Mesial temporal lobe epilepsy outcome

The reasons for failure of surgical treatment for mesial temporal lobe epilepsy (MTLE) associated with hippocampal sclerosis (HS) remain unclear.

After surgery for intractable mesiotemporal lobe epilepsy (mTLE) seizures recur in 30-40%. One predictor for seizure recurrence is the distribution of seizure onset and interictal epileptiform discharges (IED).

Preoperative bilateral ictal foci are a negative predictor for seizure outcome. Contrarily, IED exceeding the affected temporal lobe in the ipsilateral hemisphere or even bilateral IED had favorable seizure outcome if seizure onset is strictly limited to the affected temporal lobe. Reoperation for seizure persistence constitutes a promising therapeutic option [1].

The extent of pre-surgical perifocal PET abnormalities, the extent of their resection, and the extent of non-resected abnormalities were not useful predictors of individual freedom from seizures in patients with TLE [2].

1)
Schmeiser B, Zentner J, Steinhoff BJ, Brandt A, Schulze-Bonhage A, Kogias E, Hammen T. The role of presurgical EEG parameters and of reoperation for seizure outcome in temporal lobe epilepsy. Seizure. 2017 Sep 6;51:174-179. doi: 10.1016/j.seizure.2017.08.015. [Epub ahead of print] PubMed PMID: 28888215.

2)
Stanišić M, Coello C, Ivanović J, Egge A, Danfors T, Hald J, Heminghyt E, Mikkelsen MM, Krossnes BK, Pripp AH, Larsson PG. Seizure outcomes in relation to the extent of resection of the perifocal fluorodeoxyglucose and flumazenil PET abnormalities in anteromedial temporal lobectomy. Acta Neurochir (Wien). 2015 Sep 8. [Epub ahead of print] PubMed PMID: 26350516.