School observations of children with attention-deficit hyperactivity disorder and comorbid tic disorder: effects of methylphenidate treatment.

Gadow KD, Nolan E, Sprafkin J, Sverd J.

Author information

Abstract
Although the findings from recent controlled studies suggest that methylphenidate is a safe and effective treatment for many children with attention-deficit hyperactivity disorder (ADHD) and comorbid tic disorder, relatively little is known about drug effects on school behavior. Thirty-four prepubertal children with ADHD and tic disorder received placebo and 3 doses of methylphenidate (0.1, 0.3, and 0.5 mg/kg) twice daily for 2 weeks each under double-blind conditions. Treatment effects were assessed using direct observations of child behavior in classroom, lunchroom, and playground settings. Treatment with methylphenidate resulted in marked reductions of hyperactive, disruptive, and aggressive behavior, which was evident even for the 0.1 mg/kg dose. There were no "nonresponders." The only observed changes in tics were a small but statistically significant increase in the frequency of motor tics (classroom, 0.1 mg/kg dose) and a tendency for fewer vocal tics (lunchroom). However, these changes in motor tic frequency were not perceived by care providers as a worsening in the severity of the child's tic disorder. Most dose-response relationships were linear, but the mean (operationally defined) minimal effective dose (MED) was 0.3 mg/kg. In summary, the findings support the conclusions that (1) methylphenidate suppresses ADHD behaviors in the classroom and aggressive behavior in all settings and that (2) a low dose may have a weak exacerbation effect on the frequency of motor tics; but, in general, the majority of youngsters do not experience clinically significant tic worsening with a MED.

PMID: 7560119 [PubMed - indexed for MEDLINE]