

Surgery for temporal lobe epilepsy in Indonesia: Seizure elimination on the first 38 cases

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Background and Objective: About 20-40% of epilepsy patients will finally become medically intractable, and surgery gives benefit in about 50% of those intractable cases. Complex partial epilepsy with epileptogenic focus located in the temporal lobe gains most from surgery with seizure elimination rate reaches more than 60%, and another 30% benefits from the operation.¹ In order to evaluate the results of epilepsy surgery in Indonesia, we would like to report our preliminary result of operations performed on intractable temporal lobe epilepsy during the period of July 1999 to June 2003. The length of follow-up was at least 12 months.

Methods: There were 38 patients, consisted of 24 males and 14 females, aged between 3-38 year-old. Magnetic Resonance (MR) imaging diagnoses were hippocampal sclerosis and/or atrophy in 32 patients, temporal lobe tumor in 3 patients (disembryoblastic neuroepithelial tumor or D-NET, pleomorphic xantho-astrocytoma of the hippocampus, and benign cyst one patient each); hemispheric hemiatrophy, calcified lesion, and normal MRI one patient each. One patient with hippocampal sclerosis had also ipsilateral temporal lobe infarction since childhood. The seizure attacks were between 1-2 times to 6-10 times monthly despite administration of 3-4 antiepileptic drugs (AEDs) in combination. Preoperatively, all patients had at least one 0.5 Tesla MRI evaluation, and repeated interictal scalp EEG. Intracranial subdural grid EEG was performed in one patient with doubtful results of MRI. Decisions of the epileptic temporal lobe were based on MRI results in 37 patients and on invasive EEG in one patient. The operations were in the right sides in 30 patients (all were right handed) and in the left sides in 8 patients. Wada tests were performed on these patients with left-sided lesion, despite the presence of left-handedness, and in one patient with right-sided sclerosis accompanied with left-sided hemispheric hemiatrophy. They all underwent anterior temporal lobectomy with amygdalo-hippocampectomy, except the patients with D-NET and benign cyst who had only anterior temporal lobectomy. The post-operative follow-up periods were 12 – 52 months.

Results: The results were evaluated both from seizure elimination rates according to Engel's criteria and improvements in socialization reported by patient's family member(s). Seizure free were seen on 26 patients (Engel Ia), aura only in 5 patients (Engel's Ib), 5 patients had no more than 2 attacks a year (Engel's II) and seizure frequency decreased more than 75% in 2 patients (Engel's III). All patients were better socialized according to the family member(s), especially the younger and the highly educated ones. Two patients had postoperative depression that needed psychiatric consultation for about 3 postoperative months, one had temporary contralateral hemiparesis, which resolved completely in 3 months, and two others had wound infection, which needed removal of the bone flap.

Conclusion: Surgery performed on intractable temporal lobe epilepsy patients in Semarang showed good result (Engel's I-III) in all patients. Since secondary epileptogenesis at distant sites may develop with uncontrolled seizures², MR evaluation should be performed and surgery should be offered early for those patients suitable for epilepsy surgery.

References

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