In patients with severe acute lung injury (ALI) or acute respiratory distress syndrome (ARDS) the prone position has been shown to improve survival of patients who are severely hypoxemic with an arterial oxygen tension to inspiratory oxygen fraction ratio (PaO2/FiO2) < 100. In those patients tracheobronchial toilette is crucial in preventing or treating airways obstructed by secretions and deterioration of oxygenation. Flexible fiberoptic bronchoscopy is widely recognized as an effective technique to perform bronchial toilette in the intensive care unit (ICU). Flexible bronchoscopy performed during prone mechanical ventilation in two cardiosurgical patients who developed ALI after complex surgery, proved feasible and safe and helped to avoid undesirable earlier cessation of prone mechanical ventilation. However decision making about bronchoscopy in severe hypoxia should be even more cautious than in the supine patient, as dangerous delay in resuscitation manoeuvres due to postponed switching the patient to the supine position should always be prevented. © 2011 Sociedade Portuguesa de Pneumologia. Published by Elsevier España, S.L. All rights reserved.