

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 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.