A Systematic Review of the Use of Bupropion for Attention-Deficit/Hyperactivity Disorder in Children and Adolescents.

Ng QX.

J Child Adolesc Psychopharmacol. 2016 Nov 4. [Epub ahead of print]

Abstract

INTRODUCTION:
Attention-deficit/hyperactivity disorder (ADHD) is one of the most prevalent neuropsychiatric disorders of childhood and adolescence. Stimulants are usually the first choice of drug; however, as many as 20% of patients do not respond to them. Stimulants may also worsen comorbid sleep, mood, and anxiety disorders, and they are associated with problems of misuse and diversion. Bupropion, a dopamine and norepinephrine reuptake inhibitor, is a promising nonstimulant alternative with reports of positive outcomes for ADHD management in both adolescent and adult populations. This study systematically reviews clinical trials on the subject.

METHODS:
Using the keywords bupropion or Wellbutrin or Zyban or Elontril and attention deficit hyperactivity disorder or ADHD or ADDH, a preliminary search on the PubMed and Ovid databases yielded 25,455 articles published in English between January 1, 1988 and May 1, 2016. Of these, there were only six articles on clinical trials involving children. Full articles were also reviewed for references of interest.

RESULTS:
All available open, controlled, and randomized trials demonstrated bupropion's efficacy in improving ADHD symptoms. The three head-to-head trials found that bupropion had efficacy comparable to methylphenidate (p > 0.05). However, a large double-blind, placebo-controlled multicenter study of bupropion found smaller effect sizes for bupropion, as quantified using teacher and parent ratings of ADHD symptoms, than methylphenidate. In terms of tolerability, a head-to-head trial found that headache was observed more frequently in the methylphenidate-treated group than in the bupropion-treated group, whereas the frequency of other side effects did not differ significantly.

CONCLUSION:
Current findings should be interpreted with caution because of the very limited database. Bupropion should be considered for pharmacological management of childhood and adolescent ADHD, but more randomized controlled trials with larger sample sizes are warranted. There is also some evidence of its benefits in children with comorbid ADHD and conduct, substance use, or depressive disorders.