Risk of injuries from seizures

Previous studies involving patients with intractable epilepsy may have overestimated the risk of injury due to seizures. Lawn et al. found that the rate of injury is very low in persons with epilepsy in the community. Most injuries are cranial soft tissue injuries. The most important risk factor for injury is the seizure frequency.

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Are patients with epilepsy at high risk for injury?

Commentary by Anne T. Berg, PhD

Among the challenges faced by people with epilepsy are restrictions placed on their activities due to concerns over the risk of injury to the individual and, in the case of driving a car or flying an airplane, to others. Injuries may occur during a seizure or for related reasons. This has resulted in the perception of people with epilepsy as being at particularly high risk and vulnerable. The response to the potential risk, however, should be commensurate with the degree of risk. This excess risk has been estimated in a multinational European cohort study.[1] During 2 years of follow-up, only ~5% of the cohort had seizure-related accidents. Higher seizure frequency largely determined the risk. Now, the results of the above report by Lawn et al. provide an overview of the relationship between accidents and epilepsy in a US population. Perhaps most notable is the similarity of the findings from the European and American studies.

Table *Risk of first injury due to seizures in patients with epilepsy*

Years	Cumulative risk	Patients followed
1	5.4% (2.5–8.2)	210
2	6.8% (3.5–10.0)	192
5	12.7% (8.0–17.0)	160
10	14.6% (9.5–19.3)	127
20	26.1% (15.6–35.3)	20

Lawn et al. retrospectively assessed injuries in 247 patients. Thirty-nine (16%) experienced accidents over an 11-year average follow-up period. The cumulative risk was 6.8% at 2 years (see the table). Seizure-frequency was again the most salient predictor of accident risk.

Limitations in both studies include that observations came from patients who may already have been following certain activity restrictions and therefore had a low accident risk as a result of those restrictions. Loosening such restrictions might result in more accidents. This has been of concern for driving, although the available evidence has not indicated that liberalizing restrictions for drivers with epilepsy results in markedly higher accident rates. Any restrictions can interfere with "normal" life activities. People with epilepsy labor under the weight of both the risks associated with epilepsy and the societal consequences those perceived risks engender. Optimally, we should strive to minimize both of these. To do this the risks, both to the individual and to others, must be carefully quantified, determinants of those risks identified, and the role of behavior and activity limitations in modifying those risks assessed.

Reference

1. Beghi E, Cornaggia C, RESt1-Group. Morbidity and accidents in patients with epilepsy: results of a European cohort study. Epilepsia 2002;43:1076-1083.

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