New Findings on Childhood Mania

This section of Focus on Childhood and Adolescent Mental Health includes 3 articles on childhood mania and 1 article on pharmacotherapy for the treatment of attention-deficit/hyperactivity disorder (ADHD).

Elevated symptoms of mania are characteristic of bipolar disorder. However, it is not known how many children who have elevated symptoms of mania will develop bipolar disorder. The Longitudinal Assessment of Manic Symptoms (LAMS), a National Institute of Mental Health–funded study, was designed to determine the rate of elevated symptoms of mania in children receiving outpatient mental health care, to describe the longitudinal course of elevated symptoms of mania from childhood to adolescence, and to identify risk factors that predict poor functional outcomes in adolescence for children with elevated symptoms of mania. Horwitz and colleagues presented the methodology and initial screening results from this study. The study population was children between the ages of 6 and 12 years old at 10 university child outpatient mental health clinics. Parents completed the 10-item Parent General Behavior Inventory 10-Item Mania Scale (PGBI-10M) on these 2,622 children. The PGBI-10M is a screening instrument for mania, and scores ≥ 12 were used as the cut-off for elevated symptoms of mania. It was found that nearly half (43%) of these children met criteria for elevated symptoms of mania. The investigators concluded that manic symptoms may be more common in children in outpatient settings than previously recognized. Future data provided by the investigators will address whether or not these children are at higher risk for developing bipolar disorder than those children who did not demonstrate elevated symptoms of mania.

Jerrell and colleagues examined the temporal association between medical and psychiatric comorbidities and pediatric-onset bipolar disorder. Data were obtained from the South Carolina Medicaid program (1996–2005), which included 1,841 children and adolescents diagnosed with bipolar disorder and a random sample of 4,500 children without psychiatric disorders. Ten medical conditions were found to be significantly more common in the bipolar disorder group than in the control group, with odds ratios ranging from 4.8 for substance abuse to 1.8 for migraine headache. Results indicated that 28.4% of the bipolar disorder cohort had 2 or more comorbid conditions. Preexisting obesity, hypertension, migraine headaches, endocrine disorders, and substance abuse increased the odds of having adolescent-onset bipolar disorder. Preexisting endocrine disorders and substance abuse increased the likelihood of recurrent depressive episodes. Although youth with bipolar disorder and comorbid medical and psychiatric conditions had a higher rate of outpatient service use, these comorbidities did not affect the overall course of bipolar disorder. The investigators recommended that clinicians carefully assess for medical comorbidities in children and adolescents with bipolar disorder.

Pavuluri and colleagues examined the effect of pharmacotherapy on the frontostriatal circuitry involved in motor response inhibition in adolescents with bipolar disorder. Thirteen adolescents with bipolar disorder in manic, mixed, or hypomanic episodes and 13 healthy adolescent controls participated in the study. The adolescents with bipolar disorder received treatment for 4 weeks with a second-generation antipsychotic and then were treated with lamotrigine monotherapy. A functional magnetic resonance imaging Response Inhibition Task was assessed at baseline and endpoint. There was increased cortical activation in the prefrontal and temporal regions during the performance of the Response Inhibition Task after lamotrigine monotherapy in the adolescents with bipolar disorder compared to the control group. The investigators concluded that treatment with second-generation antipsychotics followed by lamotrigine monotherapy enhanced prefrontal and temporal lobe activity during Response Inhibition Task demonstrating the

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reversal of disorder-relevant neural circuitry in patients with adolescent bipolar disorder.

Atomoxetine has demonstrated efficacy for the treatment of ADHD in children, and Waxmonsky and colleagues assessed whether atomoxetine alone or in combination with behavior therapy improved school functioning in children with ADHD. Fifty-six children aged 6–12 years with ADHD participated in an 8-week open-label trial. These children were randomized to receive atomoxetine alone or atomoxetine plus behavior therapy. The behavior therapy program included a parent program, a social skills program, and a school-based daily report card. Direct observation of children's classroom behaviors was the primary outcome measure. At study endpoint, the mean atomoxetine dose was 1.4 mg/kg/d. The group that received atomoxetine showed improved classroom functioning and a reduction in ADHD symptoms at home and at school. The addition of behavior therapy enhanced improvement at home but not at school. The authors concluded that a home-based behavior therapy program would be beneficial for children who take atomoxetine and continue to have ADHD symptoms at home.

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