Attention-deficit hyperactivity disorder medication use: factors involved in prescribing, safety aspects and outcomes

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Abstract

While treatment of patients with attention-deficit hyperactivity disorder (ADHD) is based on a multimodal approach that combines medication with specific psychological interventions, pharmacotherapy alone is generally considered an essential and cost-effective element. This paper aims to comprehensively and critically review factors involved in prescribing and medication use in individuals diagnosed with ADHD, focusing on the difficulties facing patients with ADHD seeking treatment, as well as the safety and tolerability aspects of ADHD pharmacotherapies, with particular attention on the cardiovascular adverse events and the potential risk of misuse or diversion of ADHD medications. A comprehensive and systematic literature search of PubMed/MEDLINE database was conducted to identify studies published in peer-reviewed journals until 1 August 2016. Children, adolescents and adults often encounter significant difficulties in the process of accessing specialist assessment and treatment for ADHD as a consequence of disparities in service organization and available treatment provision. Despite the well-established efficacy and overall safety profile, ADHD medications are not exempt from adverse events. The cardiovascular safety of pharmacotherapies used for treating individuals with ADHD has raised particular concerns; however there is little evidence of serious cardiovascular adverse events, including no serious corrected QT (QTc) abnormalities associated with stimulants, atomoxetine or α2-adrenergic receptor agonists. Although the abuse of prescription stimulant drugs, particularly, short-acting stimulants is a prevalent and growing problem, nonmedical use of prescription stimulants within the clinical context is very limited. In addition, nonstimulant ADHD medications lack any reinforcing effects and consequently any abuse potential.