

Exploring longitudinal course and treatment-baseline severity interactions in secondary outcomes of smoking cessation treatment in individuals with attention-deficit hyperactivity disorder.

Luo SX, Wall M, Covey L, Hu MC, Scodes JM, Levin FR, Nunes EV, Winhusen T.

Am J Drug Alcohol Abuse. 2018 Jan 25:1-7.
doi: 10.1080/00952990.2017.1416474.

Abstract

BACKGROUND:

A double blind, placebo-controlled randomized trial (NCT00253747) evaluating osmotic-release oral system methylphenidate (OROS-MPH) for smoking-cessation revealed a significant interaction effect in which participants with higher baseline ADHD severity had better abstinence outcomes with OROS-MPH while participants with lower baseline ADHD severity had worse outcomes.

OBJECTIVES:

This current report examines secondary outcomes that might bear on the mechanism for this differential treatment effect.

METHODS:

Longitudinal analyses were conducted to evaluate the effect of OROS-MPH on three secondary outcomes (ADHD symptom severity, nicotine craving, and withdrawal) in the total sample (N = 255, 56% Male), and in the high (N = 134) and low (N = 121) baseline ADHD severity groups.

RESULTS:

OROS-MPH significantly improved ADHD symptoms and nicotine withdrawal symptoms in the total sample, and exploratory analyses showed that in both higher and lower baseline severity groups, OROS-MPH statistically significantly improved these two outcomes. No effect on craving overall was detected, though exploratory analyses showed statistically significantly decreased craving in the high ADHD severity participants on OROS-MPH. No treatment by ADHD baseline severity interaction was detected for the outcomes.

CONCLUSIONS:

Methylphenidate improved secondary outcomes during smoking cessation independent of baseline ADHD severity, with no evident treatment-baseline severity interaction. Our results suggest divergent responses to smoking cessation treatment in the higher and lower severity groups cannot be explained by concordant divergence in craving, withdrawal and ADHD symptom severity, and alternative hypotheses may need to be identified.