ANTIEPILEPTIC DRUGS SHOULD NOT BE STOPPED AFTER EPILEPSY SURGERY: NO

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The main arguments for antiepileptic drug (AED) discontinuation after successful epilepsy surgery are usually clear: we can eliminate unnecessary side effects, improve quality of life and reduce medication-related costs. One of our original goals by the surgical process is to free our patients not only from seizures but also their medication. These arguments are especially true for children facing with a longer lifetime of costs and possible side effects.

Clinical data support that 67-95% of postsurgically seizure free patients remain seizure free even after AED stopping and in >90% of patients with seizure recurrence AED reinstallation is successful again. However, these data can be further refine by assessing predictive factors for a successful AED withdrawal after epilepsy surgery.

According to clinical studies, young age, focal MRI pathology (especially unilateral mesial temporal lobe epilepsy), shorter epilepsy carrier as well as normal postoperative EEG are good predictive factors for a safe tapering of AEDs. Controversially, extratemporal localization and/or non-lesional MRI, longer period of preoperative epilepsy, acute (within 10 days) postoperative seizures or spontaneous (with full AED) seizures any time after surgery might worsen the chance of seizure freedom after AED withdrawal.

All of these studies suggest that tapering or stopping AEDs after epilepsy surgery only uncover the "incomplete seizure onset zone resection" cases *earlier* or select those patients whose preoperatively pharmacoresistant epilepsy became pharmacoresponsive due to (a partial) resection.

Moving ahead one more step on this topic of AED reduction, some good clinical practices suggest to simplify antiepileptic treatment already during presurgical evaluation, especially in those receiving polytherapy and/or less rational AED combination.

The main problem of postoperative AED stopping, however, is the lack of randomized controlled trials in this field. In clinical practice, epileptologists work with a "biased sample" of patients meaning that AED withdrawal happens in situations comfortable for both the patient and his/her physician. Beside the above mentioned predictive factors, one of the strongest arguments could be our patients' preferences; let they mean a fear from side effects (and therefore AED withdrawal) or wishes to resume driving license (and in this case staying on medication). To avoid subjective factors and bias in this decision, more prospective, randomized and controlled studies could help to describe the optimal ways and timing of AED withdrawal after epilepsy surgery.