

CASE STUDY

Neocortical: Lateral Frontal

51 year old man experiences 5 to 10 seizures a month that often cluster and begin with version of the eyes and head to the left followed quickly by blinking and twitching of the left face, then extension of the left arm and leg and then generalized tonic clonic movements.

HISTORY

Seizure onset: 12 years of age

Prior treatments: failed trials of 5 antiepileptic medications and VNS (no longer implanted)

Scalp EEG: typical seizure captured with diffuse attenuation over right frontal lobe followed by muscle artifact

MRI: cortical dysplasia in the right lateral frontal lobe

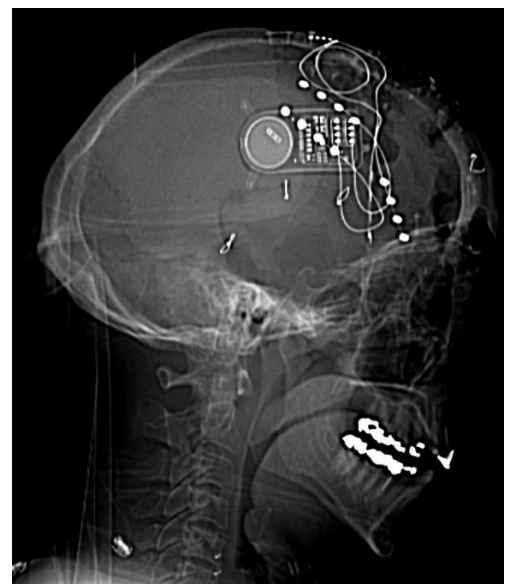
Intracranial EEG monitoring: ictal onset adjacent to region of dysplasia; mapping elicits eye deviation to the left followed by left face twitching

EVALUATION & PLAN

- Focal motor seizures involving right frontal eye fields with rapid propagation to right motor cortex
- At risk for deficits in eye movements and left face motor function with resection
- Candidate for RNS System with strips placed over region of dysplasia

LEAD IMPLANT STRATEGY

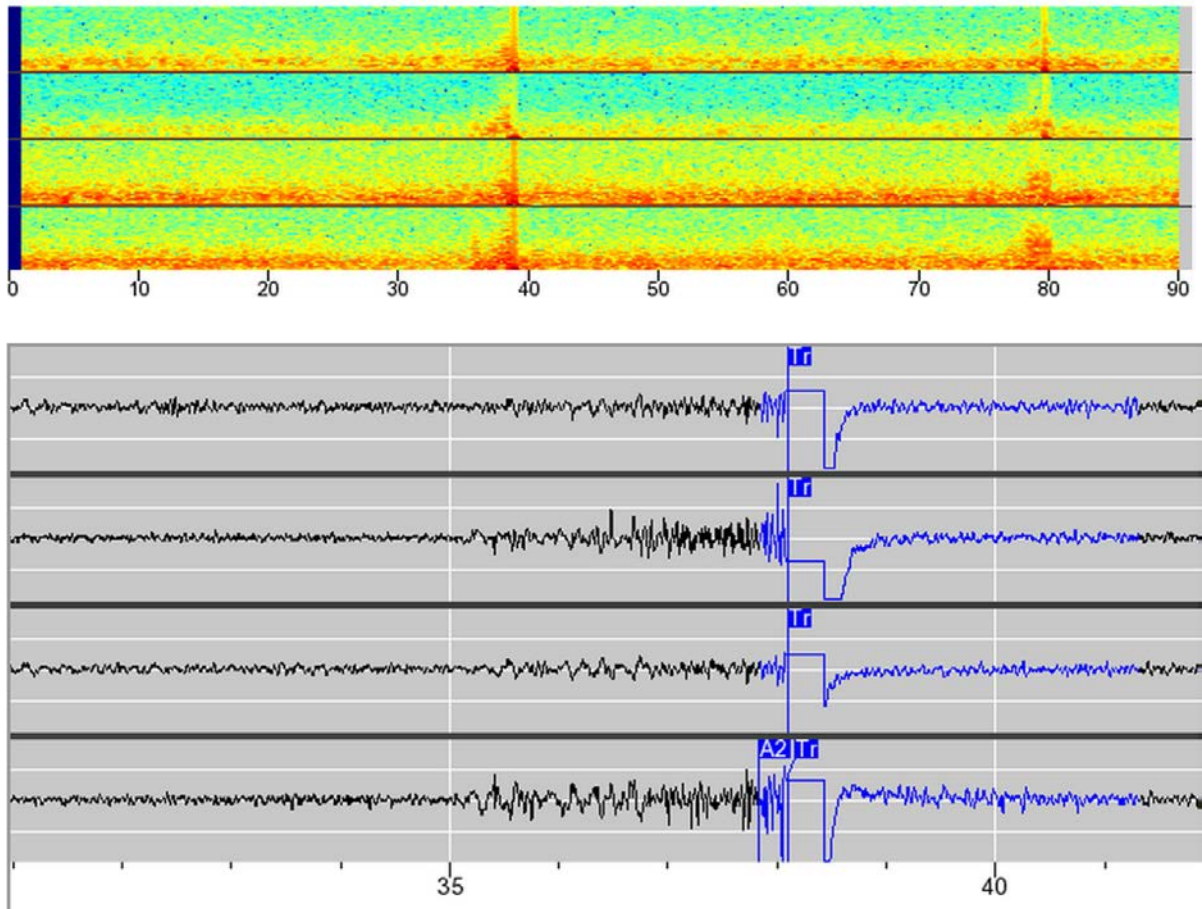
- 4 subdural strip leads placed*:
- 2 subdural strip leads in the lateral prefrontal region including the frontal eye fields
 - 2 subdural strip leads spanning premotor and motor cortex (1 superior, 1 inferior)





ECOG

Detection of brief epileptiform event (A2) followed by stimulation (Tr). The top 2 channels are recording from a frontal eye field strip lead and the bottom 2 channels from the superior frontal motor strip lead.



*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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