Behavioral Therapy Shown to Delay Initiation of ADHD Medication

BY SHERRY BOSCHERT
San Francisco Bureau

PHOENIX — Using behavioral interventions for attention-deficit/hyperactivity disorder delayed the start of medication and reduced the dose needed in a randomized, controlled study of 127 schoolchildren.

The study is the first to use behavioral modification before initiating medication for attention-deficit/hyperactivity disorder (ADHD), Erika K. Coles, Ph.D., said at a meeting of the New Clinical Drug Evaluation Unit sponsored by the National Institute of Mental Health.

The researchers also took the unusual approach of basing the need for medication on measures of impairment, not symptoms, and separated treatment of the disorder at school from treatment at home.

The study enrolled children aged 5-12 years who had participated in a tightly controlled 9-week summer treatment program and research study of three intensities of behavior modification and four doses of medication for ADHD. All of the students started the school year unmedicated.

Dr. Coles and her associates randomized them to follow-up with or without behavioral consultation. The behavioral consultations started with three meetings with teachers and parents, often before school started, to set up behavioral intervention plans and daily report cards to track success and identify problems.

Children randomized to the behavioral modification group went longer into the school year before starting methylphenidate either in school or at home and were significantly less likely to use the drug at home (24%), compared with those who did not get behavioral consultations (of whom 53% took methylphenidate at home).

By the end of the school year, the proportion of children who had started the drug did not differ significantly between groups (70% in the behavioral modification group and 80% in the control group), but the average weekly dose of methylphenidate was significantly lower in the behavioral intervention group (157 mg/day), compared with the control group (234 mg/day), said Dr. Coles, an assistant professor of psychology at the University of Maine, Orono.

In both groups, teachers and parents completed a weekly Impairment Rating Scale for seven domains of functioning such as academics, getting along with peers or family, interrupting the classroom, and more.

In the control group, a spike in teacher or parent ratings of impairment triggered a medication assessment for initiation of short-acting methylphenidate. In the behavioral modification group, a ratings spike triggered an emergency consultation to try to adjust the behavioral plan. If parents or teachers remained concerned about a child's impairment for 2 more consecutive weeks, a medication assessment began.

The only factor that predicted that a child would start medication was a history of methylphenidate use prior to the summer program, a finding that surprised the investigators. "We looked at socioeconomic status, comorbidity, and other factors—nothing else predicted it," Dr. Coles said.

Before the summer program, 77% of the cohort had taken medication at school for ADHD. Of these, 17% also had taken medication at home.

Among children who went on medication at school during the study, parents opted for weekend medication as well for 18% in the behavioral consult group and 56% in the control group, a significant difference.

The idea that the need for medication can be determined separately for school and home could counter a trend toward use of longer-acting doses of methylphenidate.

"This study is starting to show that doesn't necessarily have to be true. You can reduce the amount of medication if you just medicate [when] children are impaired," she said, adding that many studies of behavioral interventions for ADHD focus on reducing symptoms and may miss the benefits of reducing impairment.

Dr. Coles has no association with makers of ADHD treatments. ■

Suicide Alert Skewed Antidepressant Scripts

BY SHERRY BOSCHERT
San Francisco Bureau

PHOENIX — The proportion of clinic visits to psychiatrists involving antidepressants for youths fell compared with the proportion of visits to primary care physicians after the black box warning linking antidepressant use to suicidality in youths.

However, visits by adults for antidepressants did not change by specialty during the same time period—suggesting that the Food and Drug Administration's suicidality warning of 2004 caused the change in pediatric prescriptions.

Results of an analysis of data from the National Ambulatory Medical Care Survey seem to show that the FDA warning "had a greater impact on the prescribing of antidepressants to youth by psychiatrists than by primary care physicians," Julie M. Zito, Ph.D., said at a poster presentation at a meeting of the New Clinical Drug Evaluation Unit sponsored by the National Institute of Mental Health.

Dr. Zito and her associates compared the national ambulatory trend data from the years 2000-2001 and 2002-2003 (before the FDA warning) with data from 2004-2005 (after the warning).

The proportion of visits by youth (aged under 18 years) to psychiatrists for antidepressants changed little between 2000 (63%) and 2003 (62%), but fell after the FDA warning to 54% in 2004 and 41% in 2005, reported Dr. Zito, professor of pharmacoepidemiology and psychotherapeutics at the University of Maryland, Baltimore.

