A 33-year-old woman in the 28th week of gestation was admitted to the Gynecology and Obstetrics Department of our hospital with a diagnosis of H1N1 influenza and bilateral pneumonia. She developed acute respiratory failure requiring intubation and mechanical ventilation followed by rescue cesarean delivery and transfer to our Department. Wide-spectrum antimicrobial treatment with oseltamivir and positive end-expiratory pressure (PEEP) of up to 15 cm H₂O led to temporary improvement, but after 9 days, the ratio of arterial blood oxygen partial pressure (PaO₂) to fraction of inspired oxygen (FiO₂) dropped below 80 mmHg, indicating severe acute respiratory distress syndrome (ARDS) according to the Berlin definition. Chest X-rays showed extensive bilateral pulmonary consolidations (FIGURE 1A). Despite modifications of ventilator settings and recruitment maneuvers, pulmonary compliance and arterial blood oxygenation...
Severe acute respiratory distress syndrome with refractory hypoxemia and massive bilateral pulmonary consolidations (A) led to the institution of venovenous extracorporeal membrane oxygenation (ECMO). Since venous stenosis prevented cannulation of the superior vena cava via the right internal jugular vein, femoral–femoral cannulation was performed (B). Inadequate blood oxygenation related to recirculation prompted insertion of another return cannula via the left internal jugular vein (C), while both femoral cannulas were used for drainage. This rare approach resulted in the patient’s recovery despite bilateral pneumothoraces treated by pulmonary drainage as can be seen from a computed tomography scan performed after ECMO discontinuation (D). However, chest radiography performed at discharge (E) and a computed tomography scan of the lung at 3 months (F) still showed diffuse ground glass opacities and interstitial reticular thickening.

18 and 25 days after ECMO weaning, respectively. Thirteen days after liberation from mechanical ventilation, the patient was discharged from the hospital with significant clinical and radiographic improvement (FIGURE 1E). After 3 months, despite full recovery, computed tomography of the lungs revealed signs of interstitial fibrosis (FIGURE 1F). Such sequelae is quite often observed in H1N1-related ARDS.

Recent experience with the outbreak of H1N1 influenza has confirmed the life-saving potential of ECMO in severe ARDS. Here we show that influenza-associated ARDS with extreme lung infiltrations and very low pulmonary compliance can be successfully treated with ECMO despite vascular pathology.

REFERENCES