

IT IS IMPORTANT AND USEFUL TO ESTABLISH A DIAGNOSIS OF EITHER FOCAL OR GENERALIZED EPILEPSY WHEN EPILEPSY IS FIRST DIAGNOSED: NO

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It is difficult to argue why we should NOT diagnose the type of epilepsy correctly because by determining the epilepsy syndrome we may choose the appropriate therapy, predict the disease course, indicate genetic counselling, make a plan on rehabilitation, or indicate further investigations etc. Conversely, there are certain situations when we should not establish the epilepsy syndrome by any means.

The Commission on Classification and Terminology of the ILAE has more recently decided to discard the terms generalized and focal for modifying the epilepsies themselves which reflects the current suggestion on „organization of epilepsies” (Berg et al, 2010). However, in some epilepsy syndromes the term „generalized” remained and the commission suggested to change the former term of “idiopathic generalized epilepsies;” to “genetic generalized epilepsies” (GE).

Thus, in the everyday practice, we usually face the following question: how to treat patients with generalized tonic-clonic seizures if we are uncertain whether these seizures had a focal onset or not. In other words: whether we face a GE or not, because this may have relevance regarding treatment, genetic counselling, disease prognosis, etc.

In low-income countries some standard investigations (for example MRI) used in industrialized countries are not available. Thus, the correct diagnosis for epilepsy type is not always possible. However, for the largest part of the population of these countries usually the only (cheapest) available antiepileptic drug (AED) is the phenobarbital. Phenobarbital is a broad-spectrum drug. The latest ILAE review of antiepileptic drug efficacy and effectiveness as initial monotherapy for epilepsy (Glauser et al, 2013) suggest that there is „C-level” evidence that phenobarbital can be used as first-line drug for monotherapy for both focal epilepsy and GE with generalized tonic-clonic seizures (GTCS). Conversely, it is an acceptable therapeutic approach that in patients with GTCS or focal seizures who had no other type of generalized seizures (absence or myoclonia), PHB monotherapy is indicated without further specification of type of epilepsy.

In industrialized countries determining the type of epilepsy after GTCS remains also uncertain in at least 20-30% of patients. After correct eyewitness description of seizures, high-resolution MRI with epilepsy-protocol, and EEG may show no evidence on generalized vs. focal onset. Seizure semiology can be misleading. Presence or absence of other generalized seizures such as myoclonus or absence may lead to correct diagnosis, but some „focal features” at the beginning of the GTCS (such as head/body version, fencing posture, and „sign four”) can occur also in GE. The lack of interictal epileptiform potentials on standard EEG usually requires a sleep-EEG, which has a much higher diagnostic value than the standard EEG. In most cases, however, sleep deprivation EEG is the only available method for gaining sleep EEG. Sleep deprivation, however may be contraindicated in elderly patients or in patients who had previously suffered GTCS during sleep deprivation.

If we are unable to determine the seizure type, usually valproic acid is the first drug of choice. Valproic acid was superior to lamotrigine or topiramate for treating unclassified epilepsy according to a large randomized unblinded study (SANTE study, Marson et al). Valproic acid is the first-choice drug in GE with GTCS but some studies showed that it can be a first-choice drug in epilepsy with partial seizures.

There are some special patient groups where distinction between generalized or non-generalized epilepsies may be irrelevant concerning initial therapy.

(1) In young women, the the valproic acid is not recommended due to its teratogenic potential. Conversely, randomized trials showed that lamotrigine (SANAD trial conducted by Marson et al, 2007) or levetiracetam (suggested as first-choice drug with evidence level „A” by ILAE commission: Glauser et al, 2013) is a first-choice drug in focal epilepsy. Both lamotrigine and levetiracetam may be a first-line drug in generalized/unclassifiable epilepsy if the valproic acid should be avoided. Thus, in young women lamotrigin or levetiracetam monotherapy is recommended if AED therapy is necessary after GTCSs: independent of epilepsy type.

(2) In elderly patients with partial-onset seizures, lamotrigine monotherapy is recommended with evidence level „A” according to the ILAE review (Glauser et al, 2013). Because GE may occur even in elderly patients, lamotrigin monotherapy may be the the first-line choice in any elderly patients who requires treatment after GTCS and in whom the type of epilepsy remains uncertain.