

Poster presentation

Neurocognitive evaluation of oxcarbazepine monotherapy in children with benign childhood epilepsy

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from International Society on Brain and Behaviour: 2nd International Congress on Brain and Behaviour Thessaloniki, Greece. 17–20 November 2005

Published: 28 February 2006

Annals of General Psychiatry 2006, **5**(Suppl 1):S158 doi:10.1186/1744-859X-5-S1-S158

Background

To explore the impact of oxcarbazepine (OXC) monotherapy on terms of cognitive functions and academic achievement in patients with benign childhood epilepsy with centro-temporal spikes (BECTS).

Materials and methods

A total of 71 patients aged 5.6 to 11.4 years (45 males, 25 females, mean 8.5 ± 0.7) with typical clinical and EEG features of BECTS were assigned to OXC monotherapy. Inclusion criteria were a) newly diagnosed epilepsy, b) 3 or more seizures during the past 6 months c) normal brain magnetic imaging. All of them underwent psychometric assessment at screening and after 18 months of treatment by means of WISC-III, Illinois Test of Psychomotor Abilities, DSM-IV, and Bender-Santucci Test. Seizure types, frequency, awake and sleep EEG findings, dosage ranges were documented. The Mann-Whitney U test was used to describe differences 1) at initial evaluation, comparing patients with a group of 45 age-matched unaffected controls and 2) after 18 months of OXC monotherapy, as an individual follow-up in the patient group.

Results

Cognitive assessment revealed learning deficits in 7/71 patients and 3/45 controls at baseline. This subgroup marked difficulties in reasoning, computational skill, phonological awareness and short-term visuospatial memory. No child had a persistent stagnation or a regression in cognitive abilities after treatment. The identification of these disabilities was crucial to the parents' information and strategy development. The initial weak scores in isolated domains improved or normalised dur-

ing the study with concomitant EEG improvement or normalisation and effective seizure control.

Discussion

Oxcarbazepine is a novel antiepileptic drug with tested efficacy and tolerability. Ours findings suggest that OXC has a favourable cognitive profile and may prove a key medication for improving the outcome of this epilepsy syndrome

References

1. Binnie CD: **Cognitive impairment during epileptiform discharges: is it ever justifiable to treat the EEG?** *Lancet Neurology* 2003, **2**:725-730.
2. Metz-Lutz M, Kleitz C, et al.: **Cognitive Development in Benign Focal Epilepsies of Childhood.** *Dev Neurosci* 1999, **21**:182-190.
3. Loring DW, et al.: **Cognitive side effects of antiepileptic drugs in children.** *Neurology* 2004, **62**:872-877.
4. Tzitivridou, et al.: **Oxcarbazepine monotherapy in benign childhood epilepsy with centro-temporal spikes: a clinical and cognitive evaluation.** *Epilepsy and Behaviour* 2005 in press.