Anterior mesial temporal lobe resection

A study identifies potential prognostic factors for favorable anterior mesial temporal lobe (AMTL) resection outcomes in patients with medically refractory temporal lobe epilepsy (TLE) with bilateral features on pre-operative examination.

Thirty-one patients demonstrated bilateral features defined as: bilateral independent temporal or bitemporal ictal onsets on surface or intracranial EEG, or bitemporal interictal epileptiform abnormalities on surface EEG with bilateral radiographic mesial temporal sclerosis. Surgical outcomes were classified according to reduction in seizure frequency: I (100% reduction), II (≥75% reduction), III (50-74% reduction), IV (<50% reduction).

Of 31 patients, 14 (45%) improved to class I and 9 (29%) had a class II outcome at an average of 4 years after surgery. Eight (26%) patients did not exhibit good surgical outcome (class III, class IV). We found that neuropsychological and Wada memory scores were significantly correlated ($p<0.05$) with surgical outcome, and logistic regression found neuropsychological evaluation significantly predicted better surgical outcome ($p<0.05$).

When bilateral features are present on pre-operative evaluation, neuropsychological and Wada test results can provide unique data to better identify those patients more likely to achieve substantial seizure reduction [1].

1)
Waseem H, Osborn KE, Schoenberg MR, Kelley V, Bozorg AM, Benbadis SR, Vale FL. Predictors of surgical outcome in medically-resistant temporal lobe epilepsy with bilateral features on pre-operative evaluation. Clin Neurol Neurosurg. 2015 Oct 23;139:199-205. doi: 10.1016/j.clineuro.2015.10.016. [Epub ahead of print] PubMed PMID: 26513433.