MRI changes in status epilepticus

J.I. Sirven, MD; R.S. Zimmerman, MD; J.L. Carter, MD; J.F. Drazkowski, MD; and J.S. Larson, MD

A 41-year-old woman with an unremarkable medical history presented to the emergency room in generalized convulsive status epilepticus. The only abnormal laboratory tests included a CSF protein level of 89 and an anti-thyroglobulin antibody titer of 1:2,834 with euthyroid thyroid function tests. Continuous EEG monitoring confirmed generalized status epilepticus for 8 weeks, which failed to respond to numerous anticonvulsants and anesthetics. A brain biopsy revealed nonspecific gliosis.

This case illustrates the MRI changes that can be seen over time in convulsive status epilepticus (figure).1,2 Pathologic studies suggest that the increased FLAIR (fluid-attenuated inversion recovery) signal represents seizure-induced cytotoxic edema progressing to neuronal damage.2

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