

TREATMENT OF FIRST SEIZURE IN ADULTS – TO TREAT OR NOT?

Hrvoje Hećimović

Department of Neurology, University Hospital Center “Sestre milosrdnice”, Zagreb, Croatia

The first epileptic seizure needs to be evaluated by a neurologist. The comprehensive assessment includes detailed clinical history, EEG, neuroimaging, biochemical blood tests, including glucose, urine toxicology and sometimes CSF testing.

In the patients with their first seizures hospitalization may be required to confirm diagnosis. However, if the seizure is longer and the patient has still decreased level of consciousness, or has a series of epileptic seizures, focal neurological deficit, febrile state or positive meningeal signs, these may also require stay in hospital.

In majority of patients, the first seizure is usually not indication for starting with antiepileptic drug (AED). Furthermore, if the patient has a brief clusters of epileptic seizures in a short period of time that spontaneously stop, we may treat this as a single seizure.

However, there are some exceptions to these rules, when we put patients on an AED - this depends on type of epilepsy (absence or IGE), clinical semiology and clinical history (head trauma or CNS infection), in particular when the seizures are longer and the patient does not regain consciousness between two seizures. AED is also started in situations when we have a patient with two longer seizure clusters in 24 hours or in symptomatic seizures, as part of other, systemic disease (expansive cerebral lesion). In general, these exceptions are rare.

It is recommended that the first seizure is treated with lorazepam or diazepam. When we decide to start treatment with AED, the prescribed AED needs to be tailored for individual needs. Current evidence shows that in 20-25% patients the first AED will not stop seizures. In 10-17% the patient will experience AED side-effects and in 5-6% idiosyncratic reactions. About 8% of additional patients will not tolerate AED due to other reasons (Kwan and Brodie, 2001). One of larger retrospective studies examined effect of carbamazepine, valproate and lamotrigine to determine optimal AED daily dose. In the patients with complete seizure control, the average daily dose of carbamazepine was 600mg (400-600mg), valproate 1000mg (800-1000mg) or lamotrigine 180mg (150-200mg) (Mohanraj and Brodie, 2005). If the first AED was not satisfactory, then we replace it with another first-line AED. The first AED is later stopped and this is a monotherapy principle. The second-line AED is prescribed only as an add-on AED, because it failed to show better outcome in prior randomized studies. More than two AED very rarely improve seizure control, and three AEDs never. Difficult to treat epilepsies is better to control with 1-2 AEDs than with three or more, due to significant AEDs' side-effects. More often used combinations of two AEDs are lamotrigine with valproate or levetiracetam, carbamazepine with topiramate or levetiracetam, or valproate with gabapentin.