Physicians Forum

Volume IV 2013

Glendale Adventist Medical Center

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Management of Epilepsy

By Grigor Harutunian, MD, Neurology

Grigor Harutunian, MD

The management of epilepsy should be focused on three main goals: controlling seizures, avoiding treatment side effects and maintaining or restoring quality of life.

The optimal treatment plan is based on an accurate diagnosis of the patient's seizure type(s), an objective measure of the intensity and the frequency of the seizures, an awareness of medication side effects and an evaluation of disease-related psychosocial problems. A working knowledge of available antiepileptic drugs (AEDs), including their mechanisms of action, pharmacokinetics, drug-drug interactions and adverse effects is important.

Immediate antiepileptic drug therapy is usually not necessary in individuals after a single seizure, particularly if a first seizure is provoked by factors that resolve. AED therapy should be started in patients who are at significant risk for recurrent seizures, such as those with remote symptomatic seizures. AED treatment is generally started after two or more unprovoked seizures, because such a recurrence proves that the patient has a substantially increased risk for repeated seizures, well above 50%. Almost two-thirds of patients with a new diagnosis of epilepsy will become seizure free with the first AED prescribed. Tolerability of side effects is as important as efficacy in determining the overall effectiveness of treatment. No single AED is optimal for every patient or even most patients. The selection of a specific AED for treating seizures must be individualized considering drug effectiveness for the seizure type or types, potential adverse effects of the drug, interactions with other medications, comorbid medical conditions, especially but not limited to hepatic and renal disease, age and gender, including childbearing plans, lifestyle and patient preferences, and cost.

In general, enzyme-inducing AEDs (e.g., phenytoin, carbamazepine, phenobarbital, primidone; and less so, oxcarbazepine and topiramate) are the most problematic for drug interactions with anticoagulants and oral contraceptive therapy, as well as certain antineoplastic and antibiotic drugs.

In order to maximize the likelihood of a successful outcome, treatment should be started with monotherapy with plans to gradually titrate the dosage to that which is maximally tolerated and/or produces seizure freedom (start low and go slow). Treatment should be monitored regularly, paying close attention to efficacy and tolerability.

Special consideration should be given to patients who prove to have drug-resistant epilepsy. The International League Against Epilepsy proposed that drug-resistant epilepsy may be defined as failure of adequate trials of two tolerated and appropriately chosen and used AED schedules (whether as monotherapies or in combination) to achieve sustained seizure freedom. Seizure remission is achieved with combination therapy in only a small percentage (10-15%) of patients who have failed monotherapy. Therefore, up to 80% of patients can become seizure free on AED treatment. The remaining medically refractory group should have further evaluation. Established treatment options for medically refractory epilepsy in adults include epilepsy surgery and vagus nerve stimulation.

Echocardiography Reporting System

As of Oct. 1, the Cardiology Department implemented a new McKesson structured reporting system for echocardiography. The new system allows for standardized reports, immediate access to review echos for quicker patient diagnoses, interface with Cerner Powerchart for review of final reports, a more efficient workflow and web access for cardiologists to connect from multiple locations. You may notice that preliminary reports are no longer available in Powerchart. The goal is to provide final reports in a timely manner, therefore reducing the need for preliminary reports that have not been validated by the interpreting physician.

For any questions, contact **Jan Cohen** at **ext. 4280** or **Karen Brandt** at **ext. 3576.**