The Psychopharmacologic Armamentarium in the Pediatric Population

By Karen Dineen Wagner, MD, PhD

There has been a burgeoning interest in the psychopharmacology of mood, anxiety, and disruptive behavior disorders in children and adolescents. Clinicians have become increasingly aware that clinical practice should be based on controlled empirical research in children, rather than extrapolating efficacy and safety data from adults. The focus of this month’s issue of CNS Spectrums is to provide clinically relevant research findings related to the psychopharmacology of mood, anxiety, and disruptive behavior disorders in youth.

An overview of medication treatments for major depression in children and adolescents is presented in the article by Neal D. Ryan, MD. Tricyclic antidepressants (TCAs), although effective for adults, have not been shown to be superior to placebo in controlled studies with depressed youths. There have been a number of studies of selective serotonin reuptake inhibitors (SSRIs) which have demonstrated the efficacy of SSRIs compared with placebo for the treatment of depression in children and adolescents. No multicenter controlled trials of other newer antidepressants have been reported in children and adolescents. Therefore, SSRIs are first-line medication treatment for depression in youth. Dr. Ryan notes that no data is currently available to determine second- or third-line treatment for this disorder. Ongoing National Institute of Mental Health-funded multicenter studies are aimed at determining the sequence of treatment for depressed adolescents who fail to respond to an SSRI and examine the efficacy of combined medication and psychotherapy treatment. Optimal duration of medication treatment for a child suffering from depression remains to be established, although most children are treated clinically for at least 6 months following resolution of an episode of depression.

Robert A. Kowatch, MD, and Melissa P. DelBello, MD, discuss the role of mood stabilizers and atypical antipsychotics for the treatment of children and adolescents with bipolar disorder. Available studies supporting the efficacy of these agents, clinically useful information regarding baseline laboratories, medication dosage, and side effects also included. Traditional mood stabilizers have been the most studied agents for treatment of bipolar disorder in children and adolescents. Although there have been other recent investigations of atypical antipsychotics for the treatment of childhood bipolar disorder, there are no controlled studies of these agents as monotherapy in this age group. A recent controlled study demonstrated clinical superiority of adjunctive antipsychotic treatment to a mood stabilizer compared with mood stabilizers alone in treating children and adolescents with bipolar disorder. Overall, there is a striking paucity of data in large samples of children and adolescents with bipolar disorder that would guide treatment selection and duration. Current practice with children is based on treatments that have shown to be efficacious in adults with bipolar disorder.

Although stimulants are the mainstay of treatment for attention-deficit/hyperactivity disorder (ADHD), there are some youths who will either fail to respond to stimulants or have intolerable side effects. Steven R. Pliszka, MD, provides a clinical review of studies that support nonstimulant agents as second-line treatments for ADHD. The selective norepinephrine reuptake inhibitor atomoxetine, which was recently approved by the Food and Drug Administration for the treatment of ADHD, α-agonists, including clonidine and guanfacine, bupropion, modafinil, and TCAs are discussed. ADHD is commonly comorbid with mood, anxiety, and movement disorders.

Daniel A. Geller, MBBS, FRACP, and colleagues examine the effect of comorbid ADHD on pediatric obsessive-compulsive disorder (OCD). It was found that comorbid ADHD did not significantly impact on the phenotypic expression or clinical correlates of OCD in youth. However, there was a negative impact on educational functioning compared with youth with OCD only. It is important to address comorbidity in children with OCD and its accompanying treatment implications. Comorbid ADHD, if untreated, may decrease clinical response to medication treatment for OCD.

Aggression in youth, a serious societal problem, is a very common reason for referral to child psychiatrists. Hans Steiner, MD, and colleagues, focus on maladaptive aggression in youths, which may occur in a variety of psychiatric disorders, above and beyond disruptive behavior disorders. The authors provide a clinically important algorithm for the diagnosis of maladaptive aggression and for determining the type of pharmacologic treatment. Clinical trials that support the efficacy of various psychopharmacologic agents in the treatment of aggression in youth are reviewed. Mood stabilizers, antipsychotics, and stimulants have been the most clinically used agents for treating aggression in youth. The authors make clinical recommendations for treating acute, subacute, and chronic maladaptive aggression. Their model of treatment is to facilitate a child’s appropriate development while restoring aggression to its adaptive level.

After reading the articles in this issue, it will be apparent that there are significant gaps in research related to the treatment of childhood mood, anxiety, and behavioral disorders. The authors included in this month’s issue of CNS Spectrums have melded research findings and clinical expertise to provide the clinician with rational treatment choices for children suffering from these disorders.