Lateralizing and Localizing Findings in Focal Epilepsies

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Abstract

Refractory or drug resistant epilepsy develops in 20–30% of all patients diagnosed with epilepsy. The ILAE has suggested that a person be considered to have refractory epilepsy if they have failed to achieve sustained seizure freedom with two appropriate and tolerated antiepileptic drug (AED) regimens. Outcome studies have consistently shown response to the first AED to be a strong predictor of long-term outcomes. General principles of managing refractory epilepsy are 1. Review the diagnosis and classification 2. Review AEDs currently and previously used 3. Consider non-pharmacological treatments 4. Address co-morbidities and lifestyle issues 5. Optimize quality of life. Knowledge about lateralizing and localizing signs of seizure semiology and other clinical findings is necessary in the management process of patients with focal epilepsy, particularly with widespread use of surgery in the management of patients with refractory focal epilepsy. Video-EEG monitoring has permitted careful analysis of semiologic features of seizures and their correlation with simultaneous EEG activities. The availability of new imaging and functional studies could be considered as a revolution in localization of the epileptogenic zone. In my lecture, a list of well-documented lateralizing and localizing findings in focal epilepsies is presented briefly. Knowledge about these findings is practical tool for physicians to determine epileptogenic zone. While I include the correlated symptomatogenic zone and the possible mechanism in generating the finding in the context of a focal seizure, this lecture emphasizes how to localize the epileptogenic zone according to any given specific finding. More accuracy in detecting epileptogenic zone will increase the chance of seizure freedom after epilepsy surgery.

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