

## OP31

**Risk and benefit of resective epilepsy surgery in the first years of life**

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Resective surgery in children is an established method to treat drug-resistant epilepsy. Our goal was to determine risk and benefit of this invasive treatment option in very young children. We retrospectively analyzed data of 49 children who underwent surgery up to the age of 72 months. We excluded disconnective procedures (hemispherotomy, callosotomy). Long-term follow up (FU) was assessed either by clinical records or routine FU telephone interviews. Mean age at seizure onset was 19 months. Noninvasive EEG showed focal epileptic discharges (69%), both generalized and focal ETPs (19%) and only generalized ETPs (12%). Invasive EEG recording was done in 10%. Preoperative MRI suspected mostly dysplasias. Mean age at surgery was 45 months. Localization was extratemporal in 41.2%, temporo-mesial in 27.5%, multilobar in 21.6 and temporal but not mesial in 9.8%. Most common histological findings were dysplasias (54%), tumors (36%) and hippocampal-sclerosis (6%). Tumors were graded WHO°I except one ganglioglioma WHO°II. Three patients had a new permanent deficit: One patient with occipital lesion suffered from hemianopia as calculated deficit; one patient had a hemiparesis, one had a hemianopia where a quadrantanopia was expected (permanent unexpected morbidity 4.1%). There was no mortality. After a mean FU of 7.7 years (range 1-23yrs) 73.5% were completely seizure free at last FU (ILAE 1) and 30.2% of these were without antiepileptic drugs. 12% showed marked improvement (ILAE 2-4). A circumscribed lesion in preoperative MRI shows a tendency towards better epilepsy-control. Presurgical generalized EEG was not associated with a worse outcome. There were no other significant correlations between potentially predictive factors (age at onset, age at surgery, duration of seizures, histology) and seizure outcome. Despite the higher level of uncertainty in pre-surgical work-up and presumably higher rate of peri-operative complications, epilepsy-surgery in very young children is a safe and effective treatment option that renders approximately 3/4 of patients seizure free.