In 2003, 31% of vists by youths to PCPs were for for antidepressants, versus 42% in 2004 and 45% in 2005.

DR. ZITO

The proportion of visits by youths to primary care physicians (pediatricians, internists, and family physicians) for antidepressants was 31% in both 2000 and 2003, but increased to 42% in 2004 and to 45% in 2005. Visits by youth to other specialties for antidepressants comprised 6% in 2000, 8% in 2003, 4% in 2004, and 14% in 2005.

The proportion of visits by adults, in comparison, changed relatively little by specialty, with visits to psychiatrists for antidepressants comprising 21% in 2003 and 20% in 2005. Primary care physicians handled 54% of adult visits for antidepressants in 2003 and 53% in 2005. Other specialties covered 22% of adult visits for antidepressants in 2003 and 27% in 2005.

In each year, the share of antidepressant visits by youth to psychiatrists was larger than the share of antidepressant visits by adults to psychiatrists. Adults were more likely to be treated by primary care physicians.

Among the visits for antidepressant prescriptions for youths during 2004-2005, 67% were for selective serotonin reuptake inhibitors, 36% were for tricyclic antidepressants, and 26% were for other medications.

Dr. Zito has no association with companies that manufacture antidepressants. ■

ADHD Symptoms Tied to Enterovirus Infection in Children

BY ELIZABETH MECHCATIE
Senior Writer

Children who had had an enterovirus 71 infection involving the central nervous system were significantly more likely to have symptoms of attention-deficit/hyperactivity disorder than were matched controls in a prospective study that evaluated children at 3-7 years after the infection.

Although herpes simplex encephalitis and other CNS infections can affect neurodevelopment and cognitive function, the authors said this was the first study to follow up long-term behavioral outcomes or ADHD-related symptoms in children after an enterovirus 71 (EV71) CNS infection.

The findings have "clearly demonstrated the association between the EV71 CNS infection and increased symptoms of inattention, hyperactivity, oppositional defiance, internalizing problems, and increased likelihood of ADHD diagnosis," said Dr. Susan Shur-Fen Gau of National Taiwan University, Taipei, and her associates.

The results also support their hypothesis that children who have had an EV71 CNS infection "are more likely to have ADHD-related symptoms, regardless of IQ" (Pediatrics 2008;122:e452-8).

The study used standardized mother- and teacher-rated scales to evaluate ADHD symptoms and other emotional and behavioral problems in 51 boys and 35 girls aged 4-16 years who had had an EV71 CNS infection at the mean age of 2.5 years, and in 172 controls who were matched for gender, age, school performance, and parental education levels.

In the children with the infections, CNS involvement had been mild in 42 cases (aseptic meningitis) and severe in 35 cases (encephalitis, poliomyelitislike syndrome, or encephalomyelitis); the other 9 children had cardiopulmonary failure after CNS involvement. The children had been diagnosed with the infections from 1998 to 2003 at Chang Gung Children's Hospital, Taoyuan, Taiwan, and National Taiwan University Hospital. There was an epidemic of EV71 infection in Taiwan in 1998.

Scores on teacher- and mother-rated scales of inattention, hyperactivity-impulsivity, oppositional symptoms, and ADHD index were significantly higher in those with the EV71 infection, compared with controls. In the former group, 20% had elevated ADHD-related symptoms, compared with 3% of controls, a significant difference.

The reserchers said that maternal reports provided some evidence that children with the EV71 CNS infections had more internalizing problems, but that that needs to be studied further. There was no correlation between the age at which the child had the infection, any laboratory data, or the severity of CNS involvement with the severity of ADHD-related symptoms, a finding the researchers said was surprising. They speculated that the infection may involve the prefrontal-striatum-subcortical area of the brain, or another area that is related to the core symptoms of ADHD.

They cited the inability to assess ADHD symptoms in the children before the CNS infection among the study's limitations and said more studies were needed to confirm whether the increase in ADHD symptoms was specific to EV71 or also occurred with other microorganisms. Nevertheless, they concluded that an EV71 CNS infection "may affect long-term regulation of attention and emotion and cause hyperactivity-impulsivity in children" and recommended children with these infections be assessed early to identify and treat ADHD symptoms and emotional and behavioral problems.

The study was supported by a grant from the National Science Council of Taiwan's National Research Program for Genomic Medicine. ■