

CASE STUDY

Neocortical: Lateral Temporal

43 year old woman presents with 10 to 20 simple partial seizures a month beginning with a buzzing sound that increases in volume over 15 seconds. The auditory phenomenon progresses to a complex partial seizure with loss of awareness, a blank stare and manual automatisms about 3 times a month.

HISTORY

Seizure onset: 39 years of age

Seizure risk factors: none

Prior treatments: failed trials of 2 antiepileptic medications; has difficulty tolerating medication side effects

Scalp EEG: remarkable for left lateral temporal spikes (T3/T5); 3 typical auditory simple partial seizures begin with left mid-temporal rhythmic theta

MRI: evidence for small vessel disease

Functional MRI for language: left hemisphere language dominant, region of ictal onset corresponds to Wernicke's area

Neuropsychological testing: normal visual and verbal memory

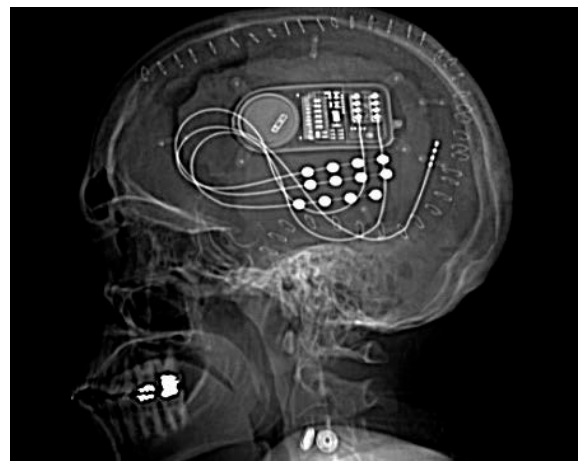
EVALUATION & PLAN

- Partial onset seizures of left lateral temporal lobe origin, probably Heschell's gyrus
- At risk for language deficits following left lateral temporal lobe resection
- Candidate for RNS System with left lateral temporal responsive stimulation

LEAD IMPLANT STRATEGY

3 left lateral temporal cortical strip leads*

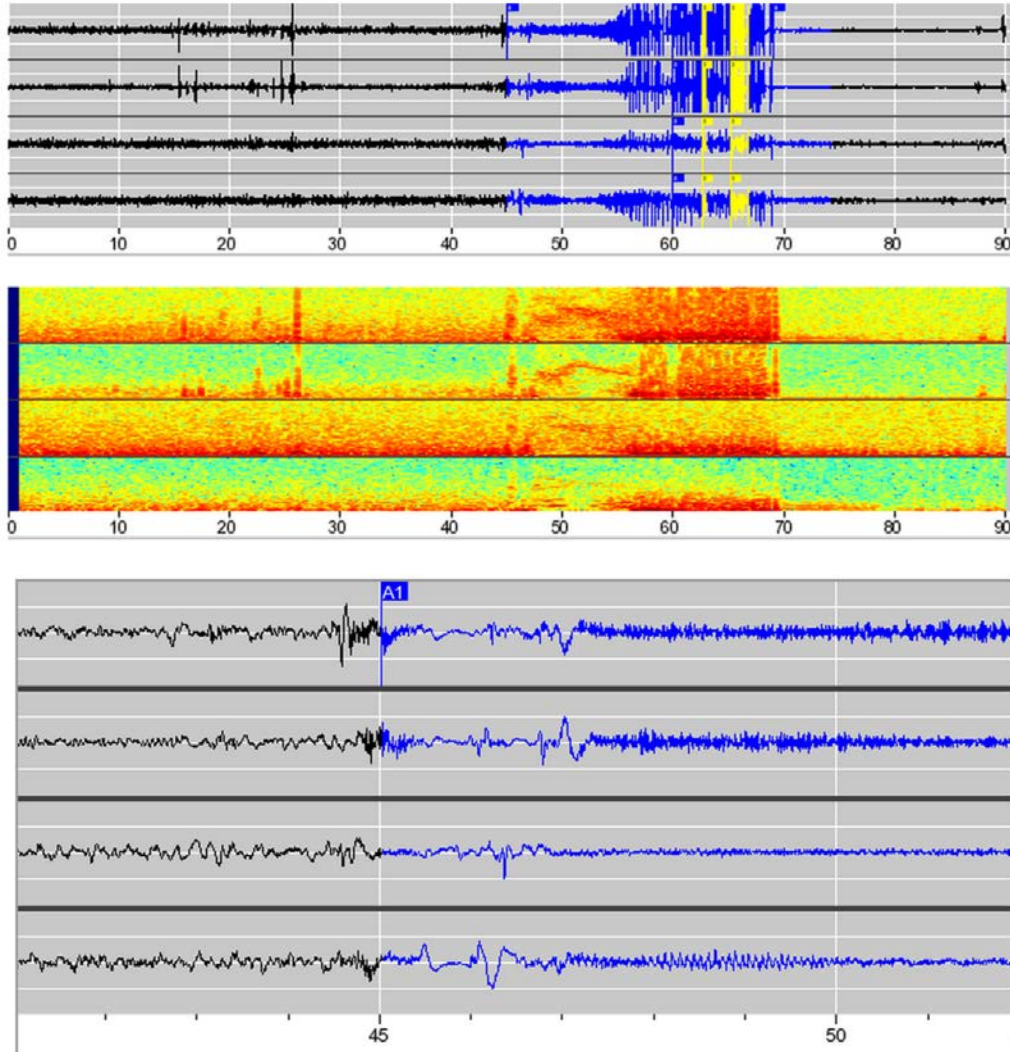
- Superior (connected)
- Middle (connected)
- Inferior (not connected)





ECOG

Electrographic seizure detected before neurostimulator has been programmed to provide responsive stimulation. The top 2 channels are recording from the superior lateral temporal strip lead and the bottom 2 channels from the middle lateral temporal strip lead. A1 indicates detection. The ECoG and corresponding Fast Fourier Transform (FFT) are shown above an expanded view of the ECoG.



*Only 2 leads are connected to the neurostimulator at once.
This case study is a composite adapted from actual case files; results are not necessarily representative of the patient population.

R_XOnly See important prescribing and safety information in the RNS[®] System labeling. This is intended as supplementary information and should be used in conjunction with the labeling. Refer to the labeling for a description of the RNS[®] System and its components, indications for use, contraindications, warnings, cautions, adverse events and instructions for use. The manuals are available at www.NeuroPace.com.

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