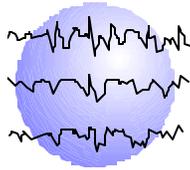


INITIAL MONOTHERAPY OF LEVETIRACETAM IN CHILDREN

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Introduction:

Levetiracetam is approved for the adjunctive treatment of partial onset seizures in children \geq 4 years old. In an expert opinion supplement to Child Neurology (DEC 2005), levetiracetam was considered “appropriate or first line” as initial monotherapy treatment for partial onset seizures by 79% of the experts. We evaluated a sample of our experience with levetiracetam as initial monotherapy in children.

Methods:

All medical records of children less than 10 years old were reviewed consecutively starting at the end of the alphabet, for children we treated initially with levetiracetam. Charts were reviewed for demographics, efficacy, tolerability, etiology, EEG, and MRI. Initial emergency treatment with a benzodiazepine, or fosphenytoin was allowed, but no previous chronic antiepileptic medications. Follow-up had to be at least 4 months from their initial dose of levetiracetam, and they were analyzed on an intent to treat basis. Charts were reviewed until twenty children meeting the criteria had been found.

Results

There were 7 females, 13 males, Median age 4 years (6 weeks to 8 years); Median follow-up 2 years (range 4 months to 5 years, mean 2.1 years); MRI was abnormal in 8 and EEG abnormal in nineteen. Dose ranged from 10 to 70 mg/kg/day.

Conclusions:

Levetiracetam was effective as initial monotherapy.

The most common reason to discontinue levetiracetam treatment was adverse behavior. This problem continued in 60% of those treated with alternative medications.

Long term follow-up: 55% were seizure free without adverse side effects. No seizures, no side effects.

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Seizure Control

- .. 16 were seizure free while treated with levetiracetam (80%).
- .. 2/4 children whose seizures were not controlled with levetiracetam gained seizure control with the next medication (one with valproate, the other with oxcarbazepine). The other 2 children have not gained seizure control despite multiple medication trials.

Adverse Side Effects

- .. Five behavioral – aggressive, “crabby”, irritable, or moody. All discontinued due to adverse effect. Two resolved with the next medication tried. 3 did not resolve despite other medications. All had been seizure free while treated with levetiracetam; two were not seizure free and continued to have behavior problems while treated with other medications.
- .. Two transient sedation, mild.