Evaluating and Treating Epilepsy Based on Clinical Subgroups

Elderly Onset Seizure and Medically Resistant Partial-Onset Epilepsy

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KEYWORDS

• Seizure • Convulsive syncope • Epilepsy • Late-onset epilepsy
• Medically refractory epilepsy • Nonmedical therapy

KEY POINTS

- New-onset epilepsy is common in older adults.
- Seizures in the elderly can be missed or mistaken for other causes.
- After seizures, despite trials of 2 or more appropriately chosen antiepileptic drugs, patients should have a detailed evaluation for medically refractory epilepsy.

INTRODUCTION

For optimal treatment, clinicians must recognize key subgroups of patients with epilepsy who have distinctive patterns of seizures, causes, and treatment needs. Particularly important subgroups are (1) patients who develop seizures in their late adult or elderly years and (2) patients with medically resistant epilepsy. Currently the largest age group of patients diagnosed with new-onset epilepsy is older adult and elderly patients; these patients have a rapidly increasing incidence of seizures beginning in the late 50s and represent the graying of America and the influence of vascular risk factors on producing seizures. Clinicians and their elderly patients often do not recognize this pattern along with distinctive clinical presentations and treatment needs of this group. Another key group that is important to recognize is patients with medically resistant epilepsy. The International League Against Epilepsy (ILAE) has recently redefined this as patients with persisting seizures despite adequate trials of 2 appropriately selected

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and dosed medications.[1] There are several new medications and stimulation and surgical treatments available to treat patients with medically resistant epilepsy, and it is helpful to review how patient factors can be used to select among these options.[2]

CASE 1: EPILEPSY IN THE ELDERLY

A 60-year-old man presented for evaluation after a reported seizure. Two weeks ago, his wife was woken at around 4 AM by his thrashing movements and found him very confused with mild limb and body stiffening and shaking. She said the stiffening and shaking episode lasted about 2 minutes. He gradually recovered and was able to converse with her after about 20 minutes, when paramedics arrived and placed him in an ambulance. In the local emergency department (ED), he had a normal examination, head computed tomography (CT), and general laboratory test results. He had a history of hypertension, with no history of heavy alcohol use or other obvious seizure risk factors. He was started on levetiracetam 1000 mg twice a day and was discharged. He was scheduled for an outpatient electroencephalogram (EEG) and brain MRI and referred to a neurologist. In his neurology consultation visit, his wife reported that he had been evaluated for 2 brief episodes in the previous 6 months during which he briefly paused in his activities and appeared dazed: one episode occurred while standing on a dock fishing and the other while sitting at dinner. These episodes had been diagnosed as probable syncopal events linked to his hypertension treatment.

What is the Differential Diagnosis for Episodes of Confusion in the Elderly?

Confusional episodes are common causes of physician visits for the elderly (**Box 1**). There are limited numbers of causes, however, for sudden phasic confusional episodes. Seizures and syncope are most common; most other disorders, such as vestibular disorders, concussions, pain reactions, dissociative states, and medication intoxications, can usually be easily identified by patients' history. Although transient ischemic attacks (TIAs) are frequently considered as a cause of episodic confusion, patients rarely develop altered awareness as part of motor or other TIA symptoms. Convulsive syncope is often mistaken for a seizure. Patients often lose consciousness and may have brief myoclonic limb jerks during major hypotensive episodes (usually with blood pressure [BP] <50 mm

Box 1
Differential diagnosis for confusional episodes in the elderly

- Seizure
- Syncope and convulsive syncope
- Vestibular causes
- Medication intoxication
- Infection
- Pain reaction
- Concussion
- Transient ischemic attack
- Dissociative episode or other psychiatric causes
- Transient global amnesia
- Sleep disorders