IDIOPATHIC MUSCULOSKELETAL PAIN AND STRESS FACTORS

The role of psychosocial factors was evaluated in 23 children with idiopathic musculoskeletal pain (IMP) and 52 with juvenile chronic arthritis (JCA), compared on admission and at 9 year follow-up, in a study at The National Hospital, Oslo, Norway. Patients with IMP had a higher prevalence of psychiatric diagnoses, school stress, and more chronic family difficulties and life events than those with JCA. (Aasland A, Flato B, Vandvik IH. Psychosocial factors in children with idiopathic musculoskeletal pain: a prospective, longitudinal study. Acta Paediatr July 1997;86;740-746). (Respond: Dr A Aasland, Division of Child and Adolescent Psychiatry, The National Hospital, Pilestredet 32, 0027 Oslo, Norway).

COMMENT. Children presenting with persistent so-called "growing pains" should receive a psychological work-up as part of the pediatric exam. It is hoped that this emphasis on emotional factors will not discourage the search for an organic cause of this sometimes distressing symptom.

MOVEMENT DISORDERS

DYSMETRIC EYE MOVEMENTS IN TOURETTE SYNDROME

A 13-year-old boy with an 11 year history of Tourette syndrome and progressively worsening tics, both motor and vocal, was referred to the Department of Ophthalmology, Great Ormond Street Hospital, London, because of visual symptoms and reading problems. He felt his eyes were crossing intermittently, but there was no diplopia and no strabismus. Refraction showed a mild hypermetropic astigmatism. Eye movement studies using electrooculography and simultaneous video recording showed dysmetric reflexive and voluntary saccades and failure of antisaccades, characteristic of disease of frontal lobes and basal ganglia. Visual symptoms resolved after spectacles were prescribed for the astigmatism, but reading difficulties were not benefited. (Narita AS, Shawkat FS, Lask B, Taylor DSI, Harris CM. Eye movement abnormalities in a case of Tourette syndrome. Dev Med Child Neurol April 1997;39:270-273). (Respond: Dr Chris Harris, Great Ormond Street Hospital for Children, London WC1N 3JH, UK).

COMMENT. Patients with Tourette disease may have an inability to form antisaccades, an abnormality of eye movements reflecting disease of the frontal lobes and basal ganglia.

PIMOZIDE cf. HALOPERIDOL IN TOURETTE SYNDROME

Pimozide (3.4 mg/day) and haloperidol (3.5 mg/day) therapy for Tourette syndrome were compared in a double-blind, 24-week, placebo-controlled crossover study of 22 patients, aged 7-16 years, at the Institute of Psychiatry, Charleston, SC. A 70% tic reduction was obtained in 64% of patients during either drug treatment, compared to 23% of patients with placebo. The effect of pimozide was significantly superior to that of placebo on total TS Global Scale scores, whereas the effect of haloperidol failed to reach statistical significance. Extrapyramidal side effects were more frequent with haloperidol than pimozide. Treatment-limiting side effects, depression, anxiety, severe dyskinesias, occurred in 41% of the 22 patients during haloperidol treatment, a threefold higher frequency than with pimozide. (Sallee FR, Nesbitt I, Jackson C, Sine L, Sethuraman G. Relative efficiacy of haloperidol and pimozide in

children and adolescents with Tourette's disorder. Am J Psychiatry August 1997;154:1057-1062). (Reprints: Dr Floyd R Sallee, Institute of Psychiatry, 67 Presidents St, Room 246, Charleston, SC 29425).

COMMENT. Pimozide is superior to haloperidol in therapeutic efficacy in children and adolescents with Tourette syndrome, and the incidence of extrapyramidal side effects is significantly lower. Only severe cases with a Tourette Symptom Global Scale score greater than 20 were included in the above trial, and exclusion criteria included: serious medical illness, abnormal ECG, use of other concurrent medication for asthma or ADHD (eg. theophylline, stimulants).

MECHANISM AND SIGNIFICANCE OF MIRROR MOVEMENTS

Neurophysiological studies, including EMG and focal magnetic brain stimulation, were used to evaluate possible mechanisms for mirror movements in 14 male patients, aged 16-60 years, with X-linked Kallmann's syndrome compared to controls at the Department of Physiology, University College London, UK. During EMG recording from the first dorsal interosseous muscle (1DI) with voluntary abduction of an index finger, mirror EMG activity was recorded simultaneously from the contralateral 1DI. Focal magnetic stimulation of the hand area of the motor cortex revealed inter- and intra-subject differences in the ratio of ipsilaterally to contralaterally projecting corticospinal axons. Multi-unit EMGs during simultaneous voluntary activation of distal upper limb muscles showed a central peak in the cross-correlograms, indicating a common drive to left and right homologous motor neuron pools. A synchronous activation of intermingled ipsilateral and contralateral corticospinal neurons could explain this common drive. Long latency trans-cortical components of a cutaneomuscular reflex recorded from the 1DI following digital nerve stimulation could be recorded simultaneously from the 1DI of the non-stimulated side. Activity in a novel ipsilateral corticospinal tract is proposed as the mechanism for pathological mirror movements in X-linked Kallmann's syndrome. (Mayston MJ, Harrison LM, Quinton R et al. Mirror movements in X-linked Kallmann's syndrome. 1. A neurophysiological study. Brain July 1997;120:1199-1216). (Respond: Dr Linda M Harrison, Department of Physiology, University College London, Gower Street, London WC1E 6BT, UK).

COMMENT. The X-linked form of Kallmann's syndrome (KS) is characterized by hypogonadotrophic hypogonadism, anosmia, unilateral renal agenesis, and mirror movements. An adolescent male of eunuchoid build, referred to the neurologist because of attention, coordination, and cognitive deficits, should be considered for olfactory tests and an MRI of the brain, for aplasia of the olfactory system. (see Progress in Pediatric Neurology II, PNB Publ, 1994;p309). The abnormal mirror movements observed in 85% of adult patients with KS are a normal and frequent finding in children under 7 years of age. The persistence of mirror movements, often observed in older children with ADHD, can be a sign of "minimal brain dysfunction," and an inability to inhibit activity in the ipsilateral corticospinal tract during rapid alternating movement of one hand. A defect or delay in myelination of callosal fibers has been suggested as the underlying pathology for persistent mirror movements. They are often present with callosal agenesis. In KS patients the defect may also extend to other axonal fibers in the frontal motor and olfactory systems, and involving a novel abnormal ipsilateral corticospinal tract.

In a further study using PET and regional cerebral blood flow, at the