

The surgical results, imaging, EEG and pathological features of the intractable epilepsy secondary to ulegyria

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Introduction

Ulegyria usually causes intractable epilepsy, and its response to surgery has not been fully established yet.

Methods

45 patients who underwent surgery for the intractable epilepsy secondary to ulegyria and were followed up for more than two years were included. All patients underwent comprehensive presurgical evaluations. Thirty-five patients underwent intracranial electroencephalography (EEG) study. The ulegyria cortex including the magnetic resonance imaging (MRI) lesion was resected totally or subtotally in all patients. Postoperative follow-up period was 2–10 (mean 4.4) years.

Results

There were 33 patients with the lesions in the posterior cortex and 12 patients with the lesions outside the posterior cortex. Thirty patients had a history of perinatal distress including prolonged labor, postterm delivery, asphyxia, or hypoglycemia. Age at seizure onset was 1-22 years with the average onset age of 8.4 years. Ulegyria was unilateral in twenty-five patients and bilateral but unilateral predominant in twelve patients. In most of the cases, the lesions were in the posterior cerebral artery area or the watershed area between middle cerebral and posterior cerebral arteries. There were 35 patients who underwent intracranial EEG. Postoperative seizure outcome was Engel's class I in 33 cases, class II in 9 cases and class III in three cases. Fifteen of eighteen patients whose lesions were subtotally resected achieved class I outcome. Five of eight patients with bilateral symmetric lesions achieved class I outcome.



Learning Objectives

To demonstrate that the intractable epilepsy secondary to ulegyria is a surgically remediable syndrome and ulegyria is a distinctive kind of epileptogenic lesion.

Conclusions

Intractable epilepsy with ulegyria may be included in the category of surgically remediable syndromes. Ulegyria due to perinatal distress is a major cause of posterior cortex epilepsy. Long-term postoperative seizure outcome is favorable and stable. Resection of MRI lesion is important for seizure relief. Subtotal resection of lesion also can acquire a satisfactory postoperative epilepsy control result. Bilateral symmetric lesions should not be excluded from surgical indication. The usefulness of intracranial EEG may be limited.

