



Reversible splenial lesion syndrome during venoarterial extracorporeal membrane oxygenation

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A 29-year-old woman with sickle cell disease was admitted for a severe vaso-occlusive crisis complicated by acute respiratory distress syndrome and acute pulmonary hypertension, which were refractory to conventional therapy. She was placed on venoarterial extracorporeal membrane oxygenation (va-ECMO) for 5 days and remained comatose after ECMO removal. Brain magnetic resonance imaging performed 5 days after ECMO removal found a cytotoxic edema within the splenium of the corpus callosum and microbleeds (Fig. 1). After 12 days, patient

neurological condition improved and she awoke with regression of the splenial lesion (Fig. 2). She was discharged from ICU 4 weeks after initial admission.

Diagnosis of reversible splenial lesion syndrome (RESLES) associated with ECMO was finally retained. RESLES is a rare cause of unexplained coma, associated with favorable neurological outcome. On the basis of our research, this is the first description of RESLES association with ECMO use in the literature.

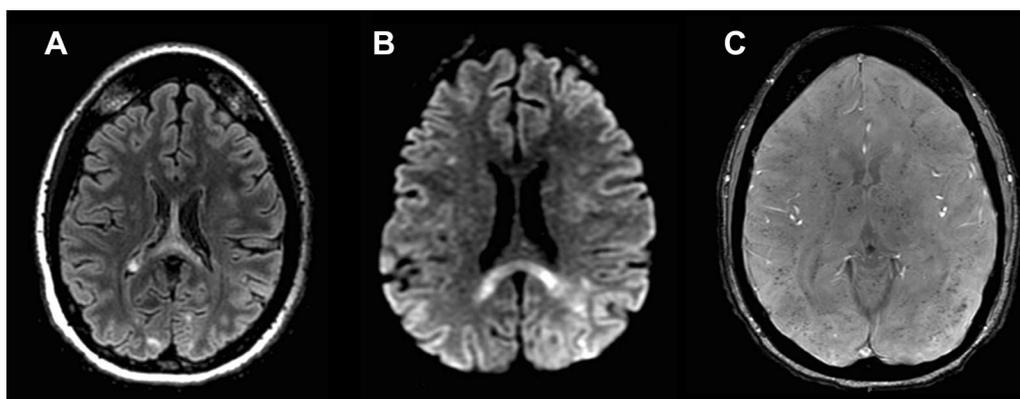


Fig. 1 MRI after extracorporeal membrane oxygenation withdrawal. **a** axial fluid-attenuated inversion recovery (FLAIR) imaging showing hypersignal involving the splenium of the corpus callosum. **b** diffusion-weighted imaging (DWI) showing hyperintensity involving the splenium of the corpus callosum with low apparent diffusion coefficient (ADC). **c** Susceptibility weighted magnetic resonance sequences (SWAN) showing widespread subcortical microbleeds in the white matter, predominating in subcortical *U* fibers

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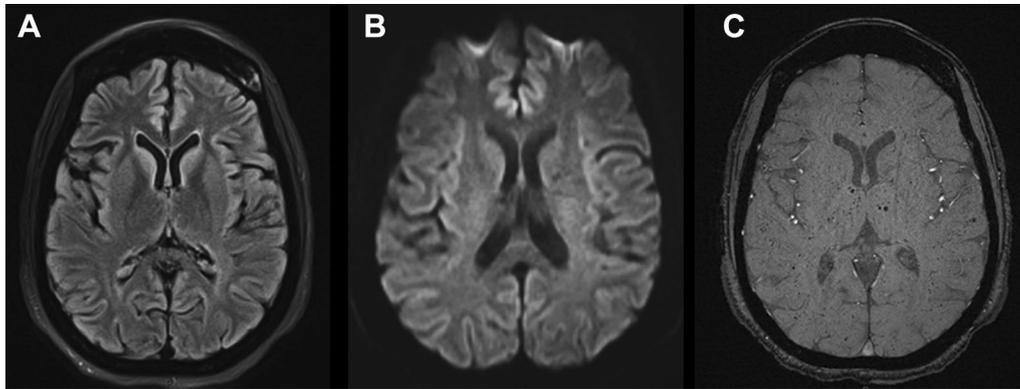


Fig. 2 MRI 1 month later. **a** Axial fluid-attenuated inversion recovery (FLAIR) imaging showing total regression of the previous splenial lesion. **b** Diffusion-weighted imaging (DWI) is normal. **c** Susceptibility weighted magnetic resonance sequences (SWAN) showing partial microbleeds resorption

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