



Figure 1. A 5-mm-thick axial fluid-attenuated inversion recovery MRI shows homogenous lesion in the right frontal lobe (a), while planar brain surface reformatted MRI demonstrates focal polymicrogyria (b: arrow).

Focal polymicrogyria: Planar-surface MRI

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A 22-year-old woman with drug-resistant complex focal seizures underwent stereotactic biopsy of a frontal lobe lesion, which revealed "gliosis." Epilepsy-dedicated MRI¹ with planar brain surface views² reformatted from a sagittal three-dimensional T1-weighted gradient echo sequence with 1 mm³ isotropic voxel demonstrated focal polymicrogyria (figure 1). Following subdural grid implantation extended lesionectomy was performed. Two years after surgery the patient had worthwhile seizure improvement (Engel's class IIIa). Correlation of MRI and histopathology explained why 5-mm-thick MRI slices are suited to display normal

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Figure 2. H-E staining of neighboring normal (a) and polymicrogyric cortex (b) with a lattice displaying the imaging matrix of the fluid-attenuated inversion recovery sequence.

cortex but fail to characterize the lesion. If the brain is unfolded along its surface, however, polymicrogyria is clearly visible (figure 2).

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Neurology 2004;62;1227

DOI 10.1212/WNL.62.7.1227

This information is current as of April 12, 2004

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