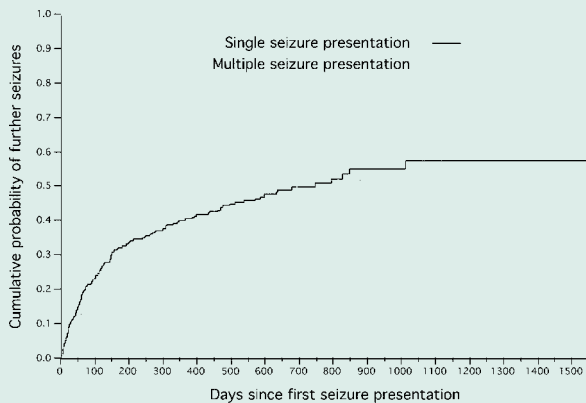


Do multiple seizures within 24 hours predict recurrence?



In adults with first-ever seizure, Kho et al. found that patients presenting with multiple seizures within 24 hours have a similar recurrence rate to those with a single seizure.

see page 1047

First seizure: Do multiple seizures predict recurrence?

Commentary by Carl W. Bazil, MD, PhD; and W. Allen Hauser, MD

The decision of whether to treat a seizure with anticonvulsant medication is a common one, and one with important implications. Unlike many diseases, treatment for epilepsy does not eliminate the disease. Treatment reduces the odds of a subsequent seizure, thereby reducing potential morbidity and mortality. The decision to treat depends on the magnitude of the recurrence risk, and must be weighed against the likelihood of a problem resulting from treatment itself. A treatment decision in epilepsy tends to persist; once a patient starts a drug, it may be years before it is stopped, and stopping often means the patient must avoid risky activities (particularly driving) for several months.

It has been known for many years that a patient who has two or more seizures is more likely to have subsequent seizures than a patient who has had only one.^{1,2} Thus, most patients who have had more than one seizure are offered anticonvulsant treatment.

Potential confusion arises with status epilepticus. One study suggested that status epilepticus increased risk vs a single uncomplicated seizure¹; however, risk of recurrence was increased for symptomatic, but not idiopathic/cryptogenic cases. The occurrence of multiple seizures in a single day is (also) potentially problematic. The Commission on Epidemiology and Prognosis of the International League Against Epilepsy has recommended that multiple seizures occurring within a 24-hour period be considered a single event. It may be that some or all of these seizures represent a single physiologic event, with incomplete neurophysiological recovery between the clinically distinct seizures. Intuitively,

however, clinicians may be tempted to view two or more seizures as more severe and, therefore, more likely to require treatment. Until now, there has been little direct evidence looking at the relative prognosis of patients presenting with only one vs two or more seizures in a single day.

The Kho et al. study³ prospectively looked at first seizure patients presenting at two centers, and compared outcomes in those with one seizure to those with two or more seizures within 24 hours. Patients with status epilepticus were excluded. The most important finding was that seizure recurrence within 1 year was virtually identical in the group with a single seizure (38%) vs those with multiple seizures (40%). Although more patients with multiple seizures were treated, this was not an independent predictor of seizure recurrence, but remote symptomatic etiology was predictive. Patients were more likely to be treated if they had epileptiform EEG findings, but the study did not specifically address this as a risk factor in recurrence. Similar to the Kho et al. study, other authors found that remote symptomatic seizures increased recurrence risk, as did epileptiform activity, Todd's paresis, and a family history of epilepsy.^{1,4} The American Academy of Neurology has published guidelines for the treatment of first seizure in children that incorporate this information,⁵ but has not done so for adults.

The Kho et al. study should therefore reassure us that treatment guidelines for multiple seizures occurring within a single day should be the same as those for a single seizure. A thorough search for remote symptomatic etiology remains es-

sential, as this study confirms previous work showing a high correlation with recurrence. Most studies, particularly in adults, have also suggested that epileptiform discharges increase the risk of seizure recurrence.^{1,6-8} This remains important for diagnosis and the decision to treat, although EEG discharges were not correlated with recurrence in this study.

References

1. Hauser WA, et al. Seizure recurrence after a 1st unprovoked seizure: an extended follow-up. *Neurology* 1990;40:1163-1170.
2. Hauser WA, et al. Risk of recurrent seizures after two unprovoked seizures [see comments]. *N Engl J Med* 1998;338:429-434.
3. Kho LK, Lawn ND, Dunne JW, Linto J. First seizure presentation: do multiple seizures within 24 hours predict recurrence? *Neurology* 2006;67:1047-1049.
4. Shinnar S, Berg AT, Moshe SL, et al. The risk of seizure recurrence following a first unprovoked seizure in childhood: A prospective study. *Pediatrics* 1990;85:1076-1085.
5. Hirtz D, et al. Practice parameter: treatment of the child with a first unprovoked seizure: Report of the Quality Standards Subcommittee of the American Academy of Neurology and the Practice Committee of the Child Neurology Society. *Neurology* 2003;60:166-175.
6. Randomized clinical trial on the efficacy of antiepileptic drugs in reducing the risk of relapse after a first unprovoked tonic-clonic seizure. First Seizure Trial Group (FIR.S.T. Group). *Neurology* 1993;43:478-483.
7. van Donselaar CA, et al. Value of the electroencephalogram in adult patients with untreated idiopathic first seizures. *Arch Neurol* 1992;49:231-237.
8. Shinnar S, Berg AT, Moshe SL, et al. The risk of seizure recurrence after a first unprovoked afebrile seizure in childhood: an extended follow-up *Pediatrics* 1996;98:216-225.

see page 1047

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