

Medically Refractory Epilepsy with a Temporal Lobe Lesion

Steven Ellis, MD
Neurophysiology Fellow, PGY-5
UT Health San Antonio



History

- No history of febrile seizures, meningitis, encephalitis, or head trauma.
- No family history of epilepsy or any other neurological issues.
- Not currently employed, but did graduate from high school.
- Currently taking college courses for computer programming.
- Lives at home with his mom, dad and three brothers.
- Denies tobacco, alcohol, or illicit drugs.
- Current AEDs: Oxcarbazepine 900mg twice daily & Lacosamide 100mg twice daily.
- Prior AEDs: Zonisamide and Levetiracetam.



DISCLOSURES

- NONE



Exam

- Vitals: T: 98, P: 58, BP: 112/60, RR: 13, O2 sat: 98%, pain: 0/10
- Gen: No acute distress
- CV: Regular rate and rhythm, no murmurs
- Pulmonary: Clear to auscultation bilaterally
- Neuro:
- Mental status: Awake and alert to person, place, and time
- Cranial nerves: PERLLA at 4mm, EOMI, VF-full, gaze conjugate, face symmetric, CN II-XII intact.
- Motor: Bulk and tone normal, no tremor, 5/5 strength throughout.
- Sensation: Intact to all modalities throughout.
- Coordination: No dysmetria or ataxia, negative Romberg.
- Gait: Normal toe, heel, and tandem gait.

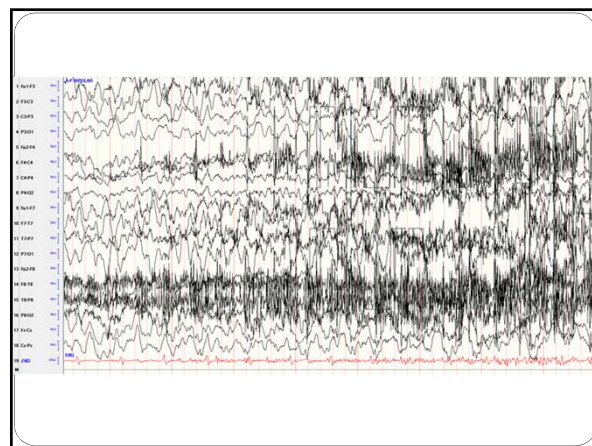
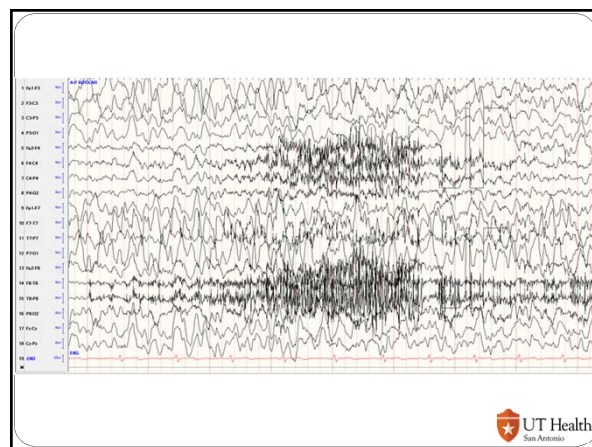
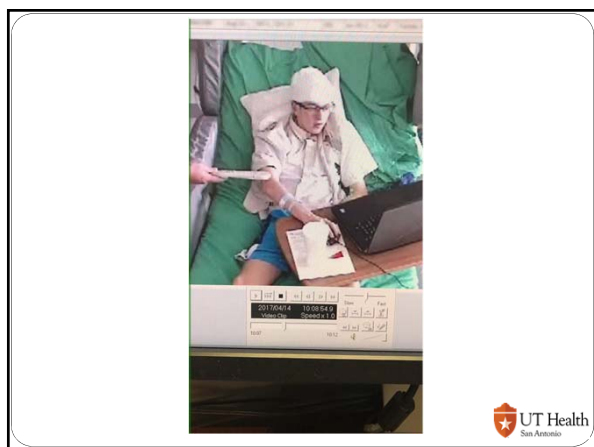


Case

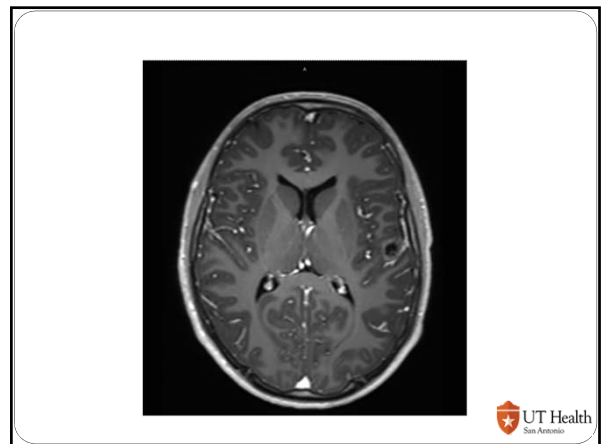
- 18 year old right handed male with PMH of ADHD, asthma, epilepsy since 15 years of age now medically refractory with a left temporal lesion presenting for evaluation.
- Seizures occur 4-5 times per week
- 2 different semiologies:
 - 1st consisting of guttural sounds, facial twitching, tonic, and tonic-clonic activity.
 - 2nd consisting of staring episodes with unresponsiveness.
- Sometimes seizures are followed by post-ictal combativeness.
- Mild developmental concerns during the first 1-2 years of life, but was age appropriate by 3 years of age.



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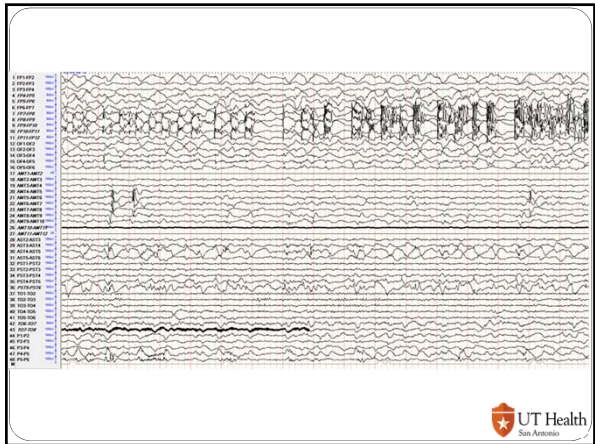
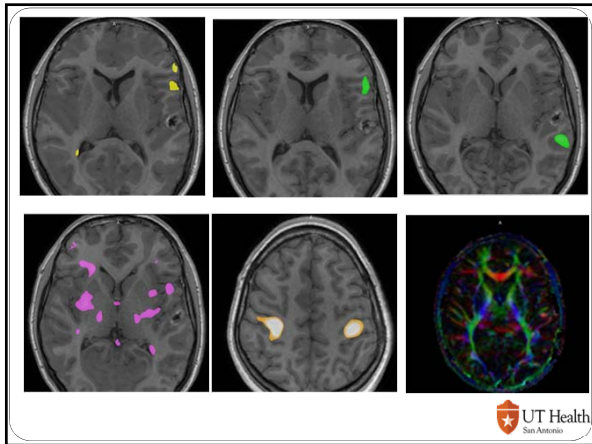
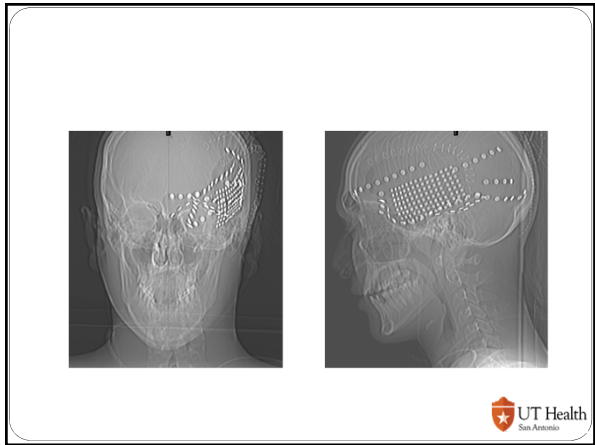
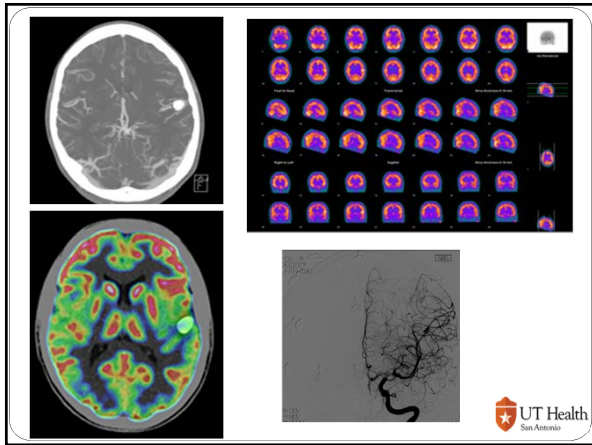
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Neuropsych Testing

- FSIQ was 113 (high average) without a cognitive decline compared to his prior testing in 2008 and 2015.
- Verbal comprehension index (VCI) was average.
- Perceptual reasoning index (PRI) was 117 (high average).
- Working memory index was 102 (higher than in 2015).
- Processing speed index was 114 (high average).
- Area of weakness was lexical access (timed word retrieval) which was below average.

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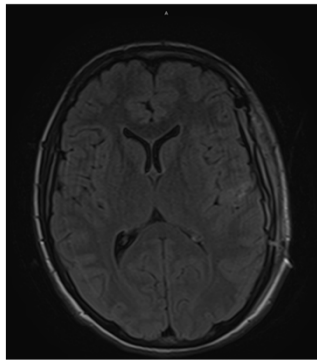
Electrocorticography (ECoG)

- Multiregional (frontal opercular, inferior parietal, and mesial temporal) onset with evidence of interictal discharges spanning the temporal lobe.
- A subcortically located irritative lesion could propagate to these regions without necessarily spreading to the surface.
- We identified probable Broca's and Wernicke's area and these sites were distant from the lesion.
- Intraoperative ECoG revealed resolution of the left frontal opercular and parietal irritability after removal of the temporal lesion, but interictal epileptiform discharges persisted in the anteromedial temporal lobe, suggesting potential dual pathology.

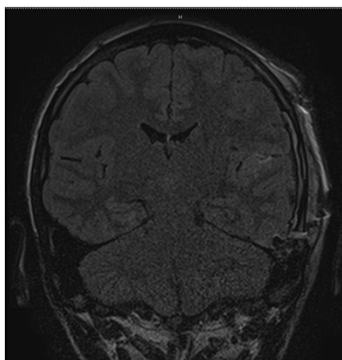


5 Week Follow Up

- Pathology results were consistent with a ganglioglioma (WHO grade 1).
- No seizures or auras were reported since the surgery.
- No observed deficits, headaches, cognitive issues, hearing difficulties, or any other symptoms.
- Neuro exam continued to be non-focal.
- Oxcarbazepine 600 mg twice daily and Lacosamide 100mg twice daily were continued.
- Will consider AED taper to monotherapy after 3-6 months if seizure free and after a repeat EEG.
- Serial brain MRI imaging.
- Neuro-oncology and neurosurgery follow up.



Questions?



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