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Topic: S537 - Effectiveness of stimulant treatment in attention-deficit/hyperactivity disorder: functional, health-related quality of life and health utility outcome measures

The first European studies of lisdexamfetamine dimesylate in children and adolescents with attention-deficit/hyperactivity disorder

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Introduction

Lisdexamfetamine dimesylate (LDX) is a long-acting prodrug stimulant for treatment of attention-deficit/hyperactivity disorder (ADHD).

Objective

Review efficacy and safety data from two double-blind, randomized trials (SPD489-325 and SPD489-326) in patients with ADHD aged 6–17 years.

Methods

In SPD489-325, patients received placebo or optimized doses of LDX or the reference treatment, osmotic-release oral system methylphenidate (OROS-MPH) for ≤7 weeks. The primary efficacy measure was ADHD Rating Scale IV (ADHD-RS-IV) total score. Statistical comparison of LDX versus OROS-MPH was not pre-specified. In SPD489-326, a ≥26-week open-label LDX period preceded a 6-week, placebo-controlled, randomized-withdrawal period (RWP). The primary endpoint was treatment failure (50% increase in ADHD-RS-IV total score and ≥2-point increase in Clinical Global Impressions-Severity score from RWP baseline). Efficacy was assessed in the full analysis sets.

Results

In SPD489-325 (N=317), placebo-adjusted least-squares-mean changes in ADHD-RS-IV total score from baseline to endpoint were: LDX, –18.6 (95% confidence interval [CI]: –21.5, –15.7; p<0.001; effect size 1.80) and OROS MPH, –13.0 (–15.9, –10.2; *p*<0.001; 1.26). In SPD489-326 (N=262, open-label period; N=153, RWP), 15.8% and 67.5% of patients receiving LDX and placebo, respectively, met treatment failure criteria at RWP endpoint (difference: –51.7%; 95% CI: –65.0%, –38.5%; *p*<0.001). The most common treatment-emergent adverse events in LDX-treated patients were decreased appetite, headache and decreased weight.

Conclusions

Short-term LDX treatment improved symptoms of ADHD in children and adolescents. Continued LDX treatment was associated with maintenance of efficacy compared with placebo. The safety profile of LDX was generally consistent with that of stimulant therapy.

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