

Improvements in Irritability with Open-Label Methylphenidate Treatment in Youth with Comorbid Attention Deficit/Hyperactivity Disorder and Disruptive Mood Dysregulation Disorder

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Abstract

Objective:

The purpose of this open-label study was to examine the effects of long-acting methylphenidate (MPH) treatment on irritability and related emotional symptoms associated with disruptive mood dysregulation disorder (DMDD) in youth with comorbid attention-deficit/hyperactivity disorder (ADHD).

Methods:

The sample included 22 medication-free male and female subjects (ages 9–15) who met criteria for both DMDD and ADHD. Participants underwent a 4-week trial of long-acting MPH treatment (Concerta®), with weekly dosing increases until a therapeutic dose was reached. Repeated measures t-tests were used to compare pre- and posttreatment ratings of primary and secondary measures. The primary outcome was self-report irritability. Secondary outcomes included parent and child ratings of emotional frequency, emotional lability, and negative affect (NA). Multiple regression was used to examine the impact baseline hyperactivity, age, gender, race, socioeconomic status, or comorbid diagnosis had on treatment outcomes.

Results:

Significant improvements (medium to large effect sizes) in child-rated irritability as well as parent and child ratings of emotional lability, NA, and anger were found. As anticipated, ADHD symptoms also improved. While a majority of the sample saw improvement in child-rated irritability (71%), symptoms worsened a small proportion (19%), and an even smaller portion experienced no change (10%). No demographics, psychiatric comorbidities, or severity of ADHD symptoms influenced treatment outcomes.

Conclusions:

Study findings suggest that MPH treatment significantly improved mood and emotional symptoms associated with DMDD comorbid with ADHD. These findings, coupled with good tolerability in this open-label pilot study supports further research into the use of MPH as a first-line treatment for DMDD. Future work examining MPH treatment of youth with DMDD with and without comorbid ADHD is needed.