

CONTENTS

Preface xiii

**Overview of Epidemiology, Clinical Features, Genetics,
Neurobiology, and Prognosis of Adolescent Attention-Deficit/
Hyperactivity Disorder** 209

Howard Schubiner, Sreenivas Katragadda

ADHD is a common neurobehavioral disorder that is highly heritable. Recent research has identified several genes that are associated with ADHD. In addition, there are several biological factors that are environmentally derived that appear to play a role in the etiology of ADHD. It is quite clear that ADHD begins in childhood, but persists into adolescence and adulthood for the majority of individuals. Since the criteria for the diagnosis of ADHD are most applicable to children, making the diagnosis in adolescents requires an understanding of how these symptoms are expressed in this age group. The prognosis of ADHD is variable and depends on several psychosocial factors, with approximately 20% of adolescents who perform well in social, emotional, and educational domains, another 20% who perform poorly in these domains, and the majority who perform somewhere in the middle.

**Common Comorbidities Seen in Adolescents With
Attention-Deficit/Hyperactivity Disorder** 216

Joel Young

This article provides an overview of key research on significant comorbidities that occur among adolescents with attention-deficit/hyperactivity disorder, including disruptive behaviors. Such comorbidities include oppositional defiant disorder and conduct disorder, as well as depressive disorders, anxiety disorders, personality disorders, suicidality, eating disorders, sleep disorders, learning disabilities, Internet "addiction," tic disorders, new-onset pediatric epilepsy, and celiac disease.

Learning Disorders in Adolescence: The Role of the Primary Care Physician

229

Desmond P. Kelly

Adolescents with learning disorders are at significantly increased risk for negative outcomes in regard to their emotional, behavioral, and academic functioning. Primary care physicians should be alert to the effect of neurodevelopmental dysfunctions that might be taking their toll as academic demands increase or as new manifestations of previously identified problems emerge. The physician should review emotional, family, and environmental factors and rule out underlying or associated medical causes and can participate in the assessment process. He or she can advise and assist parents with obtaining necessary evaluations through the school or by referral to independent clinicians and should assist with the interpretation of the findings, ensuring appropriate understanding of the challenges by the adolescent and parents and coordinating care if other medical specialists are involved. The physician can direct students and their families to appropriate resources in the community and advocate for appropriate educational services at school. Brief office-based counseling can help in dealing with the stresses associated with learning challenges and ensuring that students are afforded regular opportunities to pursue their affinities and build on their strengths.

Substance Use Disorders in Adolescents With Attention-Deficit/Hyperactivity Disorder

242

Oscar Bukstein

Attention-deficit/hyperactivity disorder and substance use disorders are commonly observed together, particularly in clinical populations of adolescents. The co-occurrence of these problems is common and presents challenges for the clinician in assessment and management. This article will review the extent of the problem, the relationship in terms of risk and prognosis, and management issues, including the use of stimulant and nonstimulant medications and the risk of abuse, misuse, and diversion.

Medications for Adolescents With Attention-Deficit/Hyperactivity Disorder

254

Earl J. Soileau, Jr

ADHD is recognized as a neurologic condition rather than just bad behavior. Medical treatment has been recognized as very

helpful. Risks of untreated ADHD are substantial. Every life area is negatively affected including school performance, drug abuse and dependence risk, driving performance, sexually transmitted diseases, unwanted pregnancy and family cohesiveness to mention some of them. Frequent misinformation in the popular media causes apprehension about medical treatment. Even after almost 60 years stimulants remain the mainstay in treatment of ADHD. Newer release systems have produced longer acting and smoother acting medication. Side effects have always been brief and mild however, newer forms cause fewer side effects than older preparations and cover symptoms for more of the waking hours of each day. Although studies in adolescents are less numerous than in children the literature standard supports the safety and efficacy of stimulants in adolescents. In addition there are non-stimulant medications that have shown efficacy in adolescents. There are now a greater number of medications and more effective medications than ever before. Clinical pearls in medication management are shared in practical terms so that these newer treatments can be used to help those affected with ADHD more effectively than ever before.

Family Intervention for Home-Based Problems of Adolescents With Attention-Deficit/Hyperactivity Disorder

268

Arthur Robin

Adolescents with ADHD frequently argue with their parents about a variety of issues, especially when they also have Oppositional Defiant Disorder or Conduct Disorder. Family interventions have proven effective for ameliorating such conflicts in two independent investigations. After a comprehensive assessment including family interviews and self-report inventories, the therapist first teaches the parents contingency management techniques and then teaches the parents and adolescent problem solving communication skills. Contingency management techniques include one-on-one time, effective commands, positive incentive systems, and punishment systems. Problem solving involves discussing a specific dispute by defining the problem, generating a list of solutions, evaluating the solutions, and reaching a compromise. Communication training involves identifying specific negative communication skills and replacing them with positive communication skills. This article reviews research and provides practitioners with specific guidelines for implementing these family interventions.

**Social Competence and Friendship Formation in Adolescents
With Attention-Deficit/Hyperactivity Disorder**

278

William Lord Coleman

Friendship formation (making friends, keeping friends, and having successful interactions with peers and adults) constitutes a critical developmental-social milestone for adolescents. This process can be especially challenging for adolescents with attention-deficit/hyperactivity disorder, whose attentional problems may negatively affect their social skills (verbal and nonverbal language) and who fail to appreciate the complexity and nuances of adolescent communication. They often do not respond to feedback cues. They may be perceived as “immature,” lacking empathy, and loners and losers, they may endure a “reputational bias,” and they often experience coexisting challenges (eg, language problems, learning disabilities, or obesity). Successful and gratifying interactions, or the lack thereof, deeply and broadly affect adolescents: their self-esteem, self-image, confidence, school-learning, lifestyle, behavior, sexual activity, intimacy formation, mental-emotional well-being, and physical health. Successful achievement of this ever-evolving milestone has lifelong implications. This article describes various social-interactive skills, other components of social competence, and the dysfunctions that may cause social failure and suffering and describes how to evaluate and help manage problems in adolescents with attention-deficit/hyperactivity disorder.

**School-Based Interventions for Adolescents With
Attention-Deficit/Hyperactivity Disorder**

300

George J. DuPaul, Steven W. Evans

Adolescents with attention-deficit/hyperactivity disorder (ADHD) frequently encounter significant difficulties with academic, behavioral, and social functioning in secondary school settings. Although psychotropic medication (eg, stimulants) may reduce ADHD symptoms, this treatment does not directly address functional impairments. Four broad psychosocial treatment classes including behavioral, academic, self-management, and multimodal intervention programs have been used to address the school difficulties adolescents with ADHD. Relevant research supporting each of these treatment approaches is described along with the clinical implications of these findings. Limitations of the extant literature are identified in order to delineate critical directions for future treatment, development and research.

**Attention-Deficit/Hyperactivity Disorder and Complementary/
Alternative Medicine**

313

Anju Sawni

The use of complementary and alternative medicine (CAM) for treatment of attention-deficit/hyperactivity disorder (ADHD) has increased both by parents and health care providers. Despite scientific evidence supporting the effectiveness of stimulants in the treatment of ADHD, the use of stimulants has received negative publicity and, for many parents, is worrisome. Concerns regarding adverse effects and the prospect of long-term use of pharmacologic treatments make many parents uncomfortable thus they seek “alternative treatments.” With the information explosion produced by the Internet, marketing for alternative therapies such as herbal remedies, elimination diets, and food supplements for ADHD has increased. Many people use CAM because they are attracted to the CAM philosophies and health beliefs, dissatisfied with the process or results of conventional treatments, or concerned about adverse effects of stimulants. Although some scientific evidence exists regarding some CAM therapies, for most there are key questions regarding safety and efficacy of these treatments in children. The aim of this article is to provide a general overview and focus on the evidence-based studies of CAM modalities that are commonly used for ADHD.

**Educational Rights of Children and Adolescents With Attention-
Deficit/Hyperactivity Disorder**

327

Matthew D. Cohen

This article describes the evolution of the legal rights of children with Attention Deficit Hyperactivity Disorder (ADHD) under the federal special education law, the Individuals with Disabilities Education Act, and under the federal disability rights law, Section 504 of the Rehabilitation Act of 1973. This article highlights key requirements under each law and compares how they apply to children with ADHD. The article also identifies key steps that physicians can take to assist children with ADHD to obtain appropriate educational and related services, accommodations and legal protections under these laws.

Attention-Deficit/Hyperactivity Disorder: A Personal Perspective

339

Michael L. Ginsberg

Children with ADHD can achieve academic and personal success in adulthood. In this article the author shares personal

perspectives on his own struggles with ADHD as a child and shares insights, tips, and anecdotes from his own life. These insights, when viewed in light of the scientific literature regarding ADHD, offer new directions for research into the management of the disorder in children and adolescents.

Index

352