Rescue Drug Is Crucial

Seizure *from page 1*

the AES and the Epilepsy Foundation to do together. All patients with status epilepticus or prolonged seizures need some type of plan," said Dr. Privitera, who chairs the AES practice standards task force.

The Epilepsy Foundation of America already makes available to families of children with epilepsy a "Seizure Action Plan" form that is designed for use in schools. The form is completed by a school nurse and signed by the patient's treating physician. It spells out in detail how a teacher or other school employee who witnesses the student's seizure should respond. The list includes general first-aid measures, such as recording the time when the seizure started and avoiding placing anything in the patient's mouth. Additional steps for tonic-clonic seizures include keeping the airway open and turning the patient on her side. The form also includes space for individualized instructions and says when to call 911 and the patient's physician. Finally, the form has space for detailing an emergency drug treatment.

The foundation plans to make the form available on its Web site early in 2008, said Kimberli A. Meadows, a spokeswoman for the foundation. The Epilepsy Foundation also was in the process of revising the form to make it suitable for use by adults with epilepsy and was planning to have this adult version available during the first few months of 2008 as well, Ms. Meadows said.

Another model seizure plan is available at Epilepsy.com 9www.epilepsy.com/pdfs/myseizureplan.pdf). Two recent reports outlining the key elements of seizure plans were published in May in the Journal of Child Neurology (2007;22:30S-7S and 38S-46S).

In certain other settings, a form is not used, but rather, all of the information that goes into a plan is reviewed with each patient. At the epilepsy center of the University of California, San Francisco, "we have individual discussions with each of our patients," said Dr. Daniel H. Lowenstein, a professor of medicine and the center's director.

"We discuss what should be done in case of a seizure, when someone needs to call 911, and for patients with repetitive or prolonged seizures, we prescribe rescue medications and review how to use them," he said.

Seizure plans are "a good idea for patients with prolonged seizures" lasting 5 minutes or longer, said Dr. Brien J. Smith, director of the comprehensive epilepsy center at Henry Ford Hospital in Detroit. When bystanders have a patient's seizure plan, it can be especially helpful for avoiding inappropriate interventions, such as calling 911 when it's not necessary. In general, children today are more likely to have seizure plans written and distributed than are adults, Dr. Smith said in an interview.

The common lack of seizure plans was documented in a recent study using a survey administered by Harris Interactive, an on-line polling company. The company maintains a panel of adults from around the United States who self-report having various chronic diseases, and from among the adults who said that they have epilepsy they received 408 completed surveys.

Among these 408 respondents, 112 (27%) said that they had a seizure plan, Dr. James W. Wheless and his associates reported in a poster at the annual meeting of the AES in Philadelphia last December.

About half of the adult respondents said that their seizures lasted less than 5 minutes; experts often say that seizure plans are somewhat less critical for these patients, primarily because treatment with rescue medication is not recommended until seizures persist to 5 minutes or beyond. But even in patients with a history of only brief seizures, having a plan to give to teachers, family members, coworkers, and friends still is considered a good idea.

About 15% of the patients surveyed self-reported having prolonged seizures (lasting 5 minutes or longer), and in this subgroup as well about 30% had a plan and the rest did not. Many experts agree essentially all patients with this type of history should have a seizure plan. The remaining patients, about 35% of the total surveyed, said that they were not sure about the average duration of their seizures.

This is the first reported survey of the prevalence of seizure plans among patients with epilepsy, said Dr. Wheless, professor of neurology and chief of pediatric neurology at the University of Tennessee, Memphis. A similar survey of adolescents with epilepsy is planned by the same group of researchers, as well as a survey of parents of younger children with epilepsy.

The results "tell us what we suspected. Having a seizure plan seems obvious, but many patients and their physicians don't think about it. Many physicians think that they take good care of their patients [with epilepsy] and so they won't have emergencies. And, if they do, the plan is that they go to the emergency department. But going to the emergency department is not a plan that engages the patient," Dr. Wheless said in an interview.

One of the cornerstones of a seizure plan is having a dose of rescue medication on hand and instructing likely bystanders in how to use it. The safety and efficacy of out-of-hospital treatment with a benzodiazepine for quickly aborting seizures in patients with status epilepticus were first established using intravenous formulations administered by paramedics (N. Engl. J. Med., 2001;345:631-7). Results from that landmark study documented several benefits from rapid, prehospital treatment of seizures with a benzodiazepine.

It showed that active treatment was less likely to lead to cardiac or respiratory complications, compared with no treatment, an important finding because treatment with a benzodiazepine carries some risk of triggering cardiac and respiratory events, said Dr. Lowenstein, who was the lead investigator for the study.

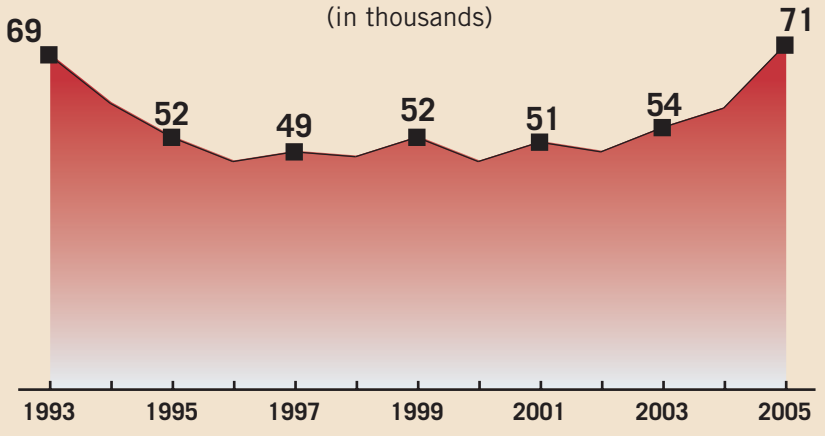
The results also established that benzodiazepines administered by emergency medical technicians were effective for aborting seizures in progress and that patients who were treated and not seizing at the time they arrived at the emergency department (ED) had fewer complications than did untreated patients who were still seizing at the time of hospital arrival. Patients who had stopped seizing when they entered the ED were more likely to be discharged from the ED to a regular hospital bed; patients who were still seizing when they reached the hospital were more likely to be discharged from the ED to the intensive care unit.

Other research findings reported within the past several years also established that rectal delivery of diazepam gel was a safe and effective alternative to intravenous treatment for aborting seizures (Arch. Neurol., 2002;59:1915-20). The Diastat AcuDial from Valeant Pharmaceuticals, a special-administration form of diazepam gel that is designed to deliver a preset dose of the drug intrarectally, has become a mainstay for out-of-hospital treatment of seizures in children. But although a Diastat also can work for adults, the social problems of people who are not health professionals administering an intrarectal drug have prevented its widespread use.

As a result, experts are hopeful that other, alternative-delivery formulations of benzodiazepines will be tested soon.

These include intramuscular injection (administered like an EpiPen), buccal and sublingual administration, and intranasal administration. ■

DATA WATCH



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Bipolar Symptoms, Depression Cluster in Epilepsy Patients

BY MITCHEL L. ZOLER
Philadelphia Bureau

PHILADELPHIA — Symptoms of bipolar disorder are prevalent among patients with epilepsy, and are also highly associated with depressive symptoms in this cohort, according to a recent analysis of 54 epilepsy patients seen at a tertiary care center.

Patients with epilepsy and both bipolar and depressive symptoms may also have the mood instability of interictal dysphoric disorder, Dr. Alan B. Ettinger and his associates reported in a poster at the annual meeting of the American Epilepsy Society.

The researchers evaluated adult patients who were managed at the Comprehensive Epilepsy Center of Long Island Jewish Hospital in New Hyde Park, N.Y. Using the Mood Disorders Questionnaire (MDQ), they identified bipolar symptoms in seven of the patients overall (13%). This was a close match with a 12% rate that the researchers had previously reported in a community-based cohort of epilepsy patients.

Six of the seven MDQ-positive patients also had a positive diagnosis on the Bipolar Spectrum Diagnostic Scale, as did another seven of the remaining 47 patients (15%) with epilepsy who were negative on the MDQ.

The MDQ-positive patients also showed evidence of increased functional impairment, documented by their scores on the Sheehan Disability Scale, and they perceived themselves as having a reduced quality of life, based on their scores on the Quality of Life in Epilepsy–89 Patient Inventory.

The researchers found a high association between a positive MDQ score and depressive symptoms, measured on the Center for Epidemiologic Studies–Depression Scale.

Among the seven patients who had positive MDQ scores, a total of six underwent assessment with the depression scale and all six were positive for depressive symptoms, reported Dr. Ettinger, who is the director of the Comprehensive Epilepsy Center at Long Island Jewish Hospital.

But only two of these six patients were also positive on the Neurological Disorders Depression Inventory for Epilepsy.

This finding suggests that the type of depression seen in patients who test positive on the mood disorders questionnaire, with its apparent link to bipolar symptoms, is not the same as the depression that is identified in many other patients with epilepsy.

Interictal dysphoric disorder may therefore affect a minority of epilepsy patients, Dr. Ettinger and his associates concluded. ■