measures of executive function, since the caregiver observes the child during unstructured daily activities. The test requires 10 minutes to administer and may be completed from the physician's office. When reports are suggestive of executive dysfunction, a more extensive neuropsychological evaluation is indicated to define the symptoms of ADHD and signs of cognitive dysfunction, the frequent sequelae of TBI. Several articles connecting symptoms of ADHD and learning disorders with TBI are cited in the literature.

SEIZURE DISORDERS

CLEFT PALATE IN INFANTS EXPOSED TO LAMOTRIGINE DURING PREGNANCY

Infants with major malformations born to 791 women who had taken lamotrigine as monotherapy during the first trimester of pregnancy, and had enrolled in the North American AED Pregnancy Registry, were identified in a study at the Genetics and Teratology Unit, MassGeneral Hospital for Children, Boston, and Boston University School of Medicine, MA. Of 684 lamotrigine-exposed infants included, 16 (2.3%) had major malformations identified at birth. Five (7.3/1000) had oral clefts: isolated cleft palate (3), isolated cleft lip (1), and cleft lip and palate (1). In comparison, the prevalence of isolated oral clefts in 206,224 unexposed infants born at Brigham and Women's Hospital, Boston, was 0.7/1000 and one tenth that of exposed infants. Of infants enrolled in 5 other registries, 1,623 were exposed to lamotrigine, as monotherapy, and 4 had oral clefts, a prevalence of 2.5/1000. (Holmes LB, Baldwin EJ, Smith CR, et al. Increased frequency of isolated cleft palate in infants exposed to lamotrigine during pregnancy. **Neurology** May 27, 2008;70:2152-2158). (Reprints: Dr LB Holmes, Genetics Unit, MassGeneral Hospital for Children, CPZS-504, 175 Cambridge Street, Boston, MA 02114. E-mail: holmes.lewis@mgh.harvard.edu).

COMMENT. Infants exposed to the anticonvulsant lamotrigine during the first trimester of pregnancy have an increased risk of an isolated cleft palate or cleft lip deformity.

TREATMENT OF REFRACTORY STATUS EPILEPTICUS

The literature on the management of refractory status epilepticus is reviewed and a treatment algorithm suggested by researchers at Children's Hospital of Philadelphia, PA. The definition of status epilepticus (according to Wasterlain et al, 2006) is divided into an 'impending' or early stage (5-30 min) and an 'established' stage of status epilepticus (30-60 min). Impending status epilepticus is a continuous generalized convulsive seizure for at least 5 min, or continuous non-convulsive seizures or focal seizures for at least 15 min, or two seizures without full recovery of consciousness between them. Established status epilepticus is a continuous seizure for at least 30 min, or intermittent seizures without full recovery of consciousness for 30 min. In refractory status, seizures persist despite treatment with 2 or 3 anticonvulsant medications for 30 min, 1 hr, 2 hrs or longer. Based on the literature review, the recommended protocol for impending status epilepticus (SE), <5 min, begins with buccal midazolam or rectal diazepam, before arrival at hospital. After 5 min, give lorazepam or

diazepam IV, oxygen, and stabilize airway and respiration as needed. Check serum glucose and begin EKG monitoring. *For established SE*, 5-10 min, repeat benzodiazepine, give fosphenytoin IV. Consider pyridoxine 100 mg IV push, if age <2 years. Obtain lab tests, including CT and neurology consult. *For refractory SE,* 10 min after fosphenytoin infusion, administer levetiracetam IV or valproate. After 5 min interval without control, give phenobarbital IV. Admit to PICU. Consider coma induction. Inhalation anesthetics will terminate refractory SE and induce burst suppression, but hypotension requiring vasopressors is a problem, and seizures recur when the anesthetic is withdrawn. (Abend NS, Dlugos DJ. Treatment of refractory status epilepticus: literature review and a proposed protocol. **Pediatr Neurol** June 2008;38:377-390). (Respond: Dr Abend, Division of Neurology, Children's Hospital of Philadelphia, 34th St and Civic Center Blvd, Philadelphia, PA 19104. E-mail: abend@email.chop.edu).

COMMENT. The treatment protocol used at the Philadelphia Children's Hospital for status epilepticus emphasizes the benefits of early intervention, consecutive medications with different mechanisms of action, and avoidance of risk of hypotension. Status epilepticus due to recognized causes (eg febrile SE, meningitis, encephalitis, etc) require specific treatment.

CLINICAL FEATURES OF PROLONGED FEBRILE SEIZURES

The results of a prospective, multicenter study of 119 children (age 1 month through 5 years) with prolonged febrile seizures (30 min or longer) are reported from Montefiore Medical Center, and Columbia University, New York; Children's Memorial Hospital, Chicago; and other members of the FEBSTAT study group. The median age was 1.3 years; 46% between 1-2 years. Males were 54%. Development was normal in 86%; and definitely abnormal in 8%. A prior FS occurred in 24%. Family history was positive for FS in 25% and for epilepsy in 9%. The mean peak temperature was 103.2F. The cause of the fever was viral in 54%, otitis media (18%), pneumonia (5%), and unknown (14%). Median duration of the FS was 68 min; 24% were >2 hours. A diagnosis of status epilepticus was not recognized in the ED in 21%. Seizures were convulsive in 99%, definitely focal in 48%, generalized in 22%, and partial with secondary generalization in 66%. (Shinnar S, Hesdorffer DC, Nordli DR Jr, et al. Phenomenology of prolonged febrile seizures. Results of the FEBSTAT study. **Neurology** July 15, 2008;71:1-1 [Epub ahead of print]. (Respond: Shlomo Shinnar MD, Comprehensive Epilepsy Management Center, Montefiore Medical Center, 111 E 210th St, Bronx, NY 10467. E-mail: sshinnar@aol.com).

COMMENT. This report represents a preliminary account of a long-term study to include 200 patients with prolonged febrile seizures, and is intended to clarify the relation of the FS to mesial temporal sclerosis and temporal lobe epilepsy. Febrile status epilepticus accounts for 25% of pediatric SE patients. The high incidence of partial seizures might be expected, given the prolonged nature of the seizures in this study. Hippocampal injury is reported especially in patients with a history of prolonged, focal FS. However, inter-rater agreement on focality reached lesser consensus than other features of FS. The high incidence of viral infection is in agreement with most recent FS studies. The results of viral assays will be of interest and important information, as a prelude to future research in viral etiology and antiviral treatment of FS.