Are psychiatric comorbidities and associated cognitive functions related to treatment response to methylphenidate in boys with attention-deficit/hyperactivity disorder?

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Abstract

BACKGROUND:
Methylphenidate (MPH) has been found to be an effective medication for attention-deficit/hyperactivity disorder (ADHD). However, there are neither consistent nor sufficient findings on whether psychiatric comorbidities and associated cognitive functions of ADHD are related to treatment response to MPH in ADHD children.

OBJECTIVES:
This study investigated whether psychiatric comorbidities, IQ, and neurocognitive deficits are related to treatment response to MPH in ADHD children. In some ways, it is preferable to have a drug that the effectiveness of which to a disorder is not affected by its associated cognitive functions and psychiatric comorbidities. On the other hand, it is likely that the baseline symptom severity of ADHD is associated with the effectiveness of MPH treatment on the symptoms post treatment.

METHODS:
A total of 149 Chinese boys (aged 6-12 years) with ADHD, combined type, and normal IQ participated in this study. Assessment of ADHD symptom severity was conducted pre and post MPH treatment, while assessment of psychiatric comorbidities, IQ, and neurocognitive deficits was performed in a non-medicated condition. Treatment response was defined as the ADHD symptom severity post MPH treatment.

RESULTS:
Results indicated that MPH treatment was effective, significantly improving the ADHD condition. Yet, comorbid disorders, IQ, and neurocognitive deficits were not related to MPH treatment response on ADHD symptoms. These findings indicated that the effectiveness of MPH was not affected by psychiatric comorbidities and associated cognitive functions of ADHD. Instead, as expected, it was the baseline symptom severity that was mainly related to the treatment response, ie, the milder the baseline condition, the better the treatment response.

CONCLUSION:
The current findings positively endorse the widespread clinical use of MPH for treating ADHD. It improves the behavioral symptoms of ADHD regardless of varying psychiatric comorbidities, IQ, and neurocognitive deficits.