



# Major Depressive Episode Presentation of Frontal Lobe Status Epilepticus Resolved with Levetiracetam Monotherapy

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## Background

Frontal lobe epilepsy (FLE) can elicit various clinical presentations, most commonly a rapid onset of unilateral clonic seizures or tonic asymmetric seizures.<sup>1</sup>

FLE can also present with primarily neuropsychiatric symptoms which has been reported to lead to misdiagnoses, including:<sup>2</sup>

- Bipolar disorder
- Antisocial personality disorder
- Obsessive compulsive disorder

## Case

### Background

A woman in her 70s with one remote major depressive episode, and a history of breast cancer in remission, was admitted for failure to thrive. The patient reported a 30 lb weight loss over 3 months in the setting of progressive depressed mood, confusion and memory impairment, decreased appetite, and fatigue.

**Psychiatry was consulted for evaluation of patient's depressive symptoms and failure to thrive.**

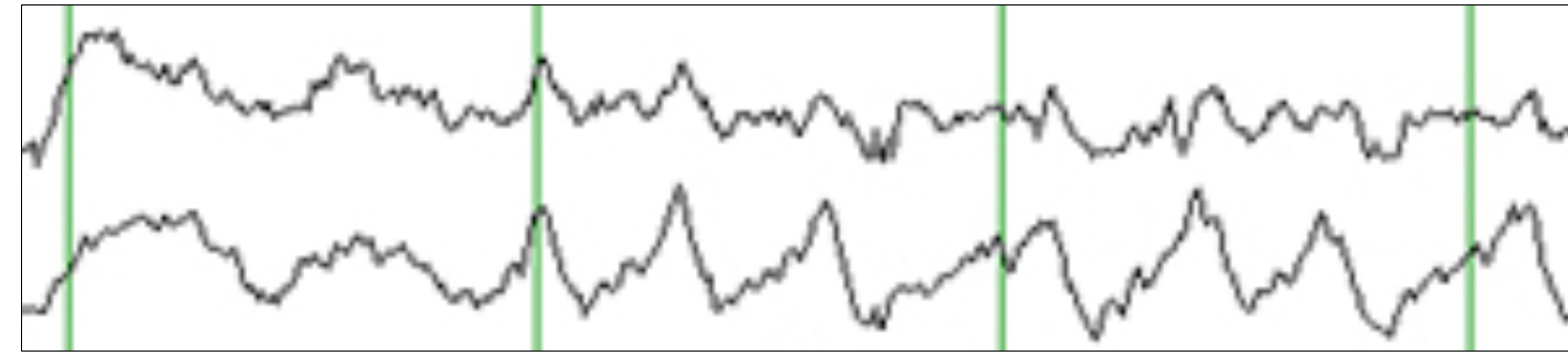


Figure 1. Lateralized rhythmic delta activity example<sup>3</sup>

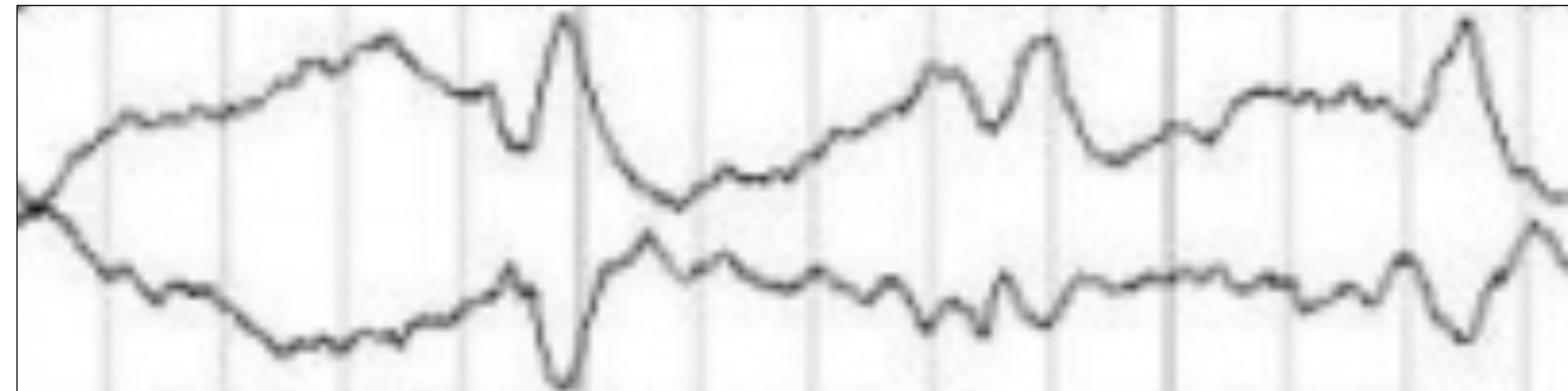


Figure 2. Sharp wave example<sup>4</sup>

### Psychiatric Evaluation

- Patient was fully oriented with flat affect, psychomotor retardation, cognitive slowing, poor eye contact, anhedonia, and depressed mood.
- Patient declined all oral intake and all medications and was evaluated to be incapacitated in the setting of vacant reasoning.
- Cognitive testing demonstrated deficits in delayed recall, fluency, attention, and visuospatial cognition.

### Medical Work-up

- CT scans of the chest, abdomen, and pelvis unremarkable.
- Right upper quadrant and mesenteric ultrasounds were also unremarkable.
- MRI brain demonstrated generalized atrophy and a remote right basal ganglia hemorrhage stroke
- CSF was unremarkable

- **Electroencephalogram (EEG) with sphenoidal leads requested, which demonstrated lateralized rhythmic delta activity with sharp waves in the bilateral frontal lobes (L > R)**

### Final Management

- EEG abnormalities normalized after loading with Levetiracetam.
- Cognition, speech, hunger, and mood improved over a few days.
- Patient was discharged euthymic and without any psychotropic regimen.
- Has been seizure free and euthymic on Levetiracetam monotherapy for the past year.

## Discussion

In the scenario where FLE presents as a neuropsychiatric syndrome, a major depressive episode may abate with antiepileptic drug normalization of epileptiform activity without psychiatric medications or electroconvulsive therapy.

## References

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4. Janti AB, et al. Atypical interictal epileptiform discharges in electroencephalography. *J Epilepsy Res* 2018;8(2):55-60.