

## MOVEMENT DISORDERS

### **TICS, OCD AND STREPTOCOCCAL INFECTION (PANDAS)**

Forty matched pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections (PANDAS) case-control pairs were prospectively evaluated clinically and with testing for group A b-hemolytic streptococcus for an average of 2 years, in a study at University of Rochester School of Medicine, New York; and WHO Streptococcal Reference Laboratory, Minneapolis, MN. Chronic tic and/or obsessive-compulsive disorder exacerbations were more frequent and were accompanied by a significantly higher rate of group A b-hemolytic streptococcus infection than controls. Five of 64 exacerbations were temporally associated (within 4 weeks) with a group A b-hemolytic streptococcus infection in cases, but >75% of exacerbations in cases were not associated with strep infection. PANDAS represents a subgroup of tic/OC disorders susceptible to exacerbations precipitated by strep infection, but other antecedent events may also be causative. A family history of rheumatic fever was significantly higher in PANDAS cases than in controls (22.5% vs 5.3%;  $P=0.03$ ). The separation of tic or OC disorders based on symptom precipitants requires validation by further studies. (Kurlan R, Johnson D, Kaplan EL, Tourette Syndrome Study Group. Streptococcal infection and exacerbations of childhood tics and obsessive-compulsive symptoms: a prospective blinded cohort study. *Pediatrics* June 2008;121:1188-1197). (Respond: Roger Kurlan MD, University of Rochester School of Medicine, Mt Hope Professional Building, 1351 Mt Hope Ave, Ste 100, Rochester, NY 14620. E-mail: [roger.kurlan@urmc.rochester.edu](mailto:roger.kurlan@urmc.rochester.edu)).

COMMENT. Children with PANDAS are a subgroup of patients with tic disorder or obsessive-compulsive disorder whose symptoms are exacerbated by a susceptibility to group A b-hemolytic streptococcus infection (GABHS). The authors suggest that the increased susceptibility to GABHS may represent a genetic vulnerability or infection with strains that induce autoimmune manifestations. Further research involves environmental precipitants of tics other than GABHS, including alternative infections, and emotional stress factors. Trials of antimicrobial agents in prevention or treatment of tic exacerbations may also be considered.

### **PERIODIC LIMB MOVEMENTS OF SLEEP (NOCTURNAL MYOCLONUS)**

The prevalence and clinical correlates of pediatric periodic limb movements of sleep (PLMS) were identified by polysomnography in children attending St Christopher's Hospital for Children, Philadelphia, PA. Of 982 polysomnograms, 77 showed PLMS, a prevalence of 7.8%. Males outnumbered females, 47 to 30. Mean age was 9.4 +/- 4.2 years (range, 1-19 years). Rapid eye movement sleep constituted 16.8% and slow-wave sleep 22% of sleep time. Associated diagnoses included obstructive sleep apnea in 36 (46.8%), ADHD in 10 (13%), migraine in 7 (9.1%), seizures in 7 (9.1%), narcolepsy in 7 (9.1%) and autistic spectrum disorder in 5 (6.5%). Serum ferritin was decreased (mean 26.1 microg) in 29 (96.6%), but the degree of decrease did not correlate with severity of PLMS. Data regarding