

| | Patient 1 | Patient 2 | Patient 3 | Patient 4 |
|--|--|---|--|---|
| Sex | F | F | F | F |
| Pre-operative Seizure Frequency | Daily focal aware seizures, 3-4 nocturnal focal impaired awareness seizures per month | 1) Focal impaired awareness: "deja vu" seizures 4-6 per month; 2) focal aware "sirens" seizures once every 2-3 months | 6-10 focal impaired awareness seizures per day | 10-15 focal impaired awareness seizures per day |
| MRI Findings | Post-surgical changes of left anterior temporal lobectomy with surrounding white matter FLAIR hyperintensity, likely gliosis, residual left hippocampal tail | Unremarkable | Asymmetric L>R bilateral periventricular heterotopia | FCDs identified in 1) right inferior frontal sulcus at border of pre-central sulcus and 2) right temporal pole regions. |
| Intracranial Monitoring Localization(s) | 1) residual left hippocampus (body/tail) 2) left posterior temporal neocortex | 1) right mesial temporal with rapid spread to insula 2) right Heschl's gyrus | 1) R periventricular nodules 2) L periventricular nodules | 1) right frontal FCD, 2) right temporal pole FCD, 3) left temporal pole, 4) left orbito-frontal |
| Surgeries Performed | LITT of residual left hippocampus + RNS | Right temporal lobectomy + RNS w/ electrodes in right insula and Heschl's area | LITT of bilateral heterotopia + RNS w/ depth electrodes in bilateral hippocampi and left lateral PVH | LITT of two known FCDs in right frontal lobe and right temporal pole + DBS placement |
| Post-Op Seizure Frequency/Outcome | Free of seizures that impair awareness and has a >50% reduction in auras | "Deja vu" seizures cured with resection; "sirens" seizures occur 2-3 per month | Seizure Free | Seizure Free |
| Duration of Follow-up | 6 months | 14 months | 6 months | 1 month |
| Adverse Events Related to Surgery | None | Fracture of neurostimulator electrode placed in Wernicke's area requiring replacement. Lead fracture was associated with an increase in non-disabling seizures. | L>R bilateral superior quadrant visual field cuts | None |
| Adverse Events Related to Neurostimulation | None | Patient able to perceive some stimulations in right Heschl's gyrus as audible beeps. | None | None |