

SURGERY

Surgical outcome and prognostic factors of temporal lobe epilepsy

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Objective: To analyzing the long-term results of temporal lobe epilepsy (TLE) surgery in our Center, and to evaluate factors that are related to the outcome.

Methods: 93 consecutive patients of TLE who underwent surgery from May 2004 to Dec 2005 were followed up for more than 1 year after surgery. Etiology, clinical, electrophysiology and neuroimaging characteristics were evaluated for their association with prognosis. Univariate and standard multiple logistic-regression analyses were used for statistical analysis.

Results: The study subjects consisted of 93 patients, 60 males and 33 females, age ranged from 6 months to 47 years, mean 20.09 years. The seizure duration was from 6 months to 30 years, mean 10.20 years. The outcome were: Engel class I¹ (55 patients), Engel class II (12 patients), Engel class III (20 patients), and Engel class IV (6 patients). The mean (SD) follow-up was 22.82 (5.58) months, range from 12 to 31 months. It means that 93.55% patients achieved a effective outcome (Engel class I-III), and 72.04% patients achieved a favorable outcome (Engel class I-II); 58.16% patients were seizure free. By univariate analysis, complex partial seizure as main seizure manifestation ($p=0.001$), ipsilateral interictal temporal spikes on scalp EEG ($p=0.052$), focal structural lesion on MRI ($p=0.03$), tumor pathology ($p=0.036$) were associated with higher rate of seizure freedom. On the other hand, status epilepticus was associated with an unsatisfactory outcome. Multivariate analysis revealed that complex partial seizure as main seizure manifestation ($p=0.001$) and ipsilateral interictal temporal spikes on scalp EEG ($p=0.034$) were independent predictors of good outcomes.

Conclusions: Surgery is shown to be an effective treatment for temporal-lobe epilepsy in a center in China. Complex partial seizure as main manifestation, and ipsilateral interictal temporal spikes on scalp EEG were predictors of better surgical outcome.

Reference

1. McIntosh AM, Wilson SJ, Berkovic SF, Seizure outcome after temporal lobectomy: current research practice and findings. *Epilepsia* 2001; 42(10):1288-307.