

coinciding with vulnerable watershed areas of cortex, yields a high sensitivity (81%) for electrical seizure activity. Bedside aEEG monitoring “on-line” and around the clock is underway in the NICU to explore feasibility and impact on management of electrographic seizures. In contrast to a low sensitivity and high false-positive rate using electronic fetal heart monitoring, the early use of aEEG has a sensitivity of 85% to 91% for predicting neurodevelopmental outcome in term newborn infants with neonatal encephalopathy. aEEG is used to recruit patients for study of therapeutic hypothermia, and clinically to evaluate the newborn by complementing the neurologic examination, conventional EEG, and neuroimaging, not in isolation. (Shah DK, de Vries LS, Hellstrom-Westas L, Toet MC, Inder TE. Amplitude-integrated electroencephalography in the newborn: a valuable tool. **Pediatrics** Oct 2008;122:863-865). (Respond: Divyen K Shah MB ChB, Washington University, Department of Pediatrics, 8<sup>th</sup> Floor, NW Tower, 1 Children’s Place, St Louis, MO 63110. E-mail: [shah-d@kids.wustl.edu](mailto:shah-d@kids.wustl.edu)).

COMMENT. Analysis of clinical data at 18 months in a study of head cooling for neonatal encephalopathy found that infants with greater amplitude-integrated EEG, lower birth weight, absence of seizures, and higher Apgar score had significantly better outcomes. Gender and gestational age were not significantly associated with outcome. (Wyatt JS et al. **Pediatrics** 2007;119:912-921; **Ped Neur Briefs** June 2007;21:48).

## EEG IN SPECIFIC LANGUAGE IMPAIRMENT

The value of routine wake electroencephalography in children with specific language impairment was reviewed retrospectively in 111 children examined over a 10-year interval at Montreal Children’s Hospital, Quebec, Canada. Children with known central nervous system disorders were excluded. Sleep-deprived EEG was not performed. The wake EEG was abnormal in 35 (31.5%) children, including 7 (6.3%) with epileptiform activity, and higher than that in ‘normal’ children (3.54%). (NS. P=0.12). The epileptiform activity was active in 3 patients. Three (2.7%) had excessive paroxysmal activity (PA) with hyperventilation, and 3 (2.7%) had excessive PA with photic stimulation. Female gender had a small association with abnormal EEG. Two patients with epileptiform EEGs received anticonvulsant medication on parental request; subsequent EEGs but not the speech were improved. Soft neurologic signs, macrocephaly, or microcephaly were present in 21 (18.9%) children, ADHD in 15 (13.5%), and comorbid learning difficulties in 14 (12.6%). (Venkateswaran S, Shevell M. The case against routine electroencephalography in specific language impairment. **Pediatrics** Oct 2008;122:e911-e916). (Respond: Michael Shevell MDCM, FRCP(C), E-mail: [Michael.shevell@muhc.mcgill.ca](mailto:Michael.shevell@muhc.mcgill.ca)).

COMMENT. Wake EEG is of uncertain value in the routine diagnostic evaluation of children with specific language impairment. Definitive recommendations await further investigation with both wake and sleep EEG. A previous prospective study including both wake and sleep EEG demonstrated abnormalities in almost half of the patients (14 of 32) with developmental dysphasia, and epileptic activity in 30 of the 32 in overnight recordings. (Echene B et al. **Brain Dev** 1992;14:216-225). Patients with receptive dysphasia were at highest risk for abnormal EEG. (Tuchman R et al. **Pediatrics** 1991;88:1219-1225).