The effect of methylphenidate treatment on psychopathic behavior of patients having attention-deficit hyperactivity disorder with and without oppositional defiant disorder

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Abstract

To evaluate the effect of 3 months of methylphenidate (MPH) treatment on psychopathic behavior in children having attention-deficit hyperactivity disorder (ADHD) with and without comorbid oppositional defiant disorder (ODD). Twenty-seven children with Diagnostic and Statistical Manual of Mental Disorders, fifth ed., ADHD (13 female/14 male; aged 13.3±2.2 years old) were compared to an age/sex matched ADHD/ODD group (N=27, eight female/19 male; aged 11.8±1.9 years). The attention-deficit hyperactivity disorder rating scale (ADHD-RS) and the California Child Q-Set (CCQ) were used in both groups before MPH treatment (0.8-1.2 mg/kg/day) and 3 months thereafter. Significant reduction in the ADHD-RS scores was detected following MPH treatment in both the ADHD/ODD group and in the ADHD group (P<0.0011 and P=0.0012, respectively). Reduction in the CCQ scores was obtained in the ADHD/ODD group (P=0.0001) but not in in the ADHD group (P=0.18). A correlation was found between the reductions in the ADHD-RS and CCQ scores following MPH treatment in the ADHD/ODD group (Spearman's r=0.43, P=0.024). MPH treatment in children with ADHD/ODD was associated with reduction in psychopathic scores, and the reduction correlated with a corresponding improvement in their ADHD severity.