Six months methylphenidate treatment improves emotion dysregulation in adolescents with attention deficit/hyperactivity disorder: a prospective study

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Abstract

PURPOSE:
Individuals with attention deficit/hyperactivity disorder (ADHD) may suffer from emotional dysregulation (ED), although this symptom is not listed among the diagnostic criteria. Methylphenidate (MPH) is useful in reducing emotional symptoms in ADHD. The aim of the present study was to determine both psychosocial risk factors and presence of ED in adolescents with ADHD before and after MPH treatment.

PARTICIPANTS AND METHODS:
Eighty-two patients aged 12-18 years with ADHD were included as participants. The Kiddie Schedule for Affective Disorders and Schizophrenia for School-Age Children - Present and Lifetime, the Difficulties in Emotion Regulation Scale (DERS), sociodemographic form, and the Inventory of Statements About Self-Injury were administered. Results were compared before and after 6 months MPH treatment.

RESULTS:
A significant improvement was detected on DERS for impulsivity (15.9±6.8 initial vs 14.2±6.5 final test, p<0.01) and total score (88.4±23.3 initial vs 82.4±2.7 final test, p<0.05) across all patients taking MPH regardless of subtype and sex. Despite treatment, a significant difference remained for impulsivity, strategies, and total score in patients with comorbid oppositional defiant disorder (ODD) compared with those without ODD, but no difference was detected for conduct disorder comorbidity. In patients who self-harm, scores for goals, impulsivity, strategies, clarity, and total score were higher before treatment: furthermore, impulsivity and total score remained high after treatment. In maltreated patients, goals, impulsivity, strategies, and total scores were significantly higher before treatment; however, their symptoms were ameliorated after treatment with MPH.

CONCLUSION:
Individuals with severe ED may "self-medicate" by smoking and/or self-harming. MPH led to significant improvements in ED possibly owing, in part, to a decrease in impulsivity, so that individuals felt more able to supervise their emotions and engage in goal-directed behaviors. ED should be considered particularly in patients with additional psychosocial factors and ODD comorbidity, and included in the treatment plan.