The American Psychiatric Publishing Textbook of Psychiatry

FIFTH EDITION

Edited by

Robert E. Hales, M.D., M.B.A.
Stuart C. Yudofsky, M.D.
Glen O. Gabbard, M.D.

With Foreword by
Alan F. Schatzberg, M.D.

American Psychiatric Publishing, Inc.

Washington, DC
London, England

36

TREATMENT OF CHILDREN AND ADOLESCENTS

Glen C. Crawford, M.D.
Stephen J. Cozza, M.D.
Mina K. Dulcan, M.D.

This chapter provides an overview of and an orientation to the psychiatric treatment of children and adolescents. Treatment modalities as they apply to adults are covered in the other chapters in Part III of this textbook. In this chapter we focus on aspects of treatment that are different for children and adolescents than for adults. Childhood psychopathology and the treatment methods used for each disorder are discussed elsewhere in this volume (see Chapter 21, "Disorders Usually First Diagnosed in Infancy, Childhood, or Adolescence," by Ursano et al.). Throughout this chapter, the terms *child* and *children* refer to children of all ages, to include adolescents, unless otherwise stated.

Techniques used in the treatment of child psychiatric conditions have developed from two different sources: the traditions of understanding and treating children that were based on developmental uniqueness, and treatments that were originally designed for adults and were then applied to children and adolescents. Increasingly, more rigorous evaluation and diagnostic procedures have allowed greater specificity in the application of treatments to our younger patients. In addition, expanding research on the efficacy of specific therapeutic approaches continues to enlarge our armamentarium of empirically tested interventions.

The goals of all treatments are to reduce symptoms, to improve emotional and behavioral functioning, to remedy skill deficits, and to remove obstacles to normal development. In contrast to the treatment of adults, a child is usually brought by someone else, and in each case there are at least two clients, the parent and the child, whose needs and desires may conflict. Compared with adults, children are more dependent on others for meeting their basic needs, they have fewer choices of residence or activities, and they are required to attend school.

Evaluation

The psychiatric treatment of children should be preceded by a comprehensive clinical evaluation, the purpose of which is similar to the assessment of adults: to determine the presence of one or more psychiatric disorders and to recommend a well-formulated treatment plan that addresses the disorder. Special considerations for children make evaluation different from that for adult patients. Practitioners must have a clear under-

able to acute dystonic reactions than are adult patients, so the physician may be more inclined to use prophylactic antiparkinsonian medication. In children, however, reduction of antipsychotic dose is preferable to the use of antiparkinsonian agents (Campbell et al. 1985).

For treatment or prevention of parkinsonian symptoms, adolescents may be given the anticholinergic drug benztropine mesylate, 1–2 mg/day, in divided doses. Chronic parkinsonian symptoms are often drastically underrecognized by clinicians (Richardson et al. 1991). The neuromuscular consequences may impair the performance of age-appropriate activities, and the subjective effects may lead to noncompliance with medication. Akathisia may be especially difficult to identify in young patients or those with limited verbal abilities.

Tardive and withdrawal dyskinesias. Tardive or withdrawal dyskinesias, some transient but others irreversible, mandate caution regarding the casual use of these drugs. Tardive dyskinesia has been documented in children and adolescents after as brief a period of treatment as 5 months with a first-generation agent (Herskowitz 1987) and may appear even during periods of constant medication dose. Cases of tardive dyskinesia have also been reported in youths treated with second-generation antipsychotics (Kumra et al. 1998), indicating that patients treated with these newer medications may not be immune to this serious adverse reaction. In children with autism or Tourette's disorder, it may be especially difficult to distinguish medication-induced movements from those characteristic of the disorder. Before patients begin taking an antipsychotic medication, they should be examined carefully for abnormal movements by using a scale such as the Abnormal Involuntary Movement Scale (AIMS 1988) and should be periodically reexamined. Parents and patients (if they are able) should receive regular explanations of the risk of movement disorders.

Cardiovascular side effects. Antipsychotic medications have been associated with prolongation of the QTc interval, torsades de pointes, and sudden death (Glassman and Bigger 2001). Certain antipsychotics may be at greater risk for causing these problems. Thioridazine possesses a "black box" warning due to its significantly greater risk for causing QTc prolongation and sudden death. Haloperidol has also been associated with torsades de pointes.

Ziprasidone has been shown to have a clear effect on cardiac repolarization, resulting in QTc prolongation that is greater than with most antipsychotic agents, but less than with thioridazine. While no evidence of serious cardiac events occurred during the premarketing testing of ziprasidone, its association with sudden death remains unclear at this time (Glassman and Bigger 2001). Blair et al. (2005) conducted a prospective open-label trial of ziprasidone use in 20 children and adolescents at relatively low dosages (≤40 mg/day). The mean QTc prolongation was 28 ms, which, the authors noted, was greater than the initially observed increases in QTc that caused the FDA to require a highlighted caution about this effect in ziprasidone's product labeling. Eight of the 20 children in the study experienced a QTc of ≥440 ms, and three experienced a QTc of ≥450 ms. Incidentally, Blair et al. also remarked on the poor correlation between manual and automated computation of the QTc interval and advised clinicians to be wary of taking a machine-calculated QTc at face value. Based on these findings, the prudent use of ECG monitoring at baseline and during dosage titration in medications that are of higher risk seems indicated.

The use of clozapine has been associated with the development of other cardiotoxicities, such as cardiomyopathy, myocarditis, and pericarditis, which have also occurred in the pediatric age group (Wehmeier et al. 2004). Clinicians entertaining the use of clozapine in pediatric patients should be mindful of the potential development of these cardiac side effects and should monitor patients accordingly.

Metabolic side effects. Weight gain may be problematic with the use of antipsychotics, especially second-generation medications (Martin et al. 2004). The weight gain associated with risperidone, while significant, appears less than that associated with olanzapine (Vieweg et al. 2005). Distinguishing growth-related weight gain from weight gain associated with antipsychotic use can be problematic in children and adolescents, and no specific criteria have been widely adopted (Correll 2005). Measurements of height and weight and calculations of body mass index (BMI) are recommended before initiation of treatment with antipsychotic agents and at regular intervals thereafter.

Reports of children and adolescents developing hyperglycemia or diabetes mellitus after treatment with second-generation agents have been published, although polypharmacy or family histories of diabetes were present in many instances. Until further studies elucidate a clear relationship (or not) between second-generation agents and the development of hyperglycemia or diabetes mellitus in children, prudence would suggest especially cautious use of these agents in children who are already overweight or who have a strong