

Gray matter heterotopia in the temporal lobe

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Section: Neuroradiology

Imaging Technique: MR

Case Type: Clinical Cases

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Patient: 10 years, male

Clinical History:

Epilepsy

Imaging Findings:

The patient had longstanding epilepsy. On MRI examination, conventional T1 and T2-weighted images were acquired.

Discussion:

Common causes of temporal epilepsy include hippocampal sclerosis, nonspecific cortical gliosis, vascular malformations, and tumors. Moreover, disorders of neuronal migration and organization, such as focal cortical dysplasia (polymicrogyria) and gray matter heterotopia, may be observed in this region. The presence of heterotopic gray matter is characterized by its similar signal pattern with the remaining normal cortex on T1-weighted, and proton-density and T2-weighted images. Gray matter heterotopia can be subdivided into several types including subependymal heterotopia, subcortical heterotopia, and band heterotopia. In the current patient, heterotopic gray matter was abundant covering a wide region in the left temporal lobe in the form of subcortical heterotopia, extending from the lateral ventricle to the cortex.

Differential Diagnosis List: Heterotopia in the left temporal lobe

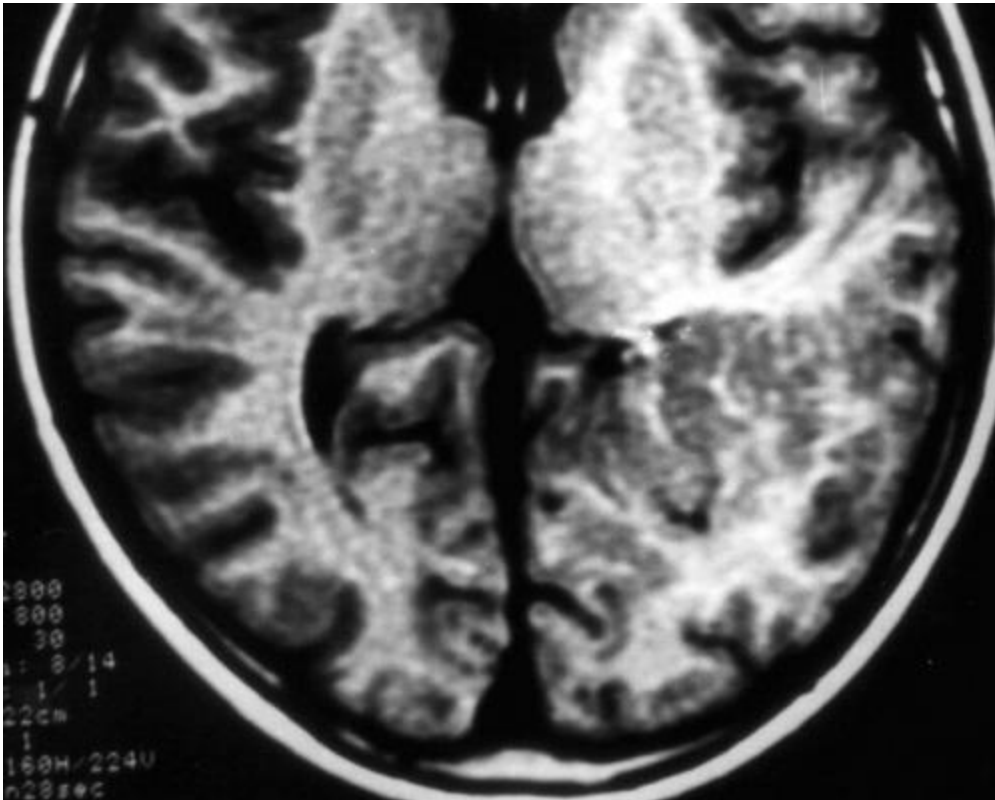
Final Diagnosis: Heterotopia in the left temporal lobe

References:

Barkovich AJ. Pediatric neuroimaging. Lippincott Williams & Wilkins, Philadelphia (2000).

Figure 1

a



Description: T1-weighted image reveals gross heterotopia involving the left temporal lobe. **Origin:**

Description: Proton-density weighted image reveals similar signal intensity in the remaining normal cortices. **Origin:**

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Description: T2-weighted image again reveals similar signal pattern in heterotopia and normal cortices.

Origin: