

Temporal lobe epilepsy surgery with limited resources: Outcome and economic considerations

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Objective: This study evaluates the surgical outcome of patients with medically refractory temporal lobe epilepsy who underwent anterior temporal lobectomy based on data derived from noninvasive studies, and assesses the economic costs entailed by a newly created epilepsy programme in Thailand.

Methods: Sixty two patients with refractory seizures, probably temporal lobe, underwent presurgical evaluations including MRI brain, 24 hour video-EEG monitoring and neuropsychological testing. Patients with congruent data localising the seizure focus to one anterotemporal region, and where resection did not affect the memory function, underwent anterior temporal lobectomy.

Results: There were 35 patients, 21 females and 14 males, with a mean age of 24 years and a mean duration of seizure disorder of 12.5 years. Fourteen patients underwent left-side temporal lobe epilepsy, 21 right-side temporal lobe epilepsy. The histopathological findings showed a hippocampal sclerosis in 23 patients, a low-grade tumour in eight patients, cavernous angiomas in 2 patients, cortical dysplasia and a granulomatous lesion in one patient each. The mean follow-up period was 18 months. Seizure outcome was assessed with Engel's classification¹: 30 patients was in class I, 3 patients in class II, and 2 in class III. The total cost, including evaluation and surgery, was equivalent to US\$2,000 or less.

Conclusion: Well-selected temporal lobe epilepsy patients can derive maximum benefit from temporal lobe epilepsy after non-invasive presurgical evaluations with limited resources. This finding is of great significance for the creation of epilepsy surgery programmes in developing countries.

Reference

1. Engel J Jr, Van Ness PC, Rasmussen TB, *et al.* Outcome with respect to epileptic seizures. In: Engel J Jr, ed: Surgical treatment of the epilepsies. 2nd ed. New York: Raven Press, 1993: 609-21.