PW01-66 - **DOES ATOMOXETINE IMPROVE EXECUTIVE FUNCTION AND INHIBITORY CONTROL AS MEASURED BY AN OBJECTIVE COMPUTER-BASED TEST? A RANDOMIZED, PLACEBO-CONTROLLED STUDY**

P.M. Wehmeier[1], A. Schacht[1], A. Minarzyk[1], C. Schneider-Fresenius[1], M. Lehmann[1], G. Lehmkuhl[2], R.W. Dittmann[3], T. Banaschweski[3]

[1]Medical Department, Lilly Deutschland GmbH, Bad Homburg, [2]Department of Child and Adolescent Psychiatry, University of Cologne, Cologne, [3]Department of Child and Adolescent Psychiatry, Central Institute of Mental Health, Mannheim, Germany

Objectives: Primary objective was to evaluate the influence of atomoxetine on standard variables of a computer-based Continuous Performance Test (cb-CPT) that reflects executive function and inhibitory control in children with ADHD.

Methods: Two-arm, 8-week, placebo-controlled, randomized, double-blind study in ADHD patients (6-12yrs). Atomoxetine was initiated at 0.5 mg/kg qd for 1 week, followed by 7 weeks on the target dose of 1.2 mg/kg qd. Primary outcome were the q-scores of the cb-CPT standard variables after 8 weeks using mixed models for repeated measurement. Additionally, ADHD-RS scores, WREMB (Weekly Ratings of Evening and Morning Behavior) and CGI-S-ADHD were assessed (weeks 0,1,2,4,6,8).

Results: N=128 patients were randomized, N=125 evaluated (atomoxetine/placebo: 63/62). Baseline characteristics were comparable (77.6% boys; 40.0% patients with ODD/CD; 24.8% prior stimulant treatment; mean (±SD) age 9.0±1.79yrs; mean ADHD-RS total score 36.99±11.56). At Week 8, all primary outcomes (cb-CPT q-scores) were significantly reduced vs. placebo (all $p< 0.001$) for mean (effect size [ES] 0.41), variance (ES=0.71), and normalized variance (ES=0.50) of “Reaction time”, “Number of microevents” (ES=1.00), “Commission errors” (ES=0.50), “Omission errors” (ES=0.70), “Distance of movement” (ES=0.90) and “Area of movement” (ES=1.08), “Time active” (ES=0.69), and “Motion simplicity” (ES=0.38). Secondary endpoints at Week 8 improved significantly in favor of atomoxetine: ADHD-RS: total score ES=1.30, $p< 0.001$; hyperactive/impulsive subscore ES=1.37, $p< 0.001$; inattentive subscore ES=1.07, $p< 0.001$). WREMB: total score ES=1.00, $p< 0.001$; morning subscore ES=0.59, $p=0.002$.; evening subscore ES=1.02, $p< 0.001$. CGI-S-ADHD: ES=1.11; $p< 0.001$.

Conclusions: Atomoxetine for 8 weeks significantly reduced ADHD symptoms as measured by the objective cb-CPT.

https://doi.org/10.1016/S0924-9338(10)71465-6 Published online by Cambridge University Press