Atomoxetine Treatment for Pediatric Patients with ADHD and Comorbid Anxiety

Calvin Sumner, MD1; Lawrence Sher, MD2; Virginia Sutton, PhD1; Rosalie Bakken, PhD1; Martin Paczkowski, MPH1; Douglas Kelsey, MD, PhD1

1Lilly Research Laboratories, Indianapolis, IN; 2Peninsula Research Associates, Inc. Rolling Hills Estates, CA

ABSTRACT

MASC Imputed Total Score

ADHD RS Total Score

Primary Efficacy Measures

ADHD-RS (18 items corresponding to the DSM-IV diagnostic symptoms of ADHD)

Secondary Efficacy Measure

ADHD and Comorbid Anxiety

Statistical Analyses

ADHD-RS and PARS total score were analyzed using analysis of covariance (least observation carried forward)

Fisher’s exact test was used for categorical analyses

The statistical analysis plan pre-specified that patients who responded during a placebo lead-in period would be excluded from the co-primary analyses (ADHRS and PARS).

RESULTS

Patient Demographics

PARS Total Score

PARS Total Score-MMRM (Eligible Patients)

Patient Disposition

Atomoxetine (N=77) Mean (SD) 43.5% 74.0% >1 TEAE*

Placebo (N=78) Mean (SD) 4.4% 12.5% ƒ

HEADACHE

DIZZINESS

VOMITING

Nausea

Sinusitis

Decreased Appetite

Adiposopathy

Abdominal Pain

Amenorrhea

Goitre

Influenza

Silaids

† 6 of the atomoxetine patients discontinued due to lack of efficacy during the placebo lead-in.

Study Design

Randomized, double-blind, placebo-controlled, multicenter trial

Patients randomized to approximately 12-weeks of atomoxetine or placebo

The target atomoxetine dose (1.2 mg/kg/day) could be increased to 1.8 mg/kg/day for patients not responding adequately

All daily doses were split and administered BID

Study Design

Randomized, double-blind, placebo-controlled, multicenter trial

Patients randomized to approximately 12-weeks of atomoxetine or placebo

The target atomoxetine dose (1.2 mg/kg/day) could be increased to 1.8 mg/kg/day for patients not responding adequately

All daily doses were split and administered BID

Patient Disposition

Atomoxetine (N=77) Mean (SD) 43.5% 74.0% >1 TEAE*

Placebo (N=78) Mean (SD) 4.4% 12.5% ƒ

HEADACHE

DIZZINESS

VOMITING

Nausea

Sinusitis

Decreased Appetite

Adiposopathy

Abdominal Pain

Amenorrhea

Goitre

Influenza

Silaids

† 6 of the atomoxetine patients discontinued due to lack of efficacy during the placebo lead-in.

Study Design

Randomized, double-blind, placebo-controlled, multicenter trial

Patients randomized to approximately 12-weeks of atomoxetine or placebo

The target atomoxetine dose (1.2 mg/kg/day) could be increased to 1.8 mg/kg/day for patients not responding adequately

All daily doses were split and administered BID

Patient Disposition

Atomoxetine (N=77) Mean (SD) 43.5% 74.0% >1 TEAE*

Placebo (N=78) Mean (SD) 4.4% 12.5% ƒ

HEADACHE

DIZZINESS

VOMITING

Nausea

Sinusitis

Decreased Appetite

Adiposopathy

Abdominal Pain

Amenorrhea

Goitre

Influenza

Silaids

† 6 of the atomoxetine patients discontinued due to lack of efficacy during the placebo lead-in.

Study Design

Randomized, double-blind, placebo-controlled, multicenter trial

Patients randomized to approximately 12-weeks of atomoxetine or placebo

The target atomoxetine dose (1.2 mg/kg/day) could be increased to 1.8 mg/kg/day for patients not responding adequately

All daily doses were split and administered BID

Funding provided by Eli Lilly and Company

References


CONCLUSIONS

Atomoxetine demonstrated significant efficacy in patients with ADHD and comorbid anxiety

Atomoxetine demonstrated a large effect size (S = 4.0) on ADHD-RS and a moderate effect size (S = 1.0) on MASC

Patients reported improvements in anxiety consistent with investigator’s ratings (MASC)

The primary results were robust in all patients as well as eligible patients (those who did not respond during the placebo lead-in)

Atomoxetine was well-tolerated in patients with ADHD and comorbid anxiety

Background: Research indicates 25-50% comorbidity of anxiety disorders with attention-deficit/hyperactivity disorder (ADHD). Atomoxetine is a nonstimulant approved for treating ADHD that is not contraindicated in the presence of anxiety disorders.

Objective: This study compared atomoxetine to placebo in treating pediatric patients with ADHD and comorbid anxiety, as measured by the ADHDRS-P-Parent or ADHD RS Total Score and the Pediatric Anxiety Rating Scale (PARS) total Score.

Methods: Patients in this double-blind, acute portion of an extended, multicenter trial were randomized to approximately 12-weeks of atomoxetine treatment (n=77) or placebo (n=78). Patients met DSM-IV criteria for both ADHD and anxiety disorder (generalized anxiety, separation anxiety, or social phobia). ADHD RS and PARS total scores were analyzed using ANCOVA (LOCF). Patients who responded during a placebo lead-in period were excluded from ADHD RS and PARS (total scores) analyses.

Results: Mean ADHD RS Total score improved significantly from baseline to endpoint for the atomoxetine group (n=55; -10.5, SD 10.6) relative to placebo (n=58; -1.4, SD 8.3; p<.001). Mean PARS total score also improved significantly from baseline to endpoint for the atomoxetine group (n=55; -5.5, SD 4.8) relative to placebo (n=58; -3.2, SD 5.0; p<.01).

Conclusion: Results suggest atomoxetine is efficacious and well tolerated in pediatric patients with ADHD and comorbid anxiety.