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Treatment of Children and Adolescents

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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. This chapter focuses on what is different or unique in the treatment of children and adolescents. Popper and colleagues, in Chapter 20 ("Disorders Usually First Diagnosed in Infancy, Childhood, or Adolescence"), address childhood psychopathology and outline the treatment methods used for each disorder. Throughout this chapter, the terms *child* and *children* refer to children of all ages, including 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 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. In comparison 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

Psychiatric treatment should be preceded by a comprehensive clinical evaluation. In an emergency situation, treatment may have to be initiated following a brief expedient assessment of the child's medical and psychological status. A more thorough evaluation should be accomplished as soon as possible. True emergencies are, fortunately, uncommon, and in most cases the evaluation will be completed before treatment is begun. Of course, the process of assessment does not end with the initiation of treatment but continues throughout.

The American Academy of Child and Adolescent Psychiatry (AACAP) has produced a number of practice parameters as guides to evaluation and treatment of specific disorders. Completed practice parameters are listed in Table 33-1.

The purpose of the comprehensive psychiatric assessment of children 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

Schizophrenia. Older adolescents with schizophrenia may require medication dosages in the adult range. Young adolescents fall in between, and doses must be empirically determined because few data exist. It may require several weeks for full therapeutic effect to be achieved. Although data are sparse, they are suggestive of the benefit and safety of atypical antipsychotics as first-line agents in this population. Because of its potentially lethal side effects, clozapine should be used only in cases refractory to treatment with typical or other atypical agents and should be started at very low dosages—12.5 mg/day or 25 mg/day—and titrated slowly upward (to minimize side effects) to an expected dosage range of 25–500 mg/day. Risperidone should also be initiated at low doses (0.5–1.0 mg) and titrated slowly, to prevent development of EPS, up to an expected dosage range of 2.0–4.0 mg/day. Olanzapine may be started at 5.0 mg/day and titrated upward to an expected range of 10.0–20.0 mg/day.

Pervasive developmental disorders. It is important to give a trial of sufficient length to determine if the drug is effective, barring serious side effects requiring immediate discontinuation. Typical daily doses are 0.5–4.0 mg of haloperidol. If the drug appears to be helpful, it should be continued for at least several months. At 3- to 6-month intervals, the drug should be discontinued to observe for withdrawal dyskinesias and to determine if the drug continues to be necessary. Some children may have physical withdrawal symptoms or a rebound phenomenon consisting of worsening of behavior for up to 8 weeks after the medication is stopped (M. Campbell et al. 1985). Developmentally disturbed children treated with risperidone may benefit from dosages as low as 0.5–1.0 mg/day (Fisman and Steele 1996; Masi et al. 2001) but may require doses up to 6.0 mg/day (Perry et al. 1997). Therapeutic daily dosages for olanzapine may range from 5.0 to 20.0 mg.

Tourette's disorder. Careful monitoring of patients with Tourette's disorder for several months before starting medication is possible, since this is a chronic disorder and not usually an emergency. This monitoring permits the clinician to establish a baseline of symptoms and to assess the need for psychological and educational interventions. An initial dose of haloperidol is 0.5 mg/day. It may be slowly increased up to 1–3 mg/day, divided in twice-daily doses (Cohen et al. 1992). Pimozide, which may be given in a single daily dose, is started at 1 mg/day and may be gradually increased to a maximum of 6–10 mg/day (0.2 mg/kg). The usual dose range is 2–6 mg/day (Cohen et al. 1992). Risperidone doses in the range of 1.0–2.5 mg/day appear to be useful (Lombroso et al.

1995). Sallee et al. (2000) initiated ziprasidone at 5 mg/day, titrating as high as 40 mg/day to achieve clinical effect in children with Tourette's disorder.

Risks and Side Effects

Acute EPS, including dystonic reactions, parkinsonian tremor, rigidity and drooling, and akathisia, occur as in adults. Laryngeal dystonia is potentially fatal. Acute dystonia may be treated with oral or intramuscular diphenhydramine, 25 mg or 50 mg, or benztropine mesylate, 0.5–2.0 mg. Adolescent boys seem to be more vulnerable 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 (M. 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 or withdrawal dyskinesias, some transient but others irreversible, seen in 8%–51% of antipsychotic-treated children and adolescents (M. Campbell et al. 1985), mandate caution regarding casual use of these drugs. Tardive dyskinesia has been documented in children and adolescents after as brief a period of treatment as 5 months (Herskowitz 1987) and may appear even during periods of constant medication dose. Cases of tardive dyskinesia have been reported in youths treated with risperidone (Feeney and Klykylo 1996), indicating that atypical antipsychotics may also cause 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.

Potentially fatal neuroleptic malignant syndrome has been reported with antipsychotic agents in children and adolescents (Silva et al. 1999), with a presentation similar to that seen in adults.