

The Tolerability and Efficacy of Levetiracetam

Can. J. Neurol. Sci. 2010; 37: 309

Levetiracetam is a new antiepileptic drug (AED) with some advantages compared with the first generation of AEDs. Initially the drug was used for patients with partial epilepsy, but over time the drug has demonstrated an adequate efficacy for patients with idiopathic generalized epilepsy. The study published by Bilo et al¹ assessed the efficacy and tolerability of levetiracetam in a retrospective cohort of patients with epilepsy.

The authors studied 202 patients and divided the study population in three groups; patients with new diagnosis of epilepsy where levetiracetam (LVT) was used as the first choice, patients with well controlled epilepsy and where a change of medication was required because of side effects with previous medications, and the last group were patients with intractable epilepsy and polytherapy was used to help in the management of seizures. The main limitation of this study is its retrospective nature, although it shows interesting findings.

The study shows that LVT has an adequate efficacy in patients where a change of drug is required, mainly because of side effects. In this group 96.8% of patients remained seizure-free with LVT, with an adequate tolerability. This finding is relevant and proves that LVT has very clear advantages compared with traditional AEDs such as few drug to drug interactions, less impact in cognitive function and the possibility to use the drug in many patients that are using drugs with liver metabolism.

In the group of patients with new diagnosis of epilepsy the study shows that 57.9% of patients are seizure-free and 31.6% have an adequate control of seizures, and only 10.5% did not have an adequate control of seizures. The efficacy in this group is also adequate, although the drug does not have the same efficacy as the previous group. This difference could be explained because of the type of patients in the first group, mainly composed of patients with well controlled epilepsy where a change of medication was required only because of side effects and not because of intractability. It is possible that with other drugs these patients also could achieve seizure free status with other medications. On the other hand the second group was composed of patients with new diagnosis of epilepsy and some of them could develop early intractable epilepsy explaining the different efficacy.

Finally the third group was composed of patients with intractable epilepsy showing a low expected rate of seizure freedom of 23%, with an additional 29.5% of patients that had an adequate response. This observation was expected and abundant information has been published in patients with intractable epilepsy and the high rate of failure to medical treatment in these patients is very well known². Even when only 20% of patients rendered seizure-free with LVT in this group the overall response to the medication was 50%, which is adequate for these type of patients.

In future studies it could be interesting to know the same outcomes assessed by this article in patients with partial and idiopathic generalized epilepsy. Unfortunately the sample size in this study does not allow this comparative analysis.

In the article the authors assessed some factors associated with the lack of response to LVT and basically the authors find the profile of patients with intractable epilepsy such as surgical candidates, patients on polytherapy, history of status epilepticus and the use of concomitant AEDs. This observation was expected and it is an interesting finding of the study because these characteristics represent the profile of patients that could not only fail to LVT but also to other medications.

Regarding tolerability the study shows an adequate profile. Overall 23% of patients developed side effects and 16% of those discontinued the drug. Side effects identified in the study were the most common, having been recognized in the international literature such as drowsiness and behavior changes. The results of this study confirm previous evidence supporting the efficacy and tolerability of LVT. There is no question that LVT is well positioned as a drug for patients with partial and generalized efficacy due to several commented advantages.

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REFERENCES

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