A Randomized, Double-Blind Study of SHP465 Mixed Amphetamine Salts Extended-Release in Adults With ADHD Using a Simulated Adult Workplace Design

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Abstract

OBJECTIVES:
Evaluate the efficacy, duration of effect, and tolerability of SHP465 mixed amphetamine salts (MAS) extended-release versus placebo and immediate-release MAS (MAS IR) in adults with attention-deficit/hyperactivity disorder (ADHD).

METHODS:
Adults with ADHD Rating Scale, Version IV (ADHD-RS-IV) scores ≥24 were randomized to SHP465 MAS (50 or 75 mg), placebo, or 25 mg MAS IR in a double-blind, 3-period, crossover study using a simulated adult workplace environment. On the final day of each 7-day treatment period, efficacy was assessed for 16 hours postdose. Primary efficacy analyses for Permanent Product Measure of Performance (PERMP) total score averaged across all postdose assessments and each postdose time point were conducted in the intent-to-treat population using a mixed linear model. Secondary endpoints included PERMP problems attempted and answered correctly and ADHD-RS-IV scores based on clinician ratings of counselor observations using the Time Segment Rating System and participant self-report. Tolerability assessments included treatment-emergent adverse events (TEAEs) and vital signs.

RESULTS:
Least squares mean (95% CI) treatment differences (combined 50/75 mg SHP465 MAS-placebo) significantly favored SHP465 MAS over placebo for PERMP total score averaged across all postdose assessments (18.38 [11.28, 25.47]; P<0.0001) and at each postdose assessment (all P<0.02). Nominal superiority of MAS IR over placebo for PERMP total score averaged across all postdose assessments was observed (nominal P=0.0001); treatment differences between SHP465 MAS and MAS IR were not significant (nominal P=0.2443). The 2 most frequently reported TEAEs associated with SHP465 MAS were insomnia (36.5%) and anorexia (21.2%). Mean increases in pulse and blood pressure with SHP465 MAS exceeded those of placebo.

CONCLUSIONS:
SHP465 MAS (combined 50/75 mg) significantly improved PERMP total score versus placebo, with superiority observed from 2 to 16 hours postdose. The tolerability profile of SHP465 MAS was similar to previous reports of SHP465 MAS in adults with ADHD.