Spontaneous radiographic resolution and subsequent redemonstration of an untreated glioblastoma.

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Abstract
The authors present the first case of spontaneous radiographic resolution and subsequent redemonstration of Gd enhancement of an untreated glioblastoma. They also review the literature on MR imaging enhancement patterns of high-grade gliomas and speculate that this phenomenon could be attributed to the dynamic biology of glioblastomas but could also represent pseudoregression following successful control of seizure activity. A 57-year-old woman presented with left-sided paresthesias and numbness. Initial Gd-enhanced MR images exhibited T2 and FLAIR signal changes in the right insular region without mass effect or contrast enhancement. Electroencephalography revealed intermittent sharp wave activity in this area. Antiepileptic medication was started, and the patient's symptoms resolved. Follow-up MR imaging 6 weeks later revealed enlargement of the lesion and contrast enhancement in the superior temporal gyrus. Consequently, the patient was scheduled for a brain biopsy. However, surgical planning MR images obtained on the day of surgery 4 weeks later showed that the enhancement had spontaneously resolved, and so the operation was cancelled. Repeat MR imaging performed 2 weeks later as a result of increased seizure frequency redemonstrated contrast enhancement. The patient then underwent a craniotomy, and final histopathology was consistent with glioblastoma.