

DISORDERS OF MOTOR FUNCTION

DIAGNOSTIC ASSESSMENT OF CEREBRAL PALSY

The Quality Standards Subcommittee of the American Academy of Neurology and the Practice Committee of the Child Neurology Society have developed practice parameters for the diagnosis of cerebral palsy (CP). CP, a nonprogressive disorder of posture or movement due to a lesion of the developing brain, occurs in 2 to 2.5 per 1000 live births. An algorithm for the evaluation of the child with CP is as follows: 1) All patients should have a history and physical to exclude a progressive or degenerative CNS disorder; 2) classify the type of CP (quadriplegic, hemiplegic, diplegic, ataxic etc); 3) screen for mental retardation, visual and hearing impairments, speech and language delay, and disorders of oral-motor function; 4) if seizures are present, obtain an EEG; 5) neuroimaging, preferably an MRI; 6) consider metabolic and genetic studies if positive family history of CP, evidence of brain malformation or atypical features; and 7) test for coagulopathy in hemiplegic CP with history of stroke. Neuroimaging when practical, especially MRI, is commonly abnormal in CP and helps to determine etiology. (Ashwal S, Russman BS, Blasco PA et al. Practice parameter: Diagnostic assessment of the child with cerebral palsy. *Neurology* March (2 of 2) 2004;62:851-863). (Reprints: Quality Standards Subcommittee of the American Academy of Neurology, 1080 Montreal Ave, St Paul, MN 55116).

COMMENT. The authors recommend that future research should be directed to underlying mechanisms such as perinatal stroke, coagulopathies, genetic disorders, pre- and perinatal inflammatory diseases, and environmental factors. The treatment of cerebral palsy is often tedious and discouraging, for child, parent, therapist, educator and physician. Having witnessed the untiring efforts of occupational therapists and teachers in rehabilitation schools for cerebral palsied children, their patience and skills are admirable, especially in view of the generally slow and minimal gains in function obtained. In the United States, CP affects an estimated 750,000 people. It is hoped that future research in the etiologies of CP will lead to effective preventive methods and recommendations. In this regard, the Neurological Collaborative Perinatal Project (NCPP), begun by the NINDB in 1959, a prospective study of 55,000 pregnant women and their prenatal and perinatal histories, found that 35% of CP cases were attributable to prematurity. (Freeman JM. Ed. Prenatal and Perinatal Factors associated with Brain Disorders. NIH Publication 85-1149, 1985). The prevention of prematurity would have a major impact in the reduction of CP cases.

MOTOR IMPAIRMENTS IN ANGELMAN SYNDROME

Of 33 children and adolescents (median age 6 years) investigated for learning disability, epilepsy, and motor dysfunction to detect suspected Angelman syndrome (AS), in a study at Goteborg University, Sweden, 23 fulfilled criteria for AS. Distal lower limb spasticity, ataxic like gait with hand flapping, and muscle weakness, milder than findings in most CP, were significantly more frequent in AS than in a comparison group. (Beckung E, Steffenburg S, Kyllerman M. Motor impairments, neurological signs, and developmental level in individuals with Angelman syndrome. *Dev Med Child Neurol* 2004;46:239-243).