Efficacy of atomoxetine in the treatment of attention-deficit hyperactivity disorder in patients with common comorbidities in children, adolescents and adults: a review

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Therapeutic Advances in Psychopharmacology (May, 2016)
doi: 10.1177/2045125316647686

Abstract

Attention-deficit hyperactivity disorder (ADHD) is one of the most commonly diagnosed mental health disorders and is associated with higher incidence of comorbid oppositional or conduct, mood, anxiety, pervasive developmental, and substance-use disorders. Comorbid mental health conditions may alter the presence of symptoms and treatment of ADHD. Atomoxetine (ATX), a nonstimulant medication for the treatment of ADHD, may be prescribed for individuals with ADHD and comorbid conditions despite some risk for certain undesirable side effects and lower effectiveness for the treatment of ADHD than stimulants. In this paper, we review studies utilizing randomized, placebo-controlled trials (RCTs) as well as within-subject designs to determine the effectiveness of ATX in the treatment of children and adults with ADHD and comorbid conditions. The current review uses an expanded methodology beyond systematic review of randomized controlled trials in order to improve generalizability of results to real-world practice. A total of 24 articles published from 2007 to 2015 were reviewed, including 14 RCTs: n = 1348 ATX, and n = 832 placebo. The majority of studies show that ATX is effective in the treatment of ADHD symptoms for individuals with ADHD and comorbid disorders. Cohen’s d effect sizes (ES) for improvement in ADHD symptoms and behaviors range from 0.47 to 2.21. The effectiveness of ATX to improve symptoms specific to comorbidity varied by type but appeared to be most effective for diminishing the presence of symptoms for those with comorbid anxiety, ES range of 0.40 to 1.51, and oppositional defiant disorder, ES range of 0.52 to 1.10. There are mixed or limited results for individuals with ADHD and comorbid substance-use disorders, autism spectrum disorders, dyslexia or reading disorder, depression, bipolar disorder, and Tourette syndrome. Results from this review suggest that ATX is effective in the treatment of some youth and adults with ADHD and comorbid disorders, and may be a treatment option in these patients.