

COMPLEX MOTOR STEREOTYPIES IN NON-AUTISTIC, NON-RETARDED CHILDREN

The records of 40 children (63% male) aged 9 months to 17 years with complex motor stereotypies seen between 1993 and 2003 were reviewed at the Kennedy Krieger Institute. Johns Hopkins University School of Medicine, Baltimore, MD. The majority had been referred for tics, compulsions, or possible seizures, and some had prior EEGs or MRIs read as normal. Sixteen (40%) had been prescribed psychotropic medications in the past, without benefit. Age at onset was at 2 years or earlier in 75%, and before age 3 in 90%. The average delay for diagnostic referral was 5.7 +/- 3.2 years. Individual stereotyped movement lasted less than 10 sec in 30%, and >1 min in 30%. The frequency of episodes was more than 1 a day in 90%. Triggers included excitement (70%), boredom (23%), fatigue (18%), and anxiety-stress (28%). None occurred in sleep. Movement ceased when name was called or child was distracted. Movements involved the upper limbs, arms in 70% and hand-fingers in 48%. Head-face-mouth (53%), legs-feet-toes (18%), and waist-torso (8%) were also affected. The patterns of the primary stereotypies included hand flapping (48%), shaking including tremor (28%), clenching-stiffening-posturing, resembling dystonia, facial grimacing (38%), and ritual purposeful behaviors (13%), such as bending over, rocking, or pacing. At follow-up, stereotypies were improved in 13 (32%), unchanged in 20 (50%), and worse in 5 (12%). Only 2 had complete resolution of movements after 11 and 12 years. Associated disorders included ADHD in 10 (25%), learning disabilities in 8 (20%), early language delay in 9 (23%), motor delay in 7 (18%), obsessive compulsive disorder in 2 (5%), and tics in 7 (18%). Family history was positive for stereotypies in 25%, ADHD (10%), tic disorders (33%), mood disorders (38%), and other neurologic disorders, including epilepsy (30%). Stereotypies were mainly resistant to medication such as clonidine and neuroleptics. (Mahone EM, Bridges D, Prahme C, Singer HS. Repetitive arm and hand movements (complex motor stereotypies) in children. *J Pediatr* Aug 2004;145:391-395). (Reprints: E Mark Mahone PhD, Department of Neuropsychology, Kennedy Krieger Institute, 1750 E Fairmont Ave, Baltimore, MD 21231).

COMMENT. The recognition of these repetitive, complex movements of arms and hands in otherwise normal children is important, and the distinction of motor stereotypies from tics and seizures is especially relevant. The pathophysiology of complex motor stereotypies is not fully understood, and hypotheses have included an altered state of arousal, anxiety related, or poor inhibitory control. Frontal-striatal dysfunction is suggested by the common association of stereotypies with ADHD, OCD, and tic disorders. The authors cite a report from their Institute of MRI studies that show reduced size of frontal white matter.

SELF-INJURIOUS BEHAVIOR IN TOURETTE SYNDROME

Self-injurious behavior (repetitive infliction of self harm) occurred in 29% of 300 subjects with Tourette syndrome and was correlated with comorbid OCD, impulsivity, episodic rages, and with tic severity. Mild and severe SIBs had different comorbidities. (Mathews CA, Waller J, Glidden DV, et al. Self injurious behaviour in Tourette syndrome: correlates with impulsivity and impulse control. *J Neurol Neurosurg Psychiatry* Aug 2004;75:1149-1155). (Respond: Dr CA Mathews, Department of Psychiatry, UC La Jolla).