TOPIRAMATE THERAPY AND COGNITIVE DYSFUNCTION

The effects of topiramate (TPA) adjunctive therapy on cognition in 22 consecutive patients with intractable epilepsy were studied at the Montreal Neurological Hospital, Quebec, Canada. Performance on neuropsychological tests administered on and subsequently off TPM was analyzed. In a second study at the Minnesota Epilepsy Group, St Paul, MN, 16 patients were tested first off, then on TPM. In the Quebec study, significant improvements were observed after discontinuing TPM on 13 measures of verbal and nonverbal fluency and some perceptual tasks. In the Minnesota study, performance was impaired on all tests of cognition after TPM was begun, and especially for tests of fluency, sustained concentration, and visual motor processing speed. (Lee S, Sziklas V, Andermann F, et al. Epilepsia March 2003;44:339-347). (Respond: Dr Suzee Lee, McGill University, Montreal Neurological Hospital, Monytreal, Quebec, Canada).

COMMENT. Topiramate is associated with impairments of fluency, attention/concentration, processing speed, language skills, and perception. Working memory but not retention is affected. The TPM-induced cognitive dysfunction is independent of the order of testing, first on or off medication.

Topiramate-asociated word-finding difficulties are reported from the Institute of Neurology, University College, Queen Square, London (Mula M, Trimble MR, Thompson P, Sander J. Neurology April 8, 2003;60:1104-1107). Word-finding difficulties developed in 31 (7.2%) patients with epilepsy during treatment with TPM. Patients with simple partial seizures and a left temporal EEG epileptic focus were especially at risk.

MACROCEPHALY AND RISK OF SEIZURES

The epidemiology, perinatal risk factors, and major neurologic comorbidity of 42 children with hydrocephalus were studied in a community-based clinic for children with neurodevelopmental disabilities at the Institute for Child Development, Tel Aviv, Israel. Of 4,309 children examined, 62 (1.4%) had macrocephaly (HC >98th percentile), of whom 42 (1%) had macrocephaly not associated with hydrocephalus. Of the 42, 3 had familial macrocephaly and 15 had comorbid diagnoses: generalized macrosomia in 6, of whom 3 had cerebral gigantism (Soto's syndrome), migration defects (2), holoprosencephaly (1), neurofibromatosis type 1 (1), achondroplasia (2), myotonic dystrophy (1), and other (2). In comparison with normocephalic disabled controls, children with macrocephaly without hydrocephalus had an increased incidence of neonatal respiratory distress (9.5% vs 3.6%, p=0.042); other perinatal complications were not significantly different in the 2 groups. In the 42 patients with macrocephaly without hydrocephalus the risk of developing epilepsy or febrile seizures was significantly increased compared with controls (24% and 10% [p<0.001 and p=0.026] respectively). Macrocephaly was a significant risk factor for febrile seizures (odds ratio = 3.1, p<0.001) and epilepsy (odds ratio = 7.7, p<0.001), but not for mental retardation (odds ratio = 1.1, p=0.78) or cerebral palsy (odds ratio = 1.3, p=0.67). (Nevo Y, Kramer U, Shinnar S, et al. Macrocephaly in children with developmental disabilities. Pediatr Neurol Nov 2002;27:363-368). (Respond: Dr Nevo, The Institute for Child Development, 14 Balfour St, Tel Aviv, 65211, Israel).