

Clinical EEG and Neuroscience October 2007;38:216-217). (Respond: E-mail: Marc-Andre Gingras: masleep@hotmail.com)

COMMENT. Previous studies of the waking EEG in ADHD children by the above authors had found abnormalities in frontal, temporal, parietal and occipital regions. Researchers from the Universities of Wollongong and Sydney, Australia, report that increased delta and theta in frontal regions in unmedicated girls with ADHD was normalized by treatment with methylphenidate. Stimulant medication in ADHD girls may improve processing deficits rather than increasing arousal levels. (Clarke A, Barry R, McCarthy R et al. Effects of stimulant medications on the EEG of girls with attention-deficit/hyperactivity disorder. Abstracts of presentations at the 16th Annual Conference of the Australian Society for Psychophysiology December 9-11, 2006, Canberra, Australia. **Clinical EEG and Neuroscience** Oct 2007;38:222). (Respond: E-mail: Adam Clarke: aclarke@uow.edu.au).

Epileptiform activity in the EEG is reported with varying frequency from 7% to 30% of children with ADHD (Hughes JR et al. **Epilepsy & Behavior** 2000;1:271-277; **Ped Neur Briefs** Oct 2000;14:73-74). Methylphenidate treatment of ADHD complicated by centrotemporal rolandic spikes in the EEG has a risk of precipitating seizures in 16.7% compared to only 0.6% in patients with normal EEGs. (Hemmer SA et al. **Pediatr Neurol** 2001;24:99-102; **Ped Neur Briefs** July 2007;21:49-50). For a comprehensive review of ADHD and epilepsy comorbidity, see Schubert R 2005, in **Ped Neur Briefs** 2005;19:1-2.

VASCULAR DISORDERS

IRON-DEFICIENCY ANEMIA AND STROKE

The prevalence of iron-deficiency anemia (IDA) in young children at the time of stroke and in age-matched healthy controls was compared in a case-control study conducted at the Hospital for Sick Children, Toronto, Canada. IDA was significantly more common among case patients (8 (53%) of 15) than control subjects (13 (9%) of 143). Patients and controls were aged 12 to 38 months; median ages of 24 vs 21 months were not significantly different. Case patients had a lower median hemoglobin level and mean corpuscular volume and a higher median platelet count than controls. Patients with IDA had serum ferritin levels below 12 mcg/L. Three stroke cases without IDA had varicella infection and prior prothrombotic risk factors. Six stroke cases (4 with IDA) had acute otitis media, pneumonia, or acute gastroenteritis infections. Stroke patients were 10 times more likely to have IDA than healthy children without stroke. More than half of all stroke cases in otherwise healthy children had IDA as a risk factor. Stroke due to sinovenous thrombosis was more closely associated with IDA than arterial ischemic stroke. (Maguire JL, de Veber G, Parkin PC. **Pediatrics** 2007;120:1053-1057). (Respond: Patricia C Parkin MD, Division of Pediatric Medicine, Hospital for Sick Children, 555 University Ave, Toronto, Ontario, Canada M5G 1X8).

COMMENT. IDA is a significant risk factor for vasoocclusive stroke in otherwise healthy children. In a series of 212 children with a first ischemic stroke, reported from Great Ormond Street Hospital, London, a previous medical diagnosis was identified in

approximately one half, including anemia in 40%. (Ganesan V et al. *Ann Neurol* 2003;53:167-173; *Ped Neur Briefs* Feb 2003;17:15) Other risk factors include activated protein C resistance, elevated lipoprotein(a), antiphospholipid antibodies, prothrombin gene variant, factor V Leiden mutation, subacute varicella infection, and methylenetetrahydrofolate reductase (MTHFR) mutation. IDA is a greater risk factor for sinovenous thrombosis than for arterial ischemic stroke.

NEONATAL SINOVENOUS THROMBOSIS AND MRI FINDINGS

Neonates with suspected sinovenous thrombosis were examined by magnetic resonance venography, diffusion-weighted imaging, and T2-weighted imaging, in a study at the Massachusetts General Hospital, Boston, MA. Of 200 CT scans performed in neonates 2004-2005, 15 neonates had intracranial hemorrhage or sinovenous signal suggesting sinovenous thrombosis. The mean birth weight was 3240g and gestational age was 40 weeks. Presenting signs were seizures (60%), apnea, hypotonia, and lethargy. Twelve patients had obstetric and perinatal complications; only 1 had sepsis. MRI showed a definite intraluminal clot in the deep venous system in 2 cases, and the remainder showed decreased flow-related enhancement within the dural venous sinuses. The sinus in all these cases was compressed by subdural hematoma or sutural diastasis. Parenchymal abnormalities were present in 5, classified as hemorrhage and cytotoxic edema in 3, or vasogenic edema in 1. Four of these 5 patients showed improvements, but one died. Intraluminal clot was rare in the superficial venous system. (Eichler F, Krishnamoorthy K, Grant PE. Magnetic resonance imaging evaluation of possible neonatal sinovenous thrombosis. *Pediatr Neurol* Nov 2007;37:317-323). (Respond: Dr Grant, Department of Radiology, Massachusetts General Hospital, 55 Fruit St, Boston, MA 02114).

COMMENT. MRI with MR venography is recommended to assess for intraluminal clot and parenchymal injury when an initial CT scan shows a suspected sinus venous thrombosis. The characteristic MR appearance in venous thrombosis is loss of the normal flow enhancement on MR venography and corresponding filling defect on T2 weighted image. Clinical signs are not specific, and MRI is essential in diagnosis of neonatal sinovenous thrombosis. Deep venous thrombosis is often associated with intraventricular or thalamic hemorrhage. One third of term neonates with intraventricular hemorrhage have cerebral sinovenous thrombosis (Wu YW et al. *Ann Neurol* 2003;54:123-126). Obstetric complications were frequent in the above patients, and occipital bone molding may be associated with subdural or epidural hematoma leading to displacement of venous sinuses, venous hypertension and thrombosis.

TOPIRAMATE COMPARED TO ACETAZOLAMIDE IN TREATMENT OF IDIOPATHIC INTRACRANIAL HYPERTENSION

The efficacy of topiramate in the treatment of idiopathic intracranial hypertension (IIH) was compared to acetazolamide in an open-label study of 40 patients (age range 16-50, median 32 years; male/female ratio 5/35) at Ege University Medical School, Izmir, Turkey. Patients were assigned alternately to topiramate (100-150 mg daily) and acetazolamide (1000-1500 mg daily). CSF pressures (mmH20) ranged from 225-850, median 342 and 300,