

the heavier twin. Similar effect sizes were found in MZ and DZ twins, and the associations did not diminish when genetic influences were controlled. Fetal growth restriction has a modest but significant environmental influence on the development of ADHD. (Hultman CM, Torrang A, Tuvblad C et al. Birth weight and attention-deficit/hyperactivity symptoms in childhood and early adolescence: a prospective Swedish twin study. **J Am Acad Child Adolesc Psychiatry** March 2007;46:370-377). (Respond: Dr Christina M Hultman, Department of Medical Epidemiology and Biostatistics, Karolinska Institute, Box 281, SE-171 77, Stockholm, Sweden).

COMMENT. Low birth weight and fetal growth restriction are risk factors for the development of ADHD in childhood, and the association is independent of genetic and other environmental influences such as maternal smoking and exposure to drugs during pregnancy.

Effect of long-term treatment with stimulant medication on growth of ADHD children.

The reports of retarded growth of ADHD children treated with stimulants have been questioned in two recent studies (Pliszka SR et al, 2006; Spencer TJ et al, 2006) showing minimal or no significant effects on growth. A letter to the editor (Poulton A. **J Am Acad Child Adolesc Psychiatry** March 2007;46:305-6) points out that studies on growth should include treatment naïve patients, because growth velocities progressively normalize with prolonged treatment. This criticism could be applied to the Pliszka study in which the majority of the cohort were previously treated, but not to that of Spencer in which absence of growth effects was not related to previous stimulant exposure. In an earlier uncontrolled study, an analysis of heights of 50 children failed to confirm a growth suppressant effect of methylphenidate, when conservative doses were employed and treatment was interrupted at weekends and on vacations (Millichap JG. Attention Deficit Hyperactivity and Learning Disorders. Chicago, PNB Publishers, 1998;175-6).

HEADACHE DISORDERS

OUTCOMES OF CHRONIC DAILY HEADACHE IN ADOLESCENTS

The outcomes and predictors of chronic daily headache (CDH) were determined in a 2-year longitudinal study of a sample of 122 adolescents (32 male/90 female; ages 12-14) with annual telephone follow-up by neurologists at Taipei Veterans General Hospital, Taiwan. Response rates were 92% in 2001 and 84% in 2002. Average monthly headache frequency was 11.0 +/- 9.7 days in 2001 and 7.7 +/- 6.5 days in 2002. Persistence rates of CDH were 40% in 2001 and 25% in 2002. Medication overuse was 20% at baseline and 6% at 2 years. Based on the International Classification of Headache Disorders-2nd ed 2004 (ICHD-2), the prevalence of migraine was not significantly changed during follow-up (67% at baseline and 60% at 2 years), whereas tension-type headache (CTTH) decreased from 86% to 46% in the same time interval (P<0.001). When using ICHD-2 appendix criteria (2006), chronic migraine prevalence increased 3 to 4 times when compared with the original ICDH-2 criteria. Chronic migraine became more common than CTTH in patients with persistent CDH in 2001 and 2002. Headaches adversely affected learning at school in 56% in 2001 and 57% in 2002; 7 (6%) dropped out of school during the 2-year follow-up. Poor outcome predictors included female gender, chronic migraine (by ICHD-2 appendix criteria), medication

follow-up. Poor outcome predictors included female gender, chronic migraine (by ICHD-2 appendix criteria), medication overuse, major depression, anxiety disorders, school phobia, and OCD. Independent predictors for CDH persistence were medication overuse ($P<0.05$) and major depression ($P<0.01$). In contrast, migraine, age at CDH onset, and CDH duration were not significant predictors. (Wang S-J, Fuh J=L, Lu S-R, Juang K-D. Outcomes and predictors of chronic daily headache in adolescents: A 2-year longitudinal study. **Neurology** Feb 20 2007;68:591-596). (Reprints: Dr S-J Wang, Neurological Institute, Taipei Veterans General Hospital, Taipei, 112, Taiwan).

COMMENT. Whereas the incidence of CDH in adolescents declines over a 2-year follow-up, the relative prevalence of migraine diagnosis increases when compared to chronic tension-type headache, especially when the ICHD-2 appendix criteria are employed. In a previous study of headache at the NIH among adolescent girls, the prevalence was 29.1% in grades 6 through 10. Heavy alcohol consumption, high caffeine intake, and cigarette smoking were strongly linked to somatic complaints associated with headache, including stomachache, back pain, and morning fatigue (Ghandour RM et al. **Arch Pediatr Adolesc Med** 2004;158:797-803).

PSYCHOLOGICAL PROFILE OF CHILDREN WITH HEADACHE AND RECURRENT ABDOMINAL PAIN

The psychological profile of 70 patients (age range 4-18 years; mean 11 years) with headache, 70 with recurrent abdominal pain (RAP), and 70 controls was compared using the Child Behaviour Checklist 4-18 (CBCL). The CBCL profile was similar for headache and RAP and showed a statistically significant tendency toward problems in the Internalizing scale (anxiety, mood and somatic complaints) and no Externalizing (behavioral) symptoms of controls. Patients with migraine compared to RAP showed a significant difference in the Attention Problems subscale but not in other subscales of the CBCL. The authors conclude that headache and RAP in children and adolescents have a similar etiology and require similar methods of treatment. (Galli F, D'Antuono G, Tarantino S et al. Headache and recurrent abdominal pain: a controlled study by the means of the Child Behaviour Checklist (CBCL). **Cephalalgia** March 2007;27:211-219 [abstract]).

COMMENT. The co-occurrence of headache and stomachache in young children constitutes a distinct syndrome with psychosocial implications requiring early intervention. (Borge AIH, Nordhagen R. **Acta Paediatr** 1995;84:795-802; **Ped Neur Briefs** Aug 1995). The co-occurrence group of patients in this longitudinal Norwegian study had emotional problems and low maternal emotional support, whereas school problems were not associated. In contrast, children with headache only were well-behaved, high achievers, and mothers were employed outside the home. Those with stomachache alone had an earlier onset of symptoms, they were well adapted emotionally, and mothers were less well educated. A causal link between recurrent abdominal pain and migraine is reported in 29 of 31 children with migraine found to have an underlying inflammatory lesion of the gastrointestinal tract (Mavromichalis I et al. **Eur J Pediatr** 1995;154:406-410). Symptoms of nausea, vomiting, and abdominal pain were associated with migraine headache in 93%, 42%, and 55% of patients, respectively.