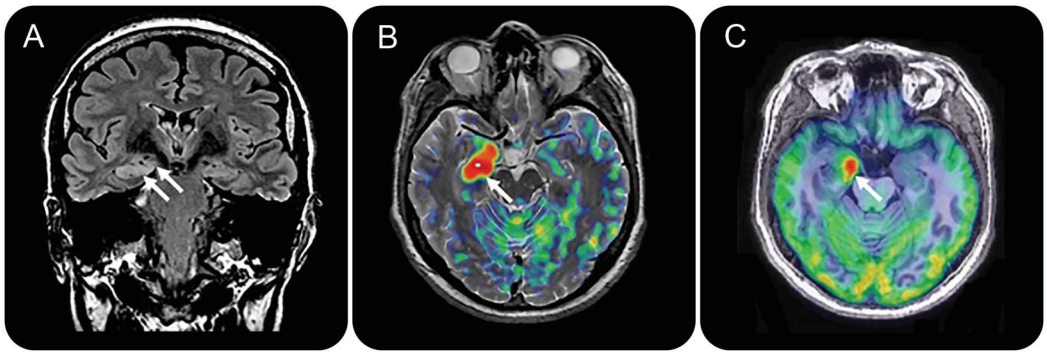
Serial arterial spin labeling MRI in autonomic status epilepticus due to anti-LGI1 encephalitis

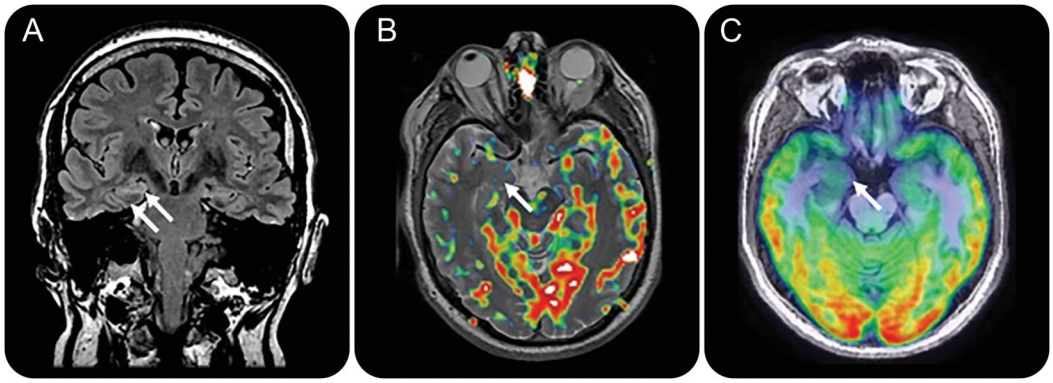
Figure 1 Neuroimaging before treatment of autonomic status epilepticus due to anti-LGI1 encephalitis



At the acute stage of the disease, coronal fluid-attenuated inversion recovery sequence (A) shows hyperintensity of the right hippocampus and amygdala (arrows), while arterial spin labeling (B) and ^{18}F-FDG-PET (C) depict marked hyperperfusion/hypermetabolism circumscribed only to these 2 structures (arrows), being caused by highly repetitive seizures.

A 56-year-old man presented with a 1-month history of daily autonomic seizures (tachycardia, diaphoresis, and nausea). Diagnosis of limbic encephalitis was confirmed based on brain MRI findings and anti-LGI1 antibodies found in CSF. Autonomic status epilepticus was diagnosed on a video-EEG study, while arterial spin labeling (ASL) sequences and ^{18}F-FDG-PET (figure 1) showed hyperperfusion/hypermetabolism over the hippocampus and amygdala. Follow-up neuroimaging (figure 2) proved improvement of the findings as the patient responded to treatment. ASL is an imaging technique highly sensitive to changes in regional cerebral blood flow that can help in the evaluation and follow-up of patients with epilepsy.[1,2]

Figure 2 Neuroimaging after treatment of autonomic status epilepticus due to anti-LGI1 encephalitis



Epilepsy was controlled on inmunomodulatory therapy. One year after treatment, follow-up coronal fluid-attenuated inversion recovery sequence (A) shows complete resolution of the inflammation involving the temporal medial region (arrows), whereas ASL (B) and ^{18}F-FDG-PET (C) show slightly decreased blood perfusion and metabolism of the hippocampus and amygdala (arrows).

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