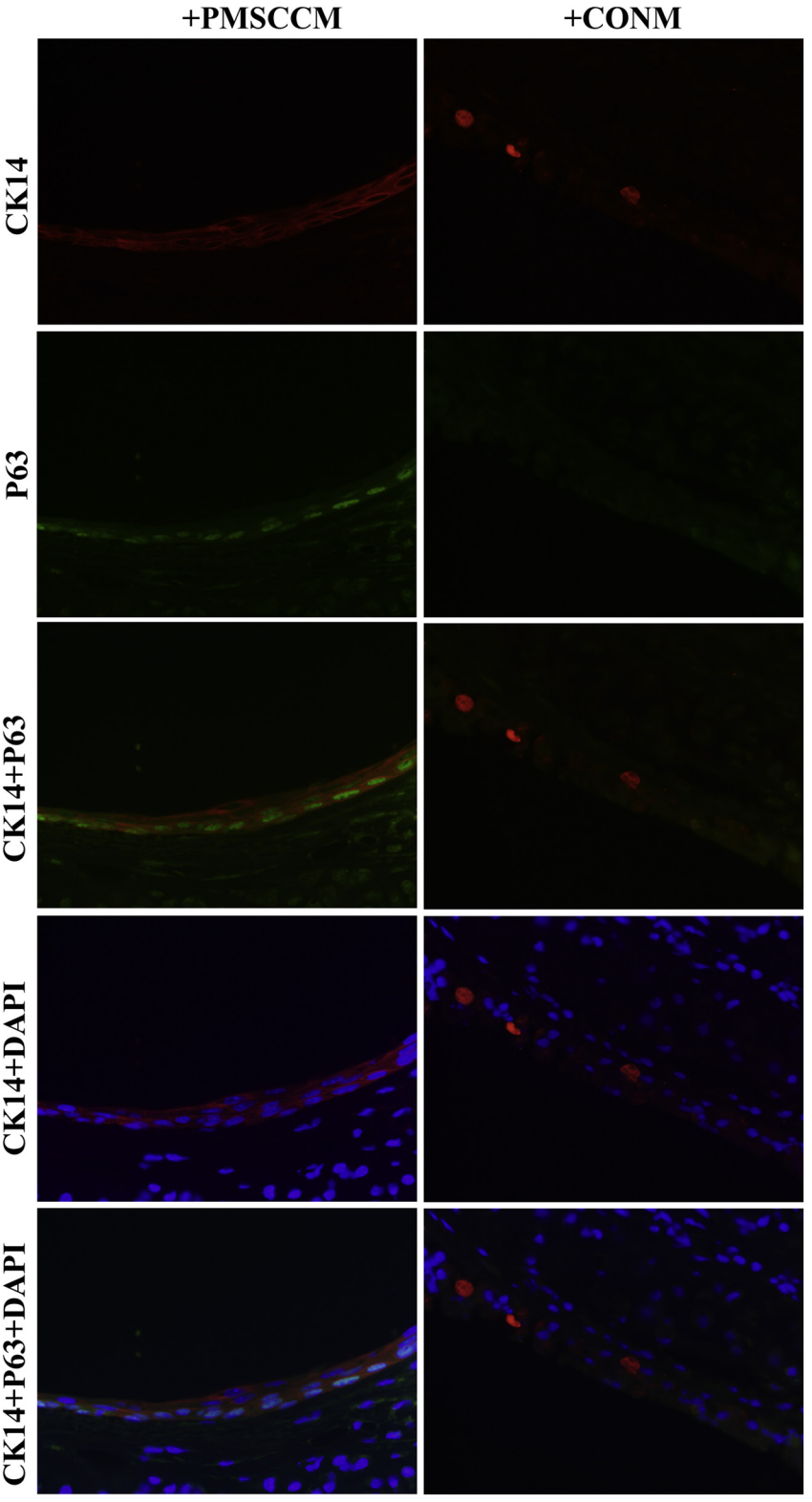

FIGURE E4. Double immunofluorescent staining of P63 and CK14 in the tracheal allografts after intratracheal treatment with PMSCCM or blank medium on day 14 after transplantation. *Red color* indicates positive staining of CK14; *green color* shows positive staining of P63; *blue color* indicates nuclei stained with DAPI. The magnification of all images is 40×. The merged images are indicated on the *side*. *+PMSCCM*, Treated with PMSCCM; *+CONM*, treated with blank medium as control. *DAPI*, 4,6-diamidine-2-phenylindole dihydrochloride; *PMSCCM*, PMSC-conditioned medium; *CONM*, control media.

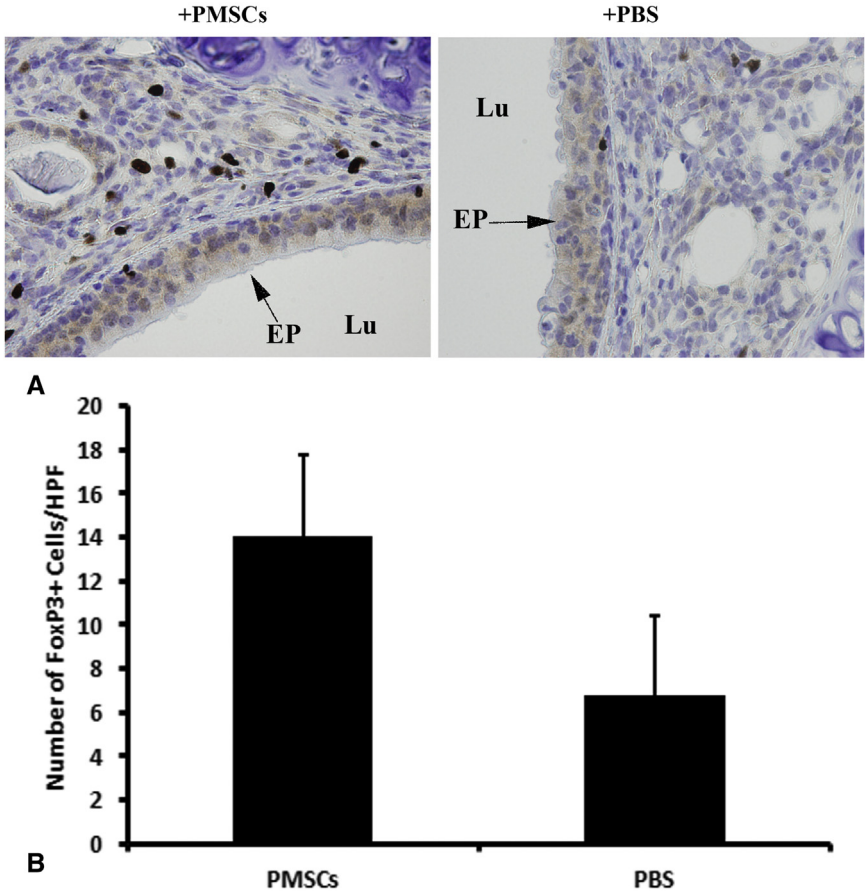

FIGURE E5. Immunohistochemical staining of Foxp3+ regulatory T cells in allografts treated intratracheally with PMSCs and PBS controls on day 7 after transplantation. A, Representative images of immunohistochemical staining of Foxp3+ regulatory T cells in allografts at 7 days after transplantation. Images are at 40× magnification. *+PMSCs*, Treated with PMSCs (1×10^6); *+PBS*, treated with 1× PBS as control. B, Bar graph of Foxp3+ regulatory T cells in the allografts. Data shown are the mean ± standard error of the mean. $n = 8$-12. *Lu*, Lumen; *EP*, epithelial layer; *HPF*, high-power field; *PMSC*, placenta–derived human mesenchymal stem cells; *PBS*, phosphate-buffered saline.

000 Treatment with placenta-derived mesenchymal stem cells mitigates development of bronchiolitis obliterans in a murine model

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Placenta–derived PMSCs have shown antiinflammatory and immunosuppressive effects with minimal immunogenicity. The present study shows that treatment with both PMSCs and PMSC-conditioned medium reduced bronchiolitis obliterans in a mouse model. PMSCs may provide a novel therapy for reducing airway fibrosis after lung transplantation